



Banner General - Use, August 2020

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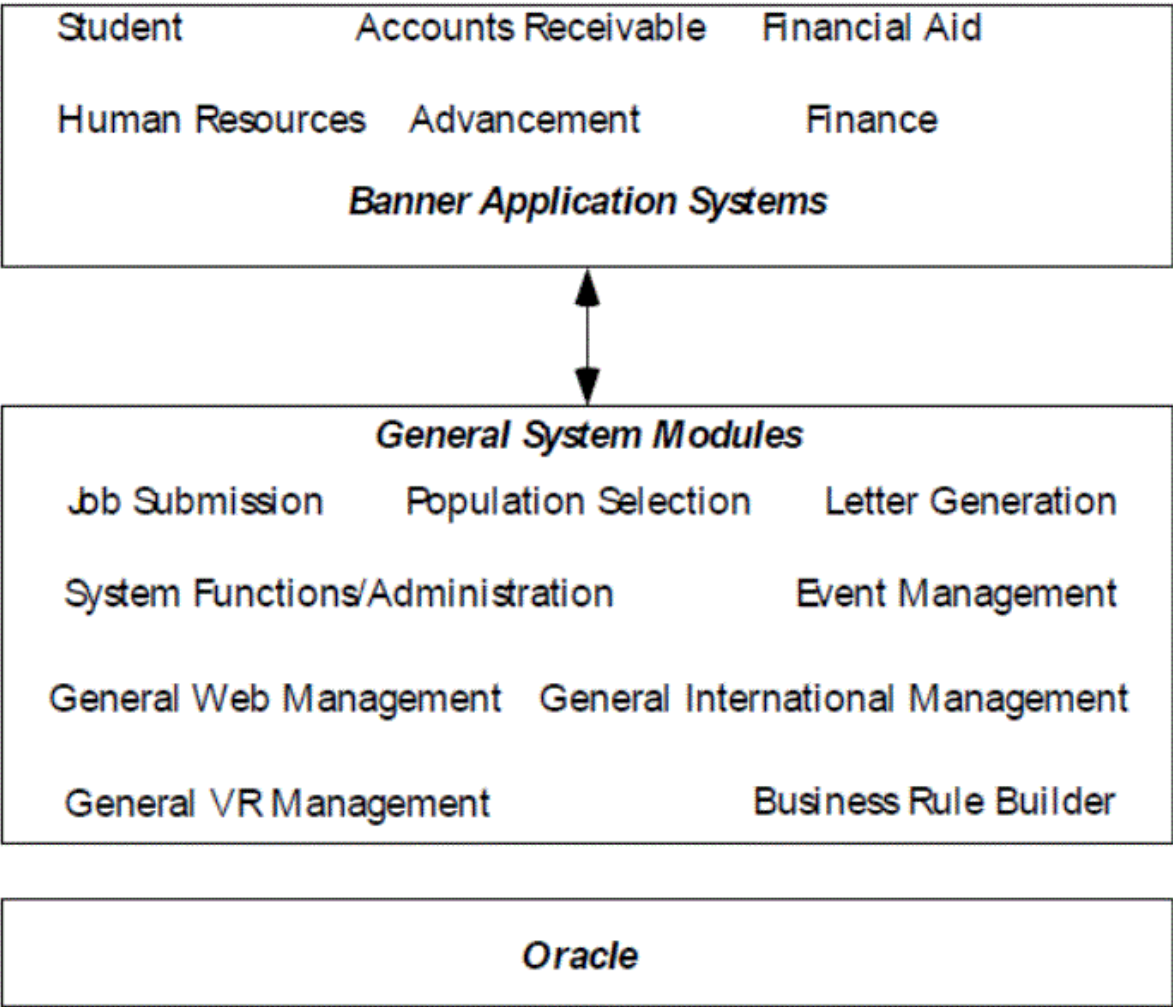
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# Banner General overview

Banner™ supports the integrated processing of the information your organization uses to manage its resources and functions. The General System is the core component of Banner, providing centralized system management tools and utility programs to the other Banner systems.

## Banner General modules

The General System contains the modules that are common to all the Banner application systems.



### Job Submission

This module facilitates the submission of reports and processes throughout Banner. You can define new reports and processes to Job Submission, define default parameters, and run Banner reports and processes. You can also set up Job Submission for reports and processes developed on site.

### **Population Selection**

This module lets you identify and group entities in the database, such as people, vendors, or organizations. You can define selection criteria to identify and extract a subset of these entities to use in Banner reports, processes, and letters.

### **Letter Generation**

This module allows you to define extract variables, build paragraphs, build a letter, extract variable data from the database, and merge the extracted variable data into the letter. You can also create a download file that can be used to produce letters with Microsoft Word or WordPerfect.

### **General International Management**

This module has been designed to help institutions meet the requirements of the United States Bureau of Citizenship and Immigration Services (BCIS). If your institution is not located in the USA, you may not need these features. This module includes Visa tracking and SEVIS support.

### **System Functions/Administration**

This module lets you set up, operate, and monitor Banner. You can set up currency codes, maintain EDI information, set up the Desktop Tools application, set up Event Queue Maintenance, customize menus, create Banner objects, and set up QuickFlows, Fine-Grained Access Control (FGAC), and Common Matching.

### **Event Management**

This module helps you manage an event and the functions, tasks, and participants associated with the event. You can schedule functions, organize administrative tasks, track attendance, and send messages. Keeping track of this information not only helps you manage the current event, but provides information that can be used to plan future events.

### **General Web Management**

This module supports the integrated processing between Banner and your self-service applications (Student Self-Service, Faculty and Advisor Self-Service, Employee Self-Service, Advancement Self-Service, and Executive Self-Service).

### **Business Rule Builder**

This module includes pages you can use to build business rules. It was designed to help you manage your Banner data for SEVIS processing, Multi-Institution Functionality (MIF), and Banner Integration Components, but rules you create can be used for other purposes.

You can create rules to create student and exchange visitor records automatically, and to populate columns in Banner tables with values from other columns.

### **Proxy Access**

Proxy Access allows properly authenticated constituents to set up access to designated Self-Service Banner pages and specify what activities a proxy user can perform.

After these decisions are configured, users will then have the option to set up proxies. For example, each student can then decide who they want to serve as a parental proxy and who they want as

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potential employer proxies. Users may also decide to not set up any proxies. For each individual proxy, each user can select specific pages from the list of available pages to authorize.

### **Banner Access Management**

Banner Access Management is an application containing the GSA\* security pages needed to perform Banner security and utility maintenance. This enables institutions to deploy to a controlled location, on an isolated server/container, and behind a firewall. It allows access to security administrators (BANSECR or distributed security) and utility users (BASELINE). The application provides for Single Sign-On (SSO), but also offers direct Oracle based authentication.

Banner Access Management also includes several non-security pages accessible from both Banner General and Banner Access Management at run-time. Some of these non-security pages have BASELINE user specific functionality, needed in Banner Access Management for BASELINE users to work within. Other non-security pages are needed for common toolset, or pages called from other pages.

For additional information, please refer to the Banner Security Administration information.

## **Features**

The General System includes the following major features.

- Comprehensive reporting—Both hard-copy reports and online inquiry pages are available.
- Main menu. The main menu provide easy access and navigation to infrequent users. Menus can be customized for your institution and individual users. Frequent users can use Direct Access or Object Search to bypass the main menu. It also includes a high-level Site Map to help users move through Banner more efficiently.
- Validation pages—Validation pages standardize the contents of certain fields and control data input. You can specify custom values without programmer intervention.
- Flexible, user-defined security—The limited access security system helps ensure that data is viewed and updated by authorized users only. The security feature can accommodate both centralized and decentralized operations.

**Note:** In some fields, data can be partially or completely obscured for selected users through techniques called masking and concealing. Fields can also be made completely invisible to users through field hiding.

**Note:** Value-based security (VBS) and personally identifiable information security (PII) -- both implemented through Oracle's Fine-Grained Access Control (FGAC), can selectively limit the data users can see through Banner pages. The details of the limitations depend entirely on the institution's VBS and PII rules.

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## Date fields

The use of SYSDATE in a **Date** field will no longer convert to today's date. You can enter any single, non-numeric character in the **Date** field and Banner will automatically convert it to today's date.

For example, if you enter `a` or `g` and go to the next field, Banner will enter today's date as the default.

## Time Zone field

Banner General provides time zone support, which incorporates daylight savings time offset.

While this feature supports Ellucian Ethos APIs, it is also available to all customers whether they use Ellucian Ethos or not. Institutions can set their time zone, and for institutions with multiple campuses, they can set the appropriate time zone for each campus.

Set the time zone of the institution and individual campuses on the following pages:

- Set the time zone of the institution on the Installation Controls (GUAINST) page.
- Set the time zone of a campus on the Campus Code Validation (STVCAMP) page.

## GUIIMAGE functionality

GUIIMAGE 9x does not support the TIFF (Tag Image File Format) file format for images (.tiff file extension).

## Consent to capture and process personal data support

Banner General supports the functionality to keep record(s) of consent to process personal data from an individual, parent/guardian (if required), and a source of the consent, to help the institution verify they have consent for the person and the point of data entry into the institution.

## Record consent to process personal data

The Consent to Capture and Process Personal Data (GUACCPR) page allows you to keep record(s) of consent to process personal data from an individual, parent/guardian (if required), and a source of the consent.

### Procedure

1. Access the **Consent to Capture and Process Personal Data (GUACCPR)** page.
2. In the **ID** field, enter the ID for which you want to record consent.

3. Click **Go** to go to the Consent to Capture and Process Personal Data section.
4. In the **Persona** field, specify the type of individual providing consent.  
You can select the down arrow icon to access the **Personal Data Persona Type Code Validation (GTVCCPP)** page to search for a persona type code.
5. In the **Source** field, enter the source through which you want to provide consent.  
You can select the down arrow icon to access the **Personal Data Source Code Validation (GTVSCDE)** page to select a source code.
6. In the **Consent** field, enter the type of consent you provide.  
You can select the down arrow icon to access the **Personal Data Consent Code Validation (GTVCCPD)** page to select a consent code.  
  
Examples may include a persona of `Student`, source of `Banner`, and consent value of `parent provided consent for minor`. Another example may include a persona of `Vendor`, source is `Third Party`, and consent value of `affirmative`.
7. In the **Consent Date** field, enter the date on which you are providing consent.
8. Save your changes.

## Social economic identity details collection

Banner General supports the functionality to collect the social economic identity details of a person.

This functionality provides a way for institutions that must provide social and economic identity details to a regulatory agency to collect this data. Institutions that do not have this regulatory requirement can also use this feature to collect additional information of a person.

## Collect and store social economic identity details

The Person Social Economic Identity Details (GOAPSID) page allows you to keep records of social economic identity details of a person. The Person Social Economic Identity and Biographical Audit Trail (GORPSAD) table maintains an audit trail for all of the entries on GOAPSID.

### Procedure

1. Access the **Person Social Economic Identity Details (GOAPSID)** page.
2. Enter an ID in the **ID** field.
3. In the **Report** field, enter a report code.  
You can select the LOV to access the Social Economic Identity Report (GTVSEIR) page to search or select a report code.
4. Click **Go** to go to the next section.  
This section displays all of the codes defined on the Social Economic Identity Report Template (GOASETP) page; for that report.
5. Enter a value in the **Value** field.  
If the Field Type of the social economic identity code is `Text box` as defined on the Social Economic Identity Report Template (GOASETP) page, type the value in the **Value** field. If the

Field Type is LOV, click the **Select Value** button to access the Social Economic Identity Rules (GOASEID) page to search or select a value.

The **Select Value** button is not enabled for social economic identity codes defined as Text box.

6. Click **Save**.

## Localization inventory tracking

Banner General supports tracking Banner localization products installed at an institution.

**Note:** At the time of the Banner General 9.3.13 release, and until further notice, these new pages are for Ellucian internal use only. These pages are part of the infrastructure for a future release.

Pages used for tracking localization inventory.

- Localization Inventory Validation (GTVLCIN) page

Validation page for Banner localization codes. Ellucian delivers all currently available localization codes regardless of the Banner localization products installed at an institution.

- Installed Localization Inventory (GUILCIN) page

Query only page to view installed Ellucian Banner Localizations.

Both pages belong to the BAN\_ADMIN\_C security class.

## User Preferences for Admin settings

A user can set their individual custom preferences for administrative pages that persist across sessions as long as the institution has this feature enabled.

The Installation Controls (GUAINST) and Object Maintenance (GUAOBS) pages provide a way for administrators to enable this feature at the institution level and control the pages to allow this feature.

Page	New option	Description
GUAINST	<b>User Preferences for Admin Enabled</b>	Select this check box to enable this feature for the institution.
GUAOBS	<b>User Preferences for Admin Option</b>	Select the pages to allow this feature by selecting or clearing the check box.

## Application Navigator Integrated Menu

Using the Object Maintenance (GUAOBS) page, an administrator can select which Objects to include or exclude from being visible on the Application Navigator menu and from search results.

Select the **Menu Option** check box for a specified Object on GUAOBS to make it searchable and visible on the menu. Clear the **Menu Option** check box for a specified Object to exclude it from being searchable and visible on the menu.

## Validation Pages

You can use validation pages to build, maintain, and view validation tables. Validation tables let you tailor the system to your needs by providing lists of coded values that you can enter in specific fields.

The Expense Code Validation (GTVEXPN) page, for example, lets you identify and assign a code to each expense associated with event functions. When a user enters a value in the **Expense** field on a data entry page, the system checks the validation table, verifies the code, and issues an error message if the value is not valid. The system may also display the complete name of the expense code entered. If you need a new event expense or want to delete an obsolete expense, you can easily update the list of valid values by editing the validation page.

If more than one Banner™ product is installed at your institution, a number of the validation page names beginning with STV are shared validation pages. Shared validation pages are also listed in this section.

## Accessing validation pages

You can access validation pages in several different ways.

- Use Direct Access to enter the page name.
- Use Object Search to search for and select the page.
- Choose the List function while in the field. Sometimes the complete validation page appears, while other times a **Lookup** button appears. These values are display-only.
- Select from a menu.

## Validation pages reference

The list below identifies the validation pages used by the General System.

Validation page	Used By
GTVADID	%IDEN pages
Additional Identification Type Validation page	

<b>Validation page</b>	<b>Used By</b>
GTVCCPD Personal Data Consent Code Validation page	GUACCPR Consent to Capture and Process Personal Data page
GTVCCPP Personal Data Persona Type Code Validation page	GUACCPR Consent to Capture and Process Personal Data page
GTVCCRD Credit Card Type Validation page	GORCCRD Credit Card Rules page GOAMERC Credit Card Merchant ID page
GTVCELG Certification of Eligibility Validation page	GOINTL International Information page
GTVCMSC Common Matching Source Code Validation page	GOAMTCH Common Matching Entry page GORCMRL Common Matching Rules page GORCMSC Common Matching Source Rules page GORCMUS Common Matching User Setup page
GTVCTYP Proxy Access Communication Type Validation page	GERCOMM Proxy Access Communication Rule page
GTVCURR Currency Codes Validation page	GUACURR Currency Conversion page GUAINST Installation Control page GXR BANK Bank Code Rule page

<b>Validation page</b>	<b>Used By</b>
GTVDADD Desktop Tools - Add-In Validation page	GOADADD Desktop Tools - Add-In Application page
GTVDICD District Division Code Validation page	SLAEVNT Event page STVCAMP Campus Code Validation page
GTVDIRO Directory Item Validation page	GOADPRF Web User Directory Profile page
GTVDOCM Visa Document Code Validation page	GOAINTL Visa International Information page
GTVDPRP Desktop Tools - Step Property Validation page	GORDPRP Desktop Tools - Step Property Values Rule page GORDSTP Desktop Tools - Step Type Properties Rule page
GTVDSTP Desktop Tools - Step Type Validation page	GOADSTE Desktop Tools - Wizard Steps Setup Application page GORDSTP Desktop Tools - Step Type Properties Rule page
GTVDTYP Proxy Access Data Type Validation page	GERPRXY Proxy Access Data Option Rules

<b>Validation page</b>	<b>Used By</b>
GTVDUNT Duration Unit Validation Table	SCACRSE Basic Course Information page SFARGFE Student Course Registration page SFARHST Student Registration History and Extension page SSARULE Schedule Processing Rules page SSASECQ Schedule Section Query page SSASECT Schedule page
GTVEMAL E-mail Address Type Validation page	GOAEMAL E-mail Address page
GTVEMPH Emphasis Code Validation page	SLAEVNT Event page
GTVEQNM Event Queue Code Validation page	GOAEQRM Event Queue Record Maintenance page GOREQNM Event Queue Name Definition page
GTVEQPG Parameter Group Code Validation page	GOREQNM Event Queue Name Definition page GOREQPG Parameter Group Rule page
GTVEQPM Parameter Code Validation page	GOREQPG Parameter Group Rule page

<b>Validation page</b>	<b>Used By</b>
GTVEQTS Target System Code Validation page	GOAEQRM Event Queue Record Maintenance page GOREQNM Event Queue Name Definition page
GTVEXPN Expense Code Validation page	SLAEVNT Event page
GTVFDMN FGAC Domain Validation page	GOAFGAC FGAC Group Rules page GORFDMN FGAC Domain Driver Rules page GOAFBPI FGAC PII Domain Business Profile Assignments
GTVFDTP FGAC Domain Type Validation page	GORFDMN FGAC Domain Driver Rules page GORFDTP FGAC Domain Type Predicate Rules page
GTVFEES Fee Status Code Validation page	GEAATID Event Registration page GEAATTD Attendance page
GTVFGAC FGAC Group Validation page	GOAFGAC FGAC Group Rules page

<b>Validation page</b>	<b>Used By</b>
GTVFBPR	GOAFGAC
FGAC Business Profile Validation page	FGAC Group Rules page
	GOAFPUD
	FGAC Person User Defaults page
	GORDMSK
	Data Display Mask Rules page
	GOAFBPR
	FGAC Business Profile Assignments page
	GOIFBPR
	FGAC Business Profile Inquiry page
GTVFSTA	SLAEVNT
Function Status Code Validation page	Event page
GTVFTYP	SLAEVNT
Fee Type Code Validation page	Event page
GTVFUNC	SLAEVNT
Function Code Validation page	Event page

<b>Validation page</b>	<b>Used By</b>
GTVINSM	ROASECT
Instructional Method Validation page	Section Unavailable for Aid page
	SCACRSE
	Basic Course Information page
	SFARGFE
	Registration Fee Assessment Rules page
	SOAORUL
	Open Learning Section Default Rules page
	SSADFEE
	Section Fee Assessment Control page
	SSASECQ
	Schedule Section Query page
	SSASECT
	Schedule page
	STVSCHD
	Schedule Type Code Validation page
GTVLCIN	GUILCIN
Localization Inventory Validation	Installed Localization Inventory
GTVLETR	SLAEVNT
Letter Code Validation page	Event page
	GUALETR
	Letter Process page

<b>Validation page</b>	<b>Used By</b>
GTVLFST Learner Field of Study Type Validation page	SRARECR Recruit Prospect Information page SAAADMS Admissions Application page SGASTDN General Student page SFAREGS Student Course Registration page SHADEGR Degrees and Other Formal Awards page
GTVMAIL Mail Code Validation page	SLAEVNT Event page
GTVMENU Menu Code Validation page	GEAATID Event Registration page GEAATTD Attendance page SLAEVNT Event page
GTVMTYP Meeting Type Validation page	SSASECT Schedule page SSAXMTI Cross List Meeting Time / Instructor Query page
GTVNTYP Name Type Validation page	SPAIDEN Identification page

<b>Validation page</b>	<b>Used By</b>
GTVOBJT Object Code Validation page	GUAOBSJ Object Definition page GUTGMNU Menu Maintenance page GUAPMNU My Banner Maintenance page GUTPMNU My Banner Maintenance and Copy page
GTVOTYP Proxy Access Option Type Validation page	GERPRXY Proxy Access Data Option Rules
GTVPARA Paragraph Code Validation page	GUALETR Letter Process page GUAPARA Paragraph page
GTVPARS Scheduling Partition Validation page	None
GTVPRNT Printer Validation page	GJAJOBS Process Maintenance page GJAPCTL Process Parameter Entry page
GTVPROC Process Name Validation page	GOAMERC Credit Card ID Transaction page
GTVPTYP Participant Type Code Validation page	GEAPART Function Participant page
GTVPURP Purpose Code Validation page	SLAEVNT Event page
GTVQUIK QuickFlow Code Validation page	GUAQUIK QuickFlow Definition page

<b>Validation page</b>	<b>Used By</b>
GTVRATE Fee Rate Code Validation page	SLAEVNT Event page
GTVRETP Proxy Access Relationship Type Validation page	GERCOMM Proxy Access Communication Rule page GERPRXY Proxy Access Data Option Rules
GTVREVN Revenue Code Validation page	SLAEVNT Event page
GTVRSVP RSVP Code Validation page	GEAATID Event Registration page GEAATTD Attendance page
GTVRTNG Rating Code Validation page	GEAPART Function Participant page
GTVSCDE Personal Data Source Code Validation page	GUACCPR Consent to Capture and Process Personal Data page
GTVSCHS Scheduling Status Code Validation page	None
GTVSCOD EDI/ISO Standard Code Validation page	GUACURR Currency Code Maintenance page
GTVSDAX Crosswalk Validation page	None
GTVSEID Social Economic Identity Code page	GOASEID Social Economic Identity Rules GOASETP Social Economic Identity Report page

<b>Validation page</b>	<b>Used By</b>
GTVSEIR Social Economic Identity Report	GOAPSID Person Social Economic Identity Details page GOASETP Social Economic Identity Report page
GTVSQPA Business Rule Parameter Code Validation page	GORRSQL Business Rules page
GTVSQPR Business Rule Process Code Validation page	GORRSQL Business Rules page
GTVSQRU Business Rule Code Validation page	GORRSQL Business Rules page
GTVSRCE Visa Source Code Validation page	GOAINTL Visa International Information page
GTVSUBJ Subject Index Code Validation page	GEAFCOM Function Comment page
GTVSVCA SEVIS Student Cancellation Reason Code Validation page	GOASEVS SEVIS Information page
GTVSVCC SEVIS Category Code Validation page	GOASEVS SEVIS Information page
GTVSVCP SEVIS Consular Post Validation page	GOASEVS SEVIS Information page
GTVSVCR SEVIS Creation Reason Code Validation page	GOASEVS SEVIS Information page
GTVSVDT SEVIS Dependent Termination Code Validation page	GOASEVS SEVIS Information page
GTVSVEL SEVIS Education Level Code Validation page	GOASEVS SEVIS Information page

<b>Validation page</b>	<b>Used By</b>
GTVSVEP	GOASEVS
SEVIS EV End Program Reason Code Validation page	SEVIS Information page
GTVSVFT	GOASEVS
SEVIS Drop Below Full Time Reason Code Validation page	SEVIS Information page
GTVSVGO	GOASEVS
SEVIS Governmental Organization Code Validation page	SEVIS Information page
GTVSVIO	GOASEVS
SEVIS International Organization Code Validation page	SEVIS Information page
GTVSVIT	GOASEVS
SEVIS Infraction Type Code Validation page	SEVIS Information page
GTVSVPC	GOASEVS
SEVIS Exchange Visitor Position Code Validation page	SEVIS Information page
GTVSVRP	GOASEVS
SEVIS Request for page Reprint Code Validation page	SEVIS Information page
GTVSVTR	GOASEVS
SEVIS Termination Reason Code Validation page	SEVIS Information page
GTVSVTS	SEVIS Transmittal History (GOASEVR) page
SEVIS Transmittal Status Code Validation page	

<b>Validation page</b>	<b>Used By</b>
GTVSYSI System Indicator Validation page	GJAJOB Process Maintenance page GLRAPPL Application Definition Rules page GORTCTL Third-Party Electronic Control Rules page GUAOBS Object Maintenance page GUTGMNU Menu Maintenance page GSASECR Banner Security Maintenance page SLAEVNT Event page
GTVSYST Proxy Access System Code Validation page	GERCOMM Proxy Access Communication Rule page GERPRXY Proxy Access Data Option Rules GTVOTYP Proxy Access Option Type Validation page
GTVTARG Target Audience Code Validation page	SLAEVNT Event page
GTVTASK Task Code Validation page	GEATASK Function Task page
GTVTRTP EDI Transaction Type Validation page	GXATPID EDI Trading Partner Identification page GXRETID EDI Transaction ID Rules page

<b>Validation page</b>	<b>Used By</b>
GTVTSTA Task Status Code Validation page	GEATASK Function Task page
GTVTTYP Task Type Code Validation page	GEATASK Function Task page GTVTASK Task Code Validation page
GTVVAPP Value-Based Security Application Codes page	GOABACR Value-Based Security Access Rules page GOAPCRL Value-Based Security Pattern Control Rules page GOAVUSR Value-Based Restricted Users page
GTVVBTY Value-Based Security Type Validation page	GTVVAPP Value-Based Security Application Codes page
GTVVISS Visa Issuing Authority Validation page	GOAINTL Visa International Information page
GTVVOBJ Value-Based Security Object Code Validation page	GOABACR Value Based Security Access Rules page GOAPCRL Value-Based Security Pattern Control Rules page
GTVZIPC ZIP/Postal Code Validation page	SLABLDG Building Definition page STVSITE Site Code Validation page
GXVDIRD Bank Routing Number Validation page	GXADIRD Direct Deposit Recipient page

<b>Validation page</b>	<b>Used By</b>
STVASRC Address Source Validation page	GOAADDR Address Review and Verification page
STVATYP Address Type Code Validation page	GOAADDR Address Review and Verification page GOAADRL Address Role Privileges page GOADIRO Directory Options Rule page
STVBLDG Building Code Validation page	SLABLDG Building Definition page
STVCAMP Campus Code Validation page	GTVPARS Scheduling Partition Validation page SLABLDG Building Definition page SLAEVNT Event page
STVCITZ Citizen Type Code Validation page	Refer to the system-specific documentation for a complete listing
STVCNTY County Code Validation page	GOAADDR Address Review and Verification page GTVZIPC ZIP/Postal Code Validation page SLABLDG Building Definition page APAIKEN, FOAIKEN, PPAIDEN, SPAIDEN Identification Pages

<b>Validation page</b>	<b>Used By</b>
STV COLL College Code Validation page	GT VEMPH Emphasis Code Validation page SLABLDG Building Definition page SLAEVNT Event page SLARDEF Room Definition page
STV DAYS Day of Week Validation page	SLAEVNT Event page
STV DEGC Degree Code Validation page	Refer to the system-specific documentation for a complete listing
STV DEPT Department Code Validation page	GT VEMPH Emphasis Code Validation page SLABLDG Building Definition page SLAEVNT Event page SLARDEF Room Definition page
STV EMPT Employment Type Validation page	Refer to the system-specific documentation for a complete listing
STV ETHN Ethnic Code Validation page	Refer to the system-specific documentation for a complete listing
STV ETYP Event/Function Type Code Validation page	SLEVNT Event page GTVFUNC Function Code Validation page

<b>Validation page</b>	<b>Used By</b>
STVHOND Departmental Honors Code Validation page	Refer to the system-specific documentation for a complete listing
STVLGCY Legacy Code Validation page	Refer to the system-specific documentation for a complete listing
STVMAJR Major, Minor, Concentration Code Validation page	Refer to the system-specific documentation for a complete listing
STVMRTL Marital Status Code Validation page	Refer to the system-specific documentation for a complete listing
STVNATN Nation Code Validation page	GOAADDR Address Review and Verification page GOASEVS SEVIS Information page GTVZIPC ZIP/Postal Code Validation page GUACURR Currency Code Maintenance page GUAINST Installation Control page STVSITE Site Code Validation page APAIDEN, FOAIDEN, PPAIDEN, SPAIDEN Identification Pages
STVPRCD Phone Rate Code Validation page	SLABLDG Building Definition page SLARDEF Room Definition page
STVRDEF Building/Room Attribute Code Validation page	SLABLDG Building Definition page SLARDEF Room Definition page

<b>Validation page</b>	<b>Used By</b>
STVRELG Religion Code Validation page	Refer to the system-specific documentation for a complete listing
STVRELT Relation Code Validation page	Refer to the system-specific documentation for a complete listing
STVRMST Room Status Code Validation page	SLARDEF Room Definition page
STVRRCD Room Rate Code Validation page	SLABLDG Building Definition page SLARDEF Room Definition page
STVSITE Site Code Validation page	SLABLDG Building Definition page SLAEVNT Event page
STVSTAT State/Province Code Validation page	GOAADDR Address Review and Verification page GTVZIPC ZIP/Postal Code Validation page SLABLDG Building Definition page STVSITE Site Code Validation page
STVTELE Telephone Type Validation page	GOAADDR Address Review and Verification page STVATYP Address Type Code Validation page APAIKEN, FOAIKEN, PPAIKEN, SPAIKEN Identification Pages

Validation page	Used By
STVTERM	SLARDEF
Term Code Validation page	Room Definition page
GTVIMMU	GOAIMMU
Immunization Code Validation page	Immunization Information page
GTVIMST	GOAIMMU
Immunization Status Code Validation page	Immunization Information page

## Processing

You can perform miscellaneous tasks with Banner General.

### Multi-Entity Processing procedures

At institutions that use Multi-Entity Processing, all pages that are Multi-Entity Processing-enabled display two contexts in the title bar: the home context and the process context. In the following example, the home context appears first, and is enclosed in parentheses. The process context appears second, and has no parentheses.

#### Home context

The home context is the **Institution Code** that is an Oracle Application Context; the value is your default VPDI code. Your options for choosing the home context vary according to how **Institution Codes** are set up for you on the Oracle/Banner VPD Security Maintenance (GSAVPDI) page.

- If there are multiple **Institution Codes** set up for your User ID on the User Assignment section of GSAVPDI, then you will have multiple codes from which to choose the home context for your Banner session. If you exit GUQSETI without manually selecting a code, then the code designated as your default **Institution Code** on GSAVPDI will be used as the home context. Your default code always appears first in the GUQSETI list, and is highlighted.
- If there is only one **Institution Code** set up on the User Assignment section, then that code will be used as your home context, and GUQSETI will not appear when you log in. The Institution Code assigned to you is your default Institution Code.
- If no codes are set up for you on the User Assignment section, then the Banner system default **Institution Code** will be used as your home context.

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## Process context

The process context is the **Institution Code** to which you switch during your Banner session. In some Multi-Entity Processing implementations, the process context can be changed to filter different institutions.

If your process context is different than your home context, you cannot save any changes to the database for the Institution Code of your process context.

**Note:** If you need to switch to a different Institution Code and make changes to that institution's data, you must restart your Banner session and select the new Institution Code during login. The new Institution Code is then your home context.

If you do not change codes during the session, then your process context will be the same as your home context.

**Note:** The process context (and not the home context) is used by the Banner Document Management Suite (BDMS) interface. The process context is passed as a parameter in the URL handed from Banner to BDMS.

## How to switch between institution codes

If your institution has determined to allow cross institution viewing of data on specific pages, you can switch institutions (process context) without leaving the page. This feature only works for data that has been designed to be queried by all institutions.

### About this task

The **Institution Selector** button is enabled only for pages that use data which is designed to be queried by all institutions.

### Procedure

1. Click the icon on the toolbar, or press the **Ctrl-Shift-F10** keys simultaneously.
2. Enter an **Institution Code**. You can use the **Lookup** button to select a code from the Institution Code Validation (GTVVPDI) list, or, if you want to view further information about the available codes, click the **View Existing Institutions Values** link. If you select a row from the Existing Institution Values list, the values are brought back to the key block of the page. You can then view the data related to those particular values elsewhere on the page.
3. Click **OK**.

This **Institution Code** (the "process context") now appears in the title bar after the code under which you logged in (the "home context"). Depending on the security policies established by the institution, you may have the ability to insert, update, or delete information using this selected institution code, or you may be limited to only viewing data with this selected institution.

## How changing institution codes impacts your Banner session

Banner processes always use the user's home context, the institution chosen on the Set Institution Code (GUQSETI) page during Banner login.

Banner pages might use the new institution code (your process context) if the Multi-Entity Processing implementation allows the data on the page to be queried across institutions; processes will continue to use your home context.

When you change **Institution Codes** during a session, the Banner page might use the code that appears second in your title bar if the Multi-Entity Processing implementation allows for filtering across institutions for the data the page uses. The code you chose on GUQSETI upon login appears first in the title bar.

Example of title bar after you have switched Institution Codes:

(CAMP1) : CAMP2

(CAMP1) is the Home Context you chose upon login. It is always used by Banner processes, regardless of whether you change **Institution Codes**.

CAMP2 is the Process Context, the code to which you changed. It might be user by Banner pages if the Multi-Entity Processing implementation allows for filtering across institutions for the data behind the Banner pages.

### *Job Submission*

Your jobs will run under the home institution that you set for the session at login, regardless of the default institution code that is set up for you on GSAVPDI.

#### **For jobs submitted through Job Submission (not on hold)**

The institution code that Banner uses for processing in a particular session is always the one you chose on login to that Banner session. Before this enhancement, if you had several sessions open at once, Banner used the code from the most recently-opened session for jobs that you processed in any of your open sessions, regardless of the code originally chosen for that session. With this enhancement, the institution code used for processing jobs is specific to the session you are in, regardless of other sessions you may have open.

#### **For jobs put on hold for future processing**

When you put a job on hold on the Job Submission (GJAPCTL) page, Banner saves the institution code that you chose for the session, along with the job sequence number, to a new table. Later, when you submit the job for processing, you must manually set the "one up" environment variable to the job sequence number, so that Banner can retrieve the stored institution code for the job.

The environment variable you must set is:

Platform	Variable	Example
UNIX	ONE_UP	export ONE_UP=123456 (where 123456 is the jobseqno)

---

Platform	Variable	Example
WIN NT	SCTBAN_ONE_UP_NUMBER	set SCTBAN_ONE_UP_NUMBER = 123456 (where 123456 is the jobseqno)
VMS	SEQ	ONE_UP_NO := 123456 (where 123456 is the jobseqno)

---

### *Jasper Reports*

You can run the Jasper Reports from the page or from Job Submission.

#### *Running Jasper Reports from the page*

Jasper Reports are run using the process context setting in the preceding example, as long as the page from which the report is being called is listed on GORVPDI.

**Note:** If the page that calls the Jasper Report is not listed on GORVPDI, then the report can only be run under the user's home context.

#### *Running Jasper Reports from Job Submission*

If you have Jasper Reports that can only be run through GJAPCTL, or if the Jasper Report is initiated through GJAPCTL, then the home context is used.

If users need to use the process context for Jasper Reports that are initiated through GJAPCTL, then you may consider adding GJAPCTL to GORVPDI. However, this causes the process context to appear in the title bar of GJAPCTL, which then allows the user to change **Institution Codes**. A user who is executing a C process or other Banner report might assume that the process or report is being executed under the process context institution, which is not the case. The change in the **Institution Code** is effective only for Jasper Reports.

### *Set up medical information*

The General Medical Information (GOAMEDI) page allows you to view and update the medical conditions of people at your institution, including students, faculty, and staff. The following steps are necessary to set up medical information.

#### **Procedure**

1. Go to the **Disability Type Validation (STVDISA)** page.
  - a) Create Disability Codes.
  - b) Save the page.
2. Go to the **Medical Disability Rule (GORMEDR)** page.
  - a) In Disability Type Information section, search for the Disability Code that will be the default code on the **General Medical Information (GOAMEDI)** page.
  - b) Check **Default** for the code that will be the default code on the General Medical Information (GOAMEDI) page.
  - c) Save the page.

3. Go to **General Medical Information (GOAMEDI)** page.
  - a) In the Key Block, search for the name of the person for which you are defining medical information.
  - b) In the Medical Information section, enter a Medical Code, a Medical Date, and a Disability Type, and a Comment at a minimum.
  - c) Save the page.

## Job Submission

The Job Submission module facilitates the submission of reports and processes throughout Banner™.

Some of the functions you can perform in the Job Submission module are:

- Submit a Banner report or process for processing.
- Define the characteristics of each Banner report or process that can be run at your institution.
- Define the parameters that control the processing of a report or process.
- Define user-level defaults for the parameters that control the processing of a report or process.
- Display output from a report or process that was run through Job Submission and saved to the database.
- Import and download files from the Job Submission server without having direct file access

## Validation pages

Job Submission pages use the following validation pages.

Validation page	Used By
GTVPRNT Printer Validation page	GJAJOB Process Maintenance page
	GJAPCTL Process Submission Control page
GTVSYSI System Indicator Validation page	GJAJOB Process Maintenance page

## Related report

The List of Reports and Parameters (GJRRPTS) shows reports and processes with their associated parameters. You can print the report for a single process, or you can use wildcards to print the report for all processes that begin with a specified string of characters.

### Related reference

[Reports & Processes](#) on page 251

## Menu navigation table

Pages in the Job Submission module can be accessed from the following menu.

Menu	Description
GJAPCTL	<p>Process Submission Control page</p> <p>Lets you submit a Banner report or process for processing. You can run the process or report immediately or hold it for later processing. You can save the parameter values as user-level defaults.</p>
GJAJOBS	<p>Process Maintenance page</p> <p>Defines the characteristics of each Banner report and process that can be run at your institution.</p>
GJAPDEF	<p>Parameter Definition page</p> <p>Identifies the parameters that control the processing of a report or process. Establishes validation characteristics for the parameters. Defines system-level defaults for the parameters.</p>
GJAPVAL	<p>Parameter Value Validation page</p> <p>Defines valid values for the parameters that control the processing of a report or process.</p>
GJAPDFT	<p>Default Parameter Value Validation page</p> <p>Defines user-level defaults for the parameters that control the processing of a report or process.</p>
GJRJPRM	<p>Job Parameter Set Rule page</p> <p>Defines the names of the job parameter sets used at your institution.</p> <p>The actual defaults in a set are defined on the Process Submission Control (GJAPCTL) page or the Default Parameter Value Validation (GJAPDFT) page.</p>

<b>Menu</b>	<b>Description</b>
GJARSLT	<p>Process Results page</p> <p>Displays a list of reports and processes that were run through Job Submission. Failure messages identify problems in batch processing and COBOL processes that were run online.</p>
GTVPR NT	<p>Printer Validation page</p> <p>Defines the codes that identify the printers at your institution.</p>
GJIREVD	<p>Delete Saved Output page</p> <p>A page to enable the deletion of multiple files at one time.</p>
GJIREVO	<p>Saved Output Review page</p> <p>Displays output from a report or process that was run on the Process Submission Control (GJAPCTL) page and saved to the database.</p>
GJAJPRF	<p>Job Submission Profile Maintenance page</p> <p>Defines the directory used to save output from jobs run with the Process Submission Control (GJAPCTL) page.</p>
GJASWPT	<p>Sleep Wake Maintenance page</p> <p>Allows you to monitor and control sleep/wake processing that has been set up for specific Banner processes in the Student System and the Accounts Receivable System.</p>
GJAJBMO	<p>JobSub Output Definition (GJAJBMO) page</p> <p>Allows you to define and activate Job Submission processes for the file save and download process.</p>
GJAJFLU	<p>Import File to JobSub Server (GJAJFLU) page</p> <p>Allows you to import files to the Job Submission server.</p>
GJAJLIS	<p>Saved JobSub Reports (GJAJLIS) page</p> <p>Displays a list of the report files that are uploaded and saved to the Job Submission server.</p>
GJALCPR	<p>Local Print Printer Definition (GJALCPR) page</p> <p>Identifies the printers on the Printer Validation (GTVPRNT) page that are printed external to Job Submission.</p>
GJIJBMO	<p>JobSub Output Definition Inquiry (GJIJBMO) page</p> <p>Allows you to view the status of jobs activated for GJRJLIS output processing.</p>

Menu	Description
GTVPDFT	<p>JobSub PDF Font Type (GTVPDFT) page</p> <p>Stores the valid PDFBox font code values used by the Purge Saved Report Output from JobSub Server (GJPJLIS) process to convert Job Submission output to PDF.</p>

Job Submission also uses the Alternate Logon Verification (GUAUIPW) page, which is not called from the menu. This page lets you enter an alternate user ID and password, changing the user ID that runs the job.

**Note:** You cannot enter an OPS\$ account in the **Alternate User ID** field on GUAUIPW.

## Oracle\*Wallet Proxy for Job Submission

This supports communicating with Job Submission through a proxy user with an Oracle\*Wallet supporting configuration on the Job Submission server.

This also supports running batch jobs without requiring to pass the user's password value to the Job Submission server.

When a user is connected to the Banner application, that user is commonly connected through a proxy connection. The user's password will not be known to pass it to the Job Submission server.

## Job Submission procedures

Submitting reports and other data processing jobs is a common activity for all Banner systems.

With the Job Submission module you can:

- Define new reports and processes to Job Submission
- Define default parameter settings
- Run Banner reports and processes
- Upload and download files from the Job Submission server without having direct file access

### Define new reports and processes to Job Submission

You can define a new report and process to Job Submission.

#### Procedure

1. Use the **Process Maintenance (GJAJOB)** page to define the characteristics of the report or process.
2. Use the **Parameter Definitions (GJAPDEF)** page to define the characteristics and validation requirements of the parameters for the report or process. Optionally, you can establish system-level defaults.

3. For parameters that cannot be validated by an existing validation or list page on Banner, but have a defined set of values, use the **Parameter Value Validation (GJAPVAL)** page to set up valid values. An example of this type of parameter is a Y/N option or a R (report)/U (update) option.
4. Use the **Default Parameter Value Validation (GJAPDFT)** page to define any user-level defaults. Each user must individually identify defaults on this page. Defaults are saved under the user ID that logged on to Banner.

## Set up parameter defaults for Banner reports and processes

Using default parameters reduces the number of parameter values you must enter each time you run a report or process. You can define both system-level and user-level defaults.

System-level defaults apply to all users at your institution. They have lower priority and are used only when a parameter does not have a user-level default. System-level defaults are defined on the Parameter Definition (GJAPDEF) page. A report or process can have only one set of system-level defaults.

Individual users can have one or more sets of user-level defaults for a report or process. This is useful if a user wants to run a report or process with distinct, but frequently used parameter combinations. For example, a user can have three sets of defaults for running the Person Directory (SPRPDIR): one set for recruits, another for students, and another for faculty. Each set of defaults is called a job parameter set and has its own name. If a user has more than one set of defaults for a report or process, the name of the job parameter set must be entered when the report or process is submitted on the Process Submission Control (GJAPCTL) page.

Parameter defaults must pass several validation checks when you create them:

- If specific parameter values are defined on the Parameter Value Validation (GJAPVAL) page, the default must equal one of these values.
- If a validation page is linked to the parameter on the Parameter Definition (GJAPDEF) page, the default must equal a value on the validation page.
- If a validation routine is linked to the parameter on GJAPDEF, the default must pass the special validation checking.
- The default must meet all validation criteria defined on GJAPDEF. These criteria include the data type, length, and range of values.
- If a validation routine is linked to the report or process on the Process Maintenance (GJAJOB) page, the default must pass consistency checks applied to a group of parameters.

### *Set up system-level defaults*

You can use the Parameter Definition (GJAPDEF) page to set up system-level defaults.

#### **Procedure**

1. Access the **Parameter Definition (GJAPDEF)** page.
2. Enter the name of the report or process in the **Process Name** field. You can select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.

3. Go to the next section.
4. Select the parameter for which you are entering a system-level default.
5. Enter the default value in the **Default** field. If validation requirements have been established for the parameter, select the down arrow icon to display a list of valid parameter values.
6. Save your changes.

### *Set up valid characters for the Special Print field*

You can establish which characters are permitted in commands entered in GJAPCTL's **Special Print** field. You can set up either a list of not valid characters that will not be permitted in the special print field, or a list of valid characters, with all other characters being prohibited.

This rule is set up one time and affects all users in the institution. The setup must be done by a security administrator in the Banner Security Maintenance page (GSASECR).

### *Set up user-level defaults*

There are two ways to set up user-level parameter defaults.

- You can create a single set of user-level defaults for a report or process on the Default Parameter Value Validation (GJAPDFT) page. The defaults are associated with the user ID.
- You can create one or multiple sets of defaults by using the Process Submission Control (GJAPCTL) page. If you have multiple sets, each job parameter set must have its own name. The defaults in each set are associated with the user ID and the job parameter set.

#### *Use GJAPDFT*

This page allows you to create a single set of user-level parameter defaults for a report or process.

#### **Procedure**

1. Log on to Banner with the user ID that will be linked to the defaults.
2. Access the **Default Parameter Value Validation (GJAPDFT)** page.
3. Enter the report or process name in the **Process** field. Select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.
4. Make sure the **Parameter Set** field is blank.
5. Go to the next section.
6. Select the parameter for which you are entering a user-level default.

**Note:** A message at the bottom of the page describes the selected parameter.

7. Go to the next section.
8. Enter the valid parameter value in the **User Default** field. If validation requirements have been established for the parameter, select the down arrow icon to display a list of valid parameter values.
9. Save your changes.

### Use GJAPCTL

This page allows you to run a report or process and save the parameters as user-level defaults. If you want to save more than one set of parameters for the report or process, you can save the current set with a unique name.

### About this task

The defaults in each set are associated with the user ID and the job parameter set.

### Procedure

1. Log on to Banner with the user ID that will be linked to the defaults.
2. Access the Process Submission Control (GJAPCTL) page.
3. Enter the name of the report or process in the **Process** field. You can select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.
4. Make sure the **Parameter Set** field is blank.
5. Go to the Printer Control section.
6. **Optional:** Enter any print parameters. (Print parameters are not saved as user-level defaults.)
7. Go to the Parameter Values section.
8. Enter the default value for each parameter in the **Values** fields.

Select the down arrow icon on the **Parameters** field to display the Parameter Definition (GJAPDEF) page with details for the selected parameter.

If validation requirements have been established for the parameter, you can select the down arrow icon on the **Values** field to display a list of valid parameter values.

**Note:** A message at the bottom of the section describes the selected parameter.

9. Go to the Submission section.
10. Select the **Save Parameters** check box.
11. If you want only one set of parameter defaults for the report or process, make sure the **As** field is blank.

OR

If you want multiple sets of parameter defaults for the report or process, enter the name and description of a new job parameter set in the **As** field.

12. Select the **Hold** option button or the **Submit** option button.
13. Save your changes.

**Note:** If you enter a job parameter set name and description in step 11, the job parameter set is automatically added to the Job Parameter Set Rule (GJRJPRM) page.

### Related concepts

[Use GJAPCTL](#) on page 46

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## Change user-level defaults

You can change user-level parameter defaults on two different pages.

- Default Parameter Value Validation (GJAPDFT) page
- Process Submission Control (GJAPCTL) page

### Use GJAPDFT

You can use this page to change user-level parameter defaults.

### Procedure

1. Log on to Banner with the user ID that is linked to the defaults that need to be changed.
2. Access the **Default Parameter Value Validation (GJAPDFT)** page.
3. Enter the report or process name in the **Process** field. You can select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.
4. If you are changing defaults for a job parameter set, enter the name of the set in the **Parameter Set** field. You can select the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
5. Go to the next section.
6. Select the parameter for which you are changing a user-level default.

**Note:** A message at the bottom of the page describes the selected parameter.

7. Go to the next section.
8. To change the default, enter the new default in the **User Default** field. If validation requirements have been established for the parameter, you can select the down arrow icon to display a list of valid parameter values.

OR

To delete the default, select the Remove Record function.

OR

To clear all user-level defaults associated with the job parameter set for the report or process, select the Clear Block function.

9. Save your changes. The new defaults appear on the **Process Submission Control (GJAPCTL)** page the next time the report or process is run.

### Use GJAPCTL

You can use this page to change user-level parameter defaults.

### Procedure

1. Log on to Banner with the user ID that is linked to the defaults that need to be changed.
2. Access the **Process Submission Control (GJAPCTL)** page.
3. Enter the name of the report or process in the **Process** field. You can select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.

4. If you are changing defaults for a job parameter set, enter the name of the set in the **Parameter Set** field. You can select the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
5. Go to the Printer Control section.
6. **Optional:** Enter any print parameters. (Print parameters are not saved as user-level defaults.)
7. Go to the Parameter Values section.
8. Enter any changes to the parameter values in the **Values** fields.

Select the down arrow icon on the **Parameters** field to display the Parameter Definition (GJAPDEF) page with details for the selected parameter.

If validation requirements have been established for the parameter, you can select the down arrow icon on the **Values** field to display a list of valid parameter values.

**Note:** A message at the bottom of the section describes the selected parameter.

9. Go to the Submission section.
10. Select the **Save Parameters** check box.

**Note:** If you entered a job parameter set name in step 4, the name and description automatically appear in the **As** fields.

**Warning!** If you delete the job parameter set in this section, defaults associated with the user ID will be updated, not the defaults associated with the job parameter set.

11. Select the **Hold** option button or the **Submit** option button.
12. Save your changes.

### *Copy user-level defaults to another user*

You can copy the user-level parameter defaults of one user to another user.

#### **Procedure**

1. Log on to Banner with the user ID that is linked to the defaults that are being copied.
2. Access the **Default Parameter Value Validation (GJAPDFT)** page.
3. Enter the name of the report or process in the **Process** field. Select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.
4. If you are copying defaults for a job parameter set, enter the name of the set in the **Parameter Set** field. You can select the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
5. Go to the next section.
6. Select Copy Defaults to New User from the Options menu.  
The Copy Defaults to New User window appears.
7. Enter the user ID to whom the defaults are to be copied in the **New User** field.  
You can select the down arrow icon to list user IDs.

8. Save your changes.

### *Create a job parameter set*

A single user can have multiple sets of user-level parameter defaults for a report or process. Each set of defaults is called a job parameter set and has its own name.

There are two ways to create a job parameter set:

- You can use the Job Parameter Set Rule (GJRJPRM) page to define the name of the job parameter set. The actual defaults for a specific user are defined at a later time on the Process Submission Control (GJAPCTL) page. Different users can use the same job parameter set name but have different defaults in the set.
- You can define the name of the job parameter set and save the associated parameter values as user-level defaults all at one time on the Process Submission Control (GJAPCTL) page. The job parameter set is automatically added to GJRJPRM.

In either case, after defaults are saved on GJAPCTL, the job parameter set cannot be deleted from GJRJPRM.

#### *Use GJRJPRM*

You can use the Job Parameter Set Rule (GJRJPRM) page to create a job parameter set.

### **Procedure**

1. Access the **Job Parameter Set Rule (GJRJPRM)** page.
2. Enter the report or process name in a blank **Process** field. Select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.
3. Enter the name of the job parameter set in the **Parameter Set** field.
4. Enter a description of the job parameter set in the **Description** field.
5. Save your changes.

### **Results**

These steps establish the name of the job parameter set. The actual defaults in the set are defined on the Process Submission Control (GJAPCTL) page.

Different users can define different defaults with the same job parameter set name. For example, users JKELLY and KMEYER might both use job parameter set YEAREND. JKELLY's default for parameter 1 might be Y (yes), while KMEYER's default for the same parameter might be N (no).

#### *Use GJAPCTL*

You can define the name of the job parameter set and save the associated parameter values as user-level defaults all at one time on the Process Submission Control (GJAPCTL) page. The job parameter set is automatically added to the Job Parameter Set Rule (GJRJPRM) page.

### **Related tasks**

[Use GJAPCTL](#) on page 43

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## Jasper Reports

Jasper reports are special product-specific reports delivered with Banner Student, Accounts Receivable, and Finance.

For information about running a specific Jasper report, refer to the appropriate Banner Student, Accounts Receivable, or Finance user information.

## Run Banner reports and processes

There are two ways to run Banner reports and processes.

- Using Job Submission
- Using the operating system prompt

Whatever method you use, your Job Submission procedures may vary from the ones described in these instructions, because of differences in operating systems, different versions, or site-specific system modifications. Modify the following procedures to your site-specific standards as necessary.

**Note:** Interactively entering job parameters from the host is no longer supported. Parameters for all jobs must be entered on the Process Submission Controls (GJAPCTL) page.

### *Use Job Submission*

Job Submission uses the Process Submission Control (GJAPCTL) page to run reports and processes. You can optionally use the Saved Output Review (GJIREVO) page to view, save, and print these reports and processes without exiting to the operating system.

#### *Run reports and processes*

You must have proper authorization before you can run a report or process. User authorization is established on the Oracle/Banner Security Maintenance (GSASECR) page by authorized staff according to the policies and procedures defined at your institution.

### **Procedure**

1. Access the **Process Submission Control (GJAPCTL)** page.
2. Enter the name of the report or process in the **Process** field. You can select the down arrow icon to access the **Process Maintenance (GJAJOB)** page to search for a report or process.
3. If the report or process has more than one job parameter set, enter the name of the set in the **Parameter Set** field. You can select the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
4. Go to the Printer Control section.

5. **Optional:** Enter any print parameters. Defaults come from the Process Maintenance (GJAJOB) page, but they can be changed.

**Note:** If you want to view, save, or print online, you can indicate `DATABASE` in the **Printer** field. With the addition of the "Manage files for SaaS and Cloud hosted environment" functionality, all output will be written to the database as a BLOB file, whether the user enters `DATABASE` in the **Printer** field or not.

6. Go to the Parameter Values section. Parameters defined for the report or process appear. These parameters are defined on the **Parameter Definition (GJAPDEF)** page. Default parameter values appear, if they have been defined. These defaults can be system-level or user-level.
7. Enter any changes to the parameter values in the **Values** fields. Here are some tips:
  - A message at the bottom of the section describes the currently selected parameter.
  - You can select the down arrow icon on the **Parameters** field to display the Parameter Definition (GJAPDEF) page with details for the selected parameter.
  - If validation requirements have been established for the parameter, you can select the down arrow icon on the **Values** field to display a list of parameter values.
  - Some parameters can have more than one value. This is indicated in the message at the bottom of the section as **M/S: Multiple**. To enter multiple values, place the cursor on the parameter. Select Insert Record. Select Duplicate Record to copy the previous value. Place the cursor on the copied value and change it to the appropriate value. Do not enter multiple values on the same line.
8. Go to the Submission section.
9. **Optional:** To save the set of parameter values as user-level defaults, select the **Save Parameters** check box. If you have only one set of user-level defaults for the report or process, leave the **As** field blank. If you have more than one set of user-level defaults, enter the job parameter set name and description in the **As** field.

**Note:** If you entered a job parameter set name in step 3, the name and description automatically appear in the **As** fields.

10. To hold the report or process and run it from the operating system, select the **Hold** option button. Take note of the sequence number that appears in the auto hint.

OR

To run the report or process immediately, select the **Submit** option button.

11. Save your changes.

**Warning!** When a report or process is saved on GJAPCTL, the associated parameters are stored in the GJBPRUN Table with an assigned parameter sequence number. If a process on hold is never run or if a process runs and fails, the parameter entries remain in the GJBPRUN Table. Over time the table can grow in size tremendously. This is a potential problem depending on the procedures at your installation. The space allocation for GJBPRUN should be monitored closely. Parameters left in the table can be removed through SQL\*Plus.

### Related concepts

[Use the operating system prompt](#) on page 50

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### *Set up Banner to support view, save, and print online output*

Job Submission provides online access to output for viewing, saving, and printing through the Saved Output Review (GJIREVO) page.

#### **About this task**

**Note:** In a Macintosh environment, you cannot print directly from GJIREVO. You must first save the output to a desktop file and print from there.

The Job Submission Profile Maintenance (GJAJPRF) page contains user-level parameters that are used with GJIREVO. The **GURJOBS\_DIRECTORY** parameter identifies the directory used to save your output from jobs that are run with the Process Submission Control (GJAPCTL) page.

To set up Banner to support this feature, you must perform the following steps:

#### **Procedure**

1. Create an Oracle Application Server Listener and PL/SQL cartridge, or use an existing one. An example URL might be:

```
http://yourserver.com:portnumber/plsql/
```

2. In Banner, go to the General User Preferences Maintenance (GUAUPRF) page. Select the Directory Options section.
3. Scroll down until you find the **Description** that contains `Enter the name of your Web Output URL.`

The **Default Value** field contains `http://yourserver.com/directory.`

4. Enter your directory name in **User Value**.
5. Enter the URL you created in **User Value** and save your changes. For example:

```
http://machine123.college.edu:8888/plsql/
```

**Note:** If you want to change this value for all users, you must log onto Banner as the BASELINE user, and then make the changes on GUAUPRF.

6. Login to Banner and go to GJIREVO. The output of the job appears in a separate browser window. You can save the output to a file or send it to a printer by selecting the appropriate item from the Options menu.

### *View, save, and print online output*

You must perform the following steps to view, save, and print online output.

#### **Procedure**

1. Make sure that the default printer used to print online output is set up on the **Printer Validation (GTVPRNT)** page.

2. Use the **Process Submission Control (GJAPCTL)** page to run the report or process as usual. Enter DATABASE in the **Printer** field.

**Note:** If you are running multiple jobs with the same name, the system should not overwrite existing output because Job Submission uses the job's "one up number" as part of the file name. If you are running jobs that don't use the "one up number" as part of the file name, you may overwrite an existing file.

3. Access the **Saved Output Review (GJIREVO)** page.
4. Enter the report or process name that created the output in the **Process Name** field.
5. Enter the sequence number that identifies the specific report or process in the **Number** field.
6. Enter the name of the output file in the **File Name** field.
7. Review the job's output.
8. Select one of these options to save your output
  - To save your output to your local directory and print a copy:
    - Windows PC: Select Save and Print File from the Options menu. A series of dialog boxes asks you to choose a printer and optionally set up a default printer.
    - Macintosh computer: Select Save to File from the Options menu. Then print from your desktop.
    - Web browser: The output of the job appears in a separate browser window. You can save the output to a file or send it to a printer by selecting the appropriate item from the Options menu.
  - To save your output to your local directory without printing, select Save to File from the Options menu.
  - To remove the selected file from the database, select Delete Output from the Options menu.

**Note:** A file is not automatically deleted from the local directory when you save or print the file. You must maintain this directory.

### *Use the operating system prompt*

You can submit a report or process from the operating system. You need directions from your technical support staff regarding directory names, specific commands, and syntax for your operating system. There may be timing restrictions at your installation to prevent long processes from being executed during peak operating hours.

Use the following command format to submit a Banner baseline report or process from the host command:

UNIX:	jobname username/password
OpenVMS:	runproc jobname username/password

For example, the command to run GJRRPTS is

UNIX:	gjrrpts genlusr/u_pick_it
-------	---------------------------

---

```
OpenVMS:          runproc gjrrpts genlusr/u_pick_it
```

---

If you do not specify the username and password on the command line, the system prompts you for them.

Depending on where the executable C program is located at your institution, you may need to enter the directory name before entering the job name. Check with your data center personnel for details. All output is directed to the current directory.

To create an automatic page break for each page (rather than a series of line feeds), enter `-f` following the job name. For example,

---

```
UNIX:             gjrrpts -f genlusr/u_pick_it
```

---

```
OpenVMS:          runproc gjrrpts -f genlusr/u_pick_it
```

---

**Note:** Interactively entering job parameters from the host is no longer supported. Parameters for all jobs must be entered on the Process Submission Controls (GJAPCTL) page.

The system requests two additional parameters:

- **Run Sequence Number**—This is a system-generated number that uniquely identifies the parameter values for executing the job. It is generated when you select the **Hold** field on the Process Submission Control (GJAPCTL) page. If you can leave the parameter blank, the report or process prompts you for all other parameters required for processing. If you enter the run sequence number, the report or process does not prompt for any other parameters. It obtains the parameter values from the parameter table, using the run sequence number as the key to the table. All reports and processes request this parameter, even those normally set up on sleep/wake routines. Entries in the GJBPRUN Table for the run sequence number are deleted after the process is successfully completed.
- **Number of Lines Per Printed Page**—This parameter controls page breaking. The default, which is set on the Process Maintenance (GJAJOB) page, is 55 lines per page. You can override the default on GJAPCTL before the job is run.

**Warning!** The default 55 lines per page cannot be overridden with a value greater than 66 because of an existing rpf restriction that is being enforced to emulate rpf functionality in Pro\*C programs converted by SCTCCONV.

You may want to view the contents of your report online before you print it to verify that you will get the desired output. Check with your technical staff for instructions.

Banner also allows specific reports to be written to a collector file for user-specified time interval processing and print capabilities. These processes use the "sleep/wake" routines which are unique to each process.

#### Related tasks

[Run reports and processes](#) on page 47

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## Manage files for SaaS and Cloud hosted environments

Banner Job Submission supports the management of files for SaaS and Cloud hosted environments.

Users can import and download files from the Job Submission server without having direct file access. This is an alternative to the existing Banner File Upload Utility (GUAUPLP) page which has dependencies on Oracle directories and Banner 8 Self-Service.

### *Import files to the Job Submission server*

You can use the **Import File to JobSub Server (GJAJFLU)** page to import files to the Job Submission server.

#### **Procedure**

1. Access the **Import File to JobSub Server (GJAJFLU)** page.

2. In the **Job** field, enter a job name.

Your user ID is displayed in the key block and the next available number for Job Submission displays in the **One Up No** field.

If you have the Banner security object GJAJFLU\_USER, you can view any other user's imported files on the GJAJFLU page. You can also change the user ID and view the rows. This option is useful in situations when a user has left their position and there is a requirement to view their imported files. You can also create FGAC rules to optionally control which users with the Banner security object GJAJFLU\_USER can view them.

If you have the Banner security object GJAJFLU\_JOBS, you can view the imported files that you create and files created by other users as long as you have access to the job. For example, if you have access only to the Student product, you can list and download output for any Student product process created by any user.

3. Click the **Select File** option to browse and select a file from your desktop to import to the Job Submission server.

**Result:** The selected file name appears in the **File Name** field and defaults into the **Save as File Name** field.

4. In the **Save as File Name** field, enter the name that you want for the saved file.

**Result:** The file name in the **File Name** field is defaulted after the file is selected.

Both the file names are limited to a length of 30 characters.

- 
5. Click **Other Imports with Save as File Name** to display imported files with the same Save as File Name.

**Result:** A window opens and displays the following values for any file which already exists with the same Save as File Name:

- **Job Name**
- **Job Number**
- **Create User**
- **Create Date**
- **Save As File Name**
- **File Path**

If an imported file exists with the same Save as File Name, you can change the file name if you do not want to overwrite that file.

6. **Optional:** Select the **Save in Product Data Home Directory** if you want to save the imported file to the product directory.

For example, `$DATA_HOME/finaid`.

You can select this check box only if you have access to the process you enter in the **Job** field. For example, if you have access only to Student product processes listed in the Banner Security Class `BAN_STUDENT_C`, and you enter a financial aid process in the **Job** field, you will not be able to select the check box.

**Note:** If you do not select the check box or the product defined directory does not exist, the imported file saves to the default job submission home directory.

7. In the **Delete After Days** field, enter the number of days the file should be saved on the Job Submission server.

**Result:** The **Delete After Days** is defaulted to 999 days.

The **Purge Report Output (GJPJLIS)** process removes the files and the **Import File JobSub Server (GJRJFLU)** rows after the number of days entered in this field is passed. The user is allowed to update this field after the file is saved.

8. Save your changes.

**Result:** The save action submits the Import File JobSub Server (GJRJFLU) process that runs on the Job Submission server to import the file to the Job Submission server.

If the file is removed from the Job Submission server or Job Submission is not up, you can run the Import File JobSub Server (GJRJFLU) process from the Process Submission Control (GJAPCTL) page. You need to enter the Job Submission process name, the one up number recorded on the GJAJFLU page and the input file name.

---

### *Define attributes for the file*

You can use the **JobSub Output Definition (GJAJBMO)** page to define and activate Job Submission processes for the file save and download process.

#### **Procedure**

1. Access the **JobSub Output Definition (GJAJBMO)** page.
2. Select the **Enable All** button to do a bulk selection of records and commit them instead of selecting and committing them one by one.
3. In the **Job Name** field, enter a job name.
4. Select the **Enabled** check box to indicate that the file should be imported.
5. In the **MIME Type** field, specify the format in which the file should be saved: plain text or PDF.
6. In the **PDF Font** field, specify the font that should be used for the PDF.  
The font is Courier by default.
7. In the **PDF Font Size** field, specify the size of the PDF font.  
The font size is 8 by default.
8. In the **Maximum Delete After Days** field, specify the maximum number of days the file should be saved on the Job Submission server.  
The Maximum Delete After Days is 999 by default.
9. Save your changes.

You must have the Banner security object GJAJBMO\_INSERT to insert on this page. The **Insert**, **Update**, and **Delete** check boxes are disabled if the environment setting is defined as Windows.

Entries for GJAJBMO are delivered with baseline upgrades for each of the products after the shell scripts for the jobs have been updated to include the step to execute the Saved Job Report Output (GJRJLIS) process. The entry in GJRJBMO allows the administrator to enable the process and users can start using the Saved JobSub Reports (GJAJLIS) page to view their output.

### *Download files from the Job Submission server*

You can use the Saved JobSub Reports (GJAJLIS) page to list and download the output files from the Job Submission server.

#### **Procedure**

1. Access the **Saved JobSub Reports (GJAJLIS)** page.  
This page lists the report files that are imported and saved to the Job Submission server.  
Output rows are sorted by the created date in descending order so that you see the newest files first, followed by the job name and the one up number.  
You can alternatively enter the job name in the key block and filter the output files using the filter options **Job Name**, **Created Date**, **One Up Number**, **File Name**, **Delete After Days**, **Delete**

---

**After Date, Printer Code, MIME Type, PDF Font, and PDF Font Size.** You can update the **Delete After Days** field and postpone the automatic deletion of the physical file.

If you have the Banner security object GJAJLIS\_USER, you can view any other user's output files on the GJAJLIS page. You can also change the user ID and view the rows. This option is useful in situations when a user has left their position and there is a requirement to view their output files. You can also create FGAC rules to optionally control which users with the Banner security object GJAJLIS\_USER can view them.

If you have the Banner security object GJAJLIS\_JOBS, you can view the output files that you create and any files created by other users as long as you have access to the job. For example, if you have access only to the Student product, you can list and download output for any Student product process created by any user.

2. Select the file you want to download and click the **Download File** option.

You have the option to save the file and open it later or open the file and download or print it.

Some sites have printers that are not accessible to the Job Submission server. In such cases, Job Submission cannot print the output. The printers that are printed external to Job Submission are entered on the Local Print Printer Definition (GJALCPR) page. The print command is by-passed for those printers. If it is a printer accessible to Job Submission, the print date is updated by the GJRJLIS process. The process assumes that the print execution has completed successfully.

If the printer is not listed on the GJALCPR page, gjajobs.shl will execute the print command as normal and the GJAJLIS page will be updated with a print date. The **Print Date** field on this page will be blank if the printer is listed on GJALCPR and gjajobs.shl will not execute the print command for these printers.

If the **Print Date** is null, you can select a printer from GJALCPR in the **Printer** field.

### *Alternate method to download files from the Job Submission server*

Users can continue to use the process of specifying DATABASE in the GJAPCTL printer and exporting files with .lis and .log suffixes from GJIREVO.

As of Banner General 8.10.4 release, files created by C processes will be automatically inserted with other suffixes (.csv, .xml, .txt, .lis2, dat, .html, .err) into GJIREVO as long as the file is named for the job and one up number. For example, sfrsscr\_1234.dat.

**Note:** This change is applicable for all deployment models: SaaS, Hosted and On Premise.

With Banner General 8.9.3 release, there is another option for files with a .lis suffix. The GJRJLIS process inserts files into the new BLOB column on the GJRJLIS table and optionally converts them to PDF. Users are not required to enter DATABASE in the printer for this functionality to be executed. To enable a job to be saved in GJRJLIS, the job must be listed on the GJAJBMO page to define defaults and activate GJRJLIS for a job. Ellucian delivers DML scripts to insert jobs into GJAJBMO, but as inactive. The site system administrator can enable jobs as required.

The initial entry of jobs on the GJAJBMO page is set to **MIME Code** of plain text and the **Maximum Delete After Days** is set to 999. The system administrator can change both of these. If the MIME code is changed to PDF, the font COURIER and font size 8 are defaulted on the page. The values can be changed, but the output should be tested to verify that the new font type and font size will not distort the output. Ellucian recommends to use COURIER font and font size 8.

---

The user can override the default values on GJAPCTL when they set up their job to execute. The new columns for **MIME Code**, **PDF Font**, **Font Size** and **Delete After Days** are defaulted in the Print Control section of the GJAPCTL page. The user can change these default values.

After a process's output is listed on the GJAJLIS page, the user can download the file and print or save it to disk. The user can also choose to change the life span of the output by updating the **Delete After Days** value on the GJAJLIS page. Users can only view files they have created by clicking the **Download** button and opening the file on their desktop application.

### *Job Submission server file maintenance*

The **Purge Report Output (GJPJLIS)** process purges files from the Job Submission server. The GJPJLIS process can be scheduled on regular basis with defaults to purge files that have reached the delete after date.

There are several options to set up the job for special processing. The system administrator can select to run with a filter based on a file name. They can also catch old files and override the delete after days age.

The job also has the option to list files on the Job Submission server.

### *Windows and saved output*

Clients with Windows Job Submission servers are not able to use the automatic JobSub Save Output processing from the Job Submission process (GJAPCTL).

To save output to the JobSub Save Output table, clients must manually submit the job GJRJLIS from GJAPCTL. There can be an issue in that the job output filename must have a length less than 30 characters.

The file name template delivered in `gjajobs.pl` may set the output file name to be longer than 30 characters. Clients with Windows environment can use the **Import to JobSub (GJAJFLU)** process. Windows clients can also use the **Purge Saved Report Output (GJPJLIS)** process to maintain files.

## Job Submission messages

If you make a mistake when you submit a job using the Process Submission Control (GJAPCTL) page, Banner provides a diagnostic message to alert you to the problem and gives you directions to remedy the situation.

Here are some of the common diagnostic messages you may see, with their corrective actions.

### **Can't read page by that name**

The system cannot validate a parameter you entered on the Process Submission Control (GJAPCTL) page because it cannot find the appropriate validation page for this application.

GJAPCTL validates parameters on the system-specific validation page (\*OKPVAL), where \* is the first character of the application's job name.

<b>page</b>	<b>Prefix Description</b>
AOQPVAL	Alumni
FOQPVAL	Finance
GOQPVAL	General
NOQPVAL	Position Control
POQPVAL	Payroll
ROQPVAL	Financial Aid
SOQPVAL	Student
TOQPVAL	Accounts Receivable

### **Can't read page by that name**

This message usually occurs when trying to submit a locally created job that begins with W, Y, or Z. For baseline Banner jobs, parameter and process level validation are performed by a product specific database package xOKPVAL, where x is the product's System Indicator code.

For example, General's package is named GOKPVAL. In the event that the database package is not accessible, an attempt is made to call the product specific validation page xOQPVAL, where, again, x is the product's System Indicator code.

The reason for the error message is that neither the package nor the page could be found and validation was specified for the parameter or job.

If you are submitting a baseline job, speak with your data center personnel and tell them you suspect a problem with the XOKPVAL package. If you are submitting a local job, one beginning with the letter W, Y, or Z, verify that a corresponding xOKPVAL database package has been created, or that a xOQPVAL page has been created. One or the other must exist before the validation can occur. Talk with your data center personnel about your requirements.

### **Run sequence number is invalid. Aborting job.**

If you submitted this job using the Process Parameter Control (GJAPCTL) page, the system cannot find the parameter values and associated run sequence numbers that are stored for each job in the GENERAL.GJBPRUN Table.

If the job is a newly-created one, it's possible that the variable that defines the name of the process is not correct. Often a new process is cloned from an existing one, and some instances of the old process name are not changed.

If you submitted this job interactively from the host command, the run sequence number you entered can't be found with the parameter values that are stored for each job in the GJAPCTL. You probably did not enter the correct run sequence number.

If this is a first-time use of a new job, look for all occurrences of the name of the process that was copied and change them to the new name. You may need help from your data processing personnel. Resubmit the job.

If you're running this job from the host command, you probably did not enter the correct run sequence number. Enter the parameter values on GJAPCTL again and "hold" the values. When you have finished, note the sequence number that appears in the auto hint -- this is the number that should be used as the run sequence number when you rerun the job from the host.

### **Run sequence number is invalid. Aborting job.**

No entries were found in the Process Run Parameter Table (GJBPRUN) for the run sequence number specified. If you submitted this job interactively, the run sequence number you entered can't be found in the GENERAL.GJBPRUN Table. You probably did not enter the correct run sequence number.

Check the source of the program to verify that all selects against the GJBPRUN table refer to the correct job name. If the job is new and was cloned from an existing one, check that the selects against the GJBPRUN table were changed to refer to the new program name, not the cloned one. You may need help from your data processing personnel. Resubmit the job. If you're running this job from the operating system prompt, you probably did not enter the correct run sequence number. Enter the parameter values on GJAPCTL again and select "hold", then select Commit. When you have finished, note the sequence number that appears in the autohelp -- this is the number which should be used as the Run Sequence Number when you rerun the job from the operating system prompt.

### **\*ERROR\* Problem communicating with job submission program. Seek Help.**

Either the background process that processes Job Submission requests is not running, or the volume of job requests is excessive.

Contact your technical staff to determine whether you should start the background process (gurjobs) if it not running. If it is running, technical staff may need to start more than one occurrence of gurjobs to handle the volume.

### **\*ERROR\* Unable to submit job. Verify that the gurjobs program is running.**

Either the background process that processes job submission requests is not running, or the volume of job requests is excessive.

Contact your technical staff to determine whether it is necessary to start the background process (gurjobs) if it not running. If it is running, technical staff may need to start more than one occurrence of gurjobs to handle the volume.

**\*Warning\* Timed out waiting for response from job submission program.**

The background process that processes job submission requests is not running, the volume of job requests is excessive, the job you submitted is still running or the job you submitted aborted.

Contact your technical staff to determine whether it is necessary to start the background process (gurjobs) if it not running. If it is running, try to locate any output files generated by your job to see if an error message is present.

**The variables' values do not print when I run GLRLETR.**

When I print my letters directly from Banner (the "0 = none" option), only the variables within the letter print (for example, \*FNAME, \*LNAME), and not the values for the variables. The GLRCOLR table has been updated correctly through the GLBLSEL process.

This situation occurs when the letter's table definitions [i.e., "margin settings"] are not contained within a separate paragraph code (GTVPARA/GUAPARA).

All table definitions [not text or variables] must be held in a separate paragraph, and that paragraph must be Sequence 1 on the Letter Process (GUALETR) page. A good technique, also, is to have the new page format command [#NP] in a separate paragraph and to have that be Sequence 2 on the Letter Process page.

**External Program Could Not Execute Or Had An Error.**

This occurs sometimes when I enter variable rules on GLRVRBL or population selection rules on GLRSLCT, and I exit the pages so the GLOLETT process can compile the rules, How can I prevent this from occurring?

The Process Results table, GJBRSLT, may be growing too large. This table should be monitored and periodically cleaned out through SQL\*Plus.

There may be some extraneous values lodged in the GJBPRUN table. Have your Computer Services Department issue the following statement using SQL\*Plus:

```
SQL> delete gjbprun where gjbprun_job = 'GLOLETT';
```

---

## Dynamic parameters found. Please fill in the appropriate values.

The job which you have submitted has dynamic parameters which must be entered. You will be prompted with a second window to allow you to enter the necessary values.

## Population Selection

The Population Selection module allows you to identify any group entities in the database (for example, people, vendors, and organizations). You can define selection criteria to identify and extract a subset of these entities to use in Banner™ reports, processes, and letters.

Some of the functions you can perform in the Population Selection module are:

- Manually create, change, and display a population of IDs for reports, processes, and letters.
- Define the rules used to select IDs from the Banner database for reports, processes, and letters.
- Define the functional areas (applications) used in the Population Selection and Letter Generation modules.
- Define the variables used in the Population Selection and Letter Generation modules to select a specific piece of data in the database.
- Define common rules, or objects, that are used in many different population selections and variables.

## Definitions

The following definitions are useful for understanding the functions of the Population Selection module.

- **population, definition ofPopulation.** A set of Banner IDs used for reports, processes, and letters. A population is uniquely identified by an application, selection ID, creator ID, and user ID.
- **population selection definition ofPopulation selection.** A set of rules used to select IDs from the Banner database for reports, processes, and letters. A population selection is uniquely identified by an application, selection ID, and creator ID.
- **application, definition ofApplication.** A functional area with similar characteristics that can be applied to population selections, populations, and variables.
- **variable definition ofVariable.** A specific piece of data in the database and the set of rules used to select that data.
- **object, definition ofObject.** A set of common rules used in many different population selections and variables. Objects are not required, but they simplify data entry and provide some consistency.

## Validation pages

Population Selection pages use the following validation page.

Validation page	Used By
GTVSYSI	GLRAPPL
System Indicator Validation page	Application Definition Rules page

## Related processes

The following processes are related to the Population Selection module.

- The Population Selection Extract Process (GLBDATA) extracts IDs (people and non-persons) from the Banner database based on the rules entered on the Population Selection Definition Rules (GLRSLCT) page. This is a COBOL program. If the results of this extract will be used to identify the population receiving a letter, it should be executed before running the Variable Data Extract Process (GLBLSEL). If the results of this extract will be used to identify the population to be used in a report, it must be executed before running that report.
- Parameter Selection Compile Process (GLBPARM) creates Job Submission parameters for all variables for a given application and all selection IDs for the logged in user ID. This COBOL program that should be executed before the Automatic Letter Compilation Process (GLOLETT). Only execute this process when application rule changes require recompiling the associated population selections.
- Automatic Letter Compilation Process (GLOLETT) generates SQL statements from the rules entered on the Population Selection Definition Rules (GLRSLCT) page and the Variable Rules Definition (GLRVRBL) page. This COBOL program that is executed automatically from the GLRSLCT page when a population selection is created or changed and from the GLRVRBL page when a variable is created or changed.

### Related reference

[Reports & Processes](#) on page 251

## Menu navigation table

Pages in the Population Selection module can be accessed from the following menu.

Menu	Description
GLIEXTR	Population Selection Extract Inquiry page  Displays a population, which is a set of Banner IDs used for reports, processes, and letters.

<b>Menu</b>	<b>Description</b>
GLAEXTR	Population Selection Extract Data page  Allows you to manually create, change, and display a population, which is a set of Banner IDs used for reports, processes, and letters.
GLRSLCT	Population Selection Definition Rules page  Defines a population selection, which is a set of rules used to select IDs from the Banner database for reports, processes, and letters.
GLISLCT	Population Selection Inquiry page  Displays a list of population selections within an application.
GLRAPPL	Application Definition Rules page  Defines an application, which is a functional area that controls population selections, populations, and variables.
GLIAPPL	Application Inquiry page  Displays a list of all applications defined on the GLRAPPL page.
GLRVRBL	Variable Rules Definition page  Defines a variable, which is a specific piece of data in the database and the set of rules used to select that data.
GLIVRBL	Variable Inquiry page  Displays a list of the variables defined on the GLRVRBL page for an application.
GLROBJT	Object Definition Rules page  Defines an object, which is a set of common rules used in many different population selections and variables.
GLIOBJT	Object Inquiry page  Displays a list of objects defined on the GLROBJT page.
GTVSYSI	System Indicator Validation page  Defines codes that identify the Banner applications used at your institution.

Population Selection also uses the Population Selection Result Inquiry (GLIRSLT) page, which is not called from the menu. This page displays a list of populations within a specific application.

## Population selection procedures

Many Banner reports, processes, and letters use sets of Banner IDs called populations.

For example, a particular letter may be mailed to a specific population, and a Banner report may be generated for another population.

With the Population Selection module, you can:

- Build a population selection, which is a set of rules used to select IDs from the Banner database. You can build the rules from scratch or copy an existing population selection and make changes.
- Create a population of Banner IDs. You can either use the rules in a population selection to extract IDs from the database, or you can manually create a population.

When a population is created, you can view its contents on the Population Selection Extract Inquiry (GLIEXTR) page.

### Definitions

The following definitions are useful for understanding the functions of the Population Selection module.

Term	Description
Population	A set of Banner IDs used for reports, processes, and letters. A population is uniquely identified by an application, selection ID, creator ID, and user ID.
Population selection	A set of rules used to select IDs from the Banner database for reports, processes, and letters. A population selection is uniquely identified by an application, selection ID, and creator ID.
Application	A functional area with similar characteristics that can be applied to population selections, populations, and variables.
Variable	A specific piece of data in the database and the set of rules used to select that data.
Object	A set of common rules used in many different population selections and variables. Objects are not required, but they simplify data entry and provide some consistency.

---

## Build a population selection

A population selection is a set of rules used to select IDs from the Banner database for reports, processes, and letters. A population selection is uniquely identified by an application, selection ID, and creator ID.

### About this task

**Note:** You can use objects to simplify the building process. An object is a set of common rules used in many different population selections and variables. Objects are defined on the Object Definition Rules (GLROBJT) page. When they are defined, you can reference the object rather than enter the entire set of rules each time it is needed. Objects are not required, but they simplify data entry and provide some consistency.

### Procedure

1. Make sure the application associated with the population selection is defined on the **Application Definition Rule (GLRAPPL)** page. An application is a functional area that controls a population selection. Optionally, an application will include general, high-level rules used to select IDs, if they exist for that application.

**Note:** When defined, the application can be used repeatedly for every population selection associated with that application.

2. Access the Population Selection Definition Rules (GLRSLCT) page.
3. Enter the application in the **Application** field.
4. Enter a population selection name in the **Selection ID** field. You can click the down arrow icon to access the **Population Selection Inquiry (GLISLCT)** page to see the population selections that already exist.
5. Verify the **Creator ID**. Your user ID is the default, but it can be changed.
6. Go to the Description section.
  - a) Enter a free-page description of the population selection in the **Description** field.
  - b) **Optional:** Select the **Manual** check box if all joins must be entered manually in the Rules section. No automatic PIDM joins occur when rules are compiled. This check box is used for population selections that use secondary PIDMs rather than key PIDMs to join two or more tables.

Any GLRAPPL high-level rules for the application will be included in manual population selections.
  - c) **Optional:** Select the **Lock** check box to lock the population selection. If the population selection is locked, only the creator ID can use this population selection in the Population Selection Extract Process (GLBDATA), view a selected population on the Population

Selection Extract Inquiry (GLIEXTR) page, or change a selected population on the Population Selection Extract Data (GLAEXTR) page.

**Note:** A user cannot change or delete population selection rules that were created by another user ID, regardless of the lock indicator.

- d) **Optional:** Select the **Delete** check box to delete all rules associated with the population selection. This also deletes all IDs that have the same user ID as the creator ID associated with their population selection. If a population was extracted by a user ID different from the creator ID, the IDs are not deleted.
7. Go to the Definition section. This is where you identify the data to be selected from the database.
    - a) In the **Select** field, enter the database column from which data will be extracted. This database column must reference a PIDM (for example, SPRIDEN\_PIDM or RORSTAT\_PIDM). (A PIDM is a unique internal ID maintained by the system for each entity entered on Banner.) This column name is validated against the data dictionary.
    - b) In the **From** field, enter the names of all tables from which you want to extract data. Use the format <table><alias>, separating multiple table names with commas. You can use aliases to reference tables in subqueries within the selection rules, or multiple times within the selection rules. Aliases have a maximum length of four characters. Table names are validated against the data dictionary.

If the application associated with a population selection has selection rules, include all tables referenced in the application rules. To improve performance of the Population Selection Extract Process (GLBDATA), list multiple tables in the **From** field from most general to most specific, or largest to smallest. For example, if two tables are being used, one with one record per ID and another with multiple records, list the multiple record table first.

8. Go to the Rules section. This is where you enter the selection rules.

**Note:** Use open and closed parentheses to group nested statements for logical evaluation. You can use up to three levels of nested statements. The number of open parentheses on a line must equal the number of closed parentheses.

- a) In the **Object** field, enter an object name or, in the **Data Element** field, enter the name of the database column used in the selection rule. The name must be a valid database column in the Oracle data dictionary. You cannot enter the name of an SQL function, such as MAX or MIN, in this field.

To reference an object, enter \*INCL followed by the object name. For example, enter \*INCL AID\_PERIOD. Then go to the next item. The rules from the AID\_PERIOD object are automatically added to the population selection. You can click the down arrow icon to access the Object Inquiry (GLIOBJT) page to search for an object.

- b) In the **Operator** field, enter an SQL operator (=, <>, >, <, and so forth). The operator is used to compare the **Data Element** and **Value** fields.

For date comparisons, avoid using an equal sign (=) because dates are often stored with hours, minutes, and seconds. A better approach is to use less than (<), greater than (>), less than or equal (<=), or greater than or equal (>=). You might need an extra condition.

For example, ACTIVITY\_DATE is stored with hours, minutes, and seconds. Use these statements to find addresses changed on March 1, 2003:

```
SPRADDR_ACTIVITY_DATE >= '01-MAR-03' AND
```

```
SPRADDR_ACTIVITY_DATE < '02-MAR-03'
```

IN checks for inclusion in a list of values:

```
GOREMAL_EMAL_CODE IN ('ACAD','BUS','HOME')
```

NOT IN checks for exclusion from a list of values:

```
GOREMAL_EMAL_CODE NOT IN ('ACAD','BUS','HOME')
```

- c) In the **Value** field, enter the value that is compared with the **Data Element** based on the **Operator**. This can be a constant literal, another database column name or alias, combination of a constant literal and database column name, dynamic parameter, or subquery. Use upper case.

**Note:** Do not enter a value if the **Operator** contains NULL or IS NOT NULL.

Constant literal: The data type of the **Data Element** determines the format of the literal. Values that are compared to character data elements must be enclosed in single quotes. Values that are compared to numeric data elements must be numeric. Values that are compared to date data elements must be in the format 'DD-MON-YY' or 'DD-MON-YYYY'. Single quotes are not used with SYSDATE. Use the operator AND between ranges. For example, enter '01-JAN-03' AND '31-JAN-03'. Use the same format for both years (YY or YYYY).

**Note:** The operator BETWEEN cannot execute dynamic parameters in a Selection ID or Variable. Dynamic parameters contained within single quotes are treated as literals.

Another database column name: The **Value** is validated against the Oracle data dictionary. If the data types (character, numeric, or date) of the **Value** and **Data Element** are not the same, a warning appears. You can override the warning and keep the comparison.

Dynamic parameter: Enter an ampersand (&) followed by text (for example, &Letter\_Code). When you extract a population with the Population Selection Extract Process (GLBDATA), the system prompts for each dynamic parameter in the selection rules.

Subquery: Enter (\*SUB<variable>). Use a subquery to select one record when an ID might have multiple records. The parentheses are required. The literal \*SUB indicates this is a subquery, or reference to another variable. The *variable* is a valid variable name already defined on the Variable Rules Definition (GLVRBL) page and compiled in this application. You can select the down arrow icon to access the Variable Inquiry (GLIVRBL) page to search for a variable. If you select a variable from the list, the system gives it the proper syntax. A population selection can have only one subquery. If defined, it must be the last rule.

9. In the **AND/OR** field, enter the connector that links rules with AND or OR logic. All lines in the Rules section, except the last line, must contain a connector.
10. After all the rules are entered, save your changes.

11. Exit the page.

**Result:** The GLOLETT process will run to compile the selection only after you exit the GLRSLCT page.

### Task notes

Remember the following while performing this task.

- When using a dynamic parameter with an IN or NOT IN operator do not include left and right parentheses. Do not include spaces when entering the value for the dynamic parameter. Define the IN statement similar to the following:

```
column_name IN &Term
```

- GLBLSEL will generate an 88 level prompt for &Term. Enter the values within single quotes with the parentheses, without using spaces:

```
88 &Term ('200111','200222','200333')
```

- LIKE compares a character value to a pattern and may include wildcards. The following wildcards may be used:
  - an underscore (\_) matches exactly one character
  - a percent sign (%) matches zero or more characters
- To find SPRIDEN\_LAST\_NAME values like 'Smith' and 'Smithsonian', the following may be used:

```
SPRIDEN_LAST_NAME LIKE 'Smith%'
```

- NOT LIKE compares a character value to a pattern and excludes the matched values. For example, to exclude SPRIDEN\_LAST\_NAME values like 'Smith' and 'Smithsonian':

```
SPRIDEN_LAST_NAME NOT LIKE 'Smith%'
```

- IS NULL selects rows which have a null value in a particular column. For example:

```
GURMAIL_DATE_PRINTED IS NULL
```

- IS NOT NULL selects rows which have a non-null value. For example:

```
GURMAIL_DATE_PRINTED IS NOT NULL
```

- BETWEEN tests whether a value is within a range of values by testing "greater than or equal to <low value> and less than or equal to <high value>". For example:

```
GURMAIL_TERM_CODE BETWEEN '20100' AND '20999'
```

- To improve processing time, certain criteria (such as whether a person is alive or has a current ID) should be specified through population selection rules rather than with a subquery.
- Outer joins cannot be performed. A join in Oracle occurs when fields from two or more tables are compared. If a matching row in one table does not exist, no result is returned. An outer join would cause a result to be returned even if a matching row does not exist.

For example, suppose you want to select everyone on Banner with a birth date after 1985, or an unknown birth date. The birth date is stored on the General Person Table (an optional table). If the person record exists for an ID, the ID and birth date are selected even if the birth date does not exist. If the person record does not exist for the ID, the ID is not selected. To extract this

information you must create two population selections: one to select everyone with a person record whose birth date is greater than 1985 or whose birthdate is null, and another to select everyone who does not have a person record. The two population selections would then be combined in the Population Selection Extract Process (GLBDATA) with a union function, to give the desired population.

## Copy a population selection

You can copy the rules in an existing population selection to create a new population selection. You can change the application and selection ID. Your ID becomes the creator ID. A copied population selection can be changed as needed.

### Procedure

1. Access the **Population Selection Definition Rules (GLRSLCT)** page.
2. Enter the application associated with the population selection you want to copy in the **Application** field.
3. Enter the population selection you want to copy in the **Selection ID** field. You can select the down arrow icon to access the **Population Selection Inquiry (GLISLCT)** page to search for a population selection.
4. To access the Selection ID Copy window, select Copy from the Options menu. Information in the Copy From section defaults from the main window.
5. Enter the application associated with the new population selection in the Copy To **Application** field.
6. Enter the new population selection ID in the Copy To **Selection** field. You can select the down arrow icon to access the Population Selection Inquiry (GLISLCT) page to see the existing population selection IDs that cannot be used.

**Note:** The **Creator ID** defaults to your user ID. It cannot be changed.

7. Select the Insert Record function. The main window reappears with the cursor in the **Description** field.
8. Follow the steps in [Build a population selection](#) on page 64 starting with step 6 on page 64 to change and save rules for the new population selection.

## Create a population with GLBDATA

A population is a set of Banner IDs used for reports, processes, and letters. One way to create a population is with the Population Selection Extract Process (GLBDATA). The Banner user ID that runs GLBDATA becomes the user ID associated with the population.

There are no rules associated with a manual population. Therefore, you cannot use a manual population in the Population Selection Extract Process (GLBDATA) to create a new population from the union, intersection, or minus of two population selections.

There are two ways to use GLBDATA:

- Extract IDs using the population selection rules defined on the Population Selection Definition Rules (GLRSLCT) page.

- Create a population from the union, intersection, or difference (minus) of the rules in two existing population selections.

You can run GLBDATA from the Process Submission Control (GJAPCTL) page or from the operating system. If you run the process from the operating system prompt, check with your technical personnel for the appropriate command to use at your institution. For example:

UNIX:	glbdata.shl username password
OpenVMS:	@glbdata username password

### *Extract IDs using population selection rules*

You can create a population by extracting IDs using the population selection rules defined on the Population Selection Definition Rules (GLRSLCT) page.

#### **Procedure**

1. Access the **Process Submission Control (GJAPCTL)** page.
2. Enter `GLBDATA` in the **Process** field.
3. If the process has more than one job parameter set, enter the name of the set in the **Parameter Set** field. You can select the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
4. **Optional:** If you want to view, save, or print online, enter `DATABASE` in the **Printer** field.
5. Go to the Parameter Values section. Parameters defined for the process appear. Default parameter values appear, if they have been defined.
6. Enter the following parameter values:

<b>Parameter Number</b>	<b>Parameter</b>	<b>Value</b>
1	Selection Identifier 1	ID of the population selection that will be used to extract the population
6	Application Code	Application associated with the population selection
7	Creator ID of Selection ID	Oracle ID of the user who created the population selection
8	Detail Execution Report	<ul style="list-style-type: none"> <li>• S = Display SQL statements</li> <li>• I = Display SQL statements and inserts.</li> <li>• Y = Display paragraphs.</li> </ul>

7. Go to the Submission section.
8. Select the **Hold** option button or the **Submit** option button.
9. Save your changes.

10. **Optional:** If the population selection in parameter 1 has dynamic parameters, the cursor returns to the Parameter Values section. Enter values for the dynamic parameters in parameter 88. Return to the Submission section. Save your changes again.

**Note:** You must enter a non-blank value for each 88 level prompt.

### *Create a population from the union, intersection, or minus of existing population selection rules*

You can create a population from the union, intersection, or minus (difference) of the rules in two existing population selections. The rules in both of the existing population selections are defined on the Population Selection Definition Rules (GLRSLCT) page.

#### About this task

**Note:** The two existing population selections must have the same application and creator ID.

#### Procedure

1. Access the **Process Submission Control (GJAPCTL)** page.
2. Enter `GLBDATA` in the **Process** field.
3. If the process has more than one job parameter set, enter the name of the set in the **Parameter Set** field. You can select the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
4. **Optional:** To view, save, or print online, enter `DATABASE` in the **Printer** field.
5. Go to the Parameter Values section. Parameters defined for the process appear. Default parameter values appear, if they have been defined.
6. Enter the following parameter values:

Parameter Number	Parameter	Value
1	Selection Identifier 1	ID of the first existing population selection that will be used to create a new population selection.
2	Selection Identifier 2	ID of the second existing population that will be used to create a new population selection.
3	New Selection Identifier	ID of the new population selection that will be created from the two existing population selections.
4	Description for New Selection	Free form description of the new population selection.

Parameter Number	Parameter	Value
5	Union/Intersection/Minus	Code that determines the contents of the resulting population: <ul style="list-style-type: none"> <li>• U = The population includes all IDs extracted by the first population selection and all IDs extracted by the second population selection. If an ID is selected by both, it is included only one time in the population.</li> <li>• I = The population includes only those IDs that are extracted by both population selections.</li> <li>• M = The population includes all IDs extracted by the first population selection except those IDs extracted by the second population selection.</li> </ul>
6	Application Code	Application associated with the two existing population selections. This becomes the application associated with the new population selection.
7	Creator ID of Selection ID	Oracle ID of the user who created the two existing population selections.
8	Detail Execution Report	<ul style="list-style-type: none"> <li>• S = Display SQL statements</li> <li>• I = Display SQL statements and inserts</li> <li>• Y = Display paragraphs</li> </ul>

7. Go to the Submission section.
8. Select the **Hold** option button or the **Submit** option button.
9. Save your changes.
10. **Optional:** If either of the population selections in parameter 1 or 2 has dynamic parameters, the cursor returns to the Parameter Values section. Enter values for the dynamic parameters in parameter 88. Return to the Submission section. Save your changes again.

**Note:** You must enter a non-blank value for each 88 level prompt.

#### *Population creation considerations*

Remember the following while performing this task.

1. Creating a new population from the union, intersection, or minus of two existing population selections uses the rules defined for the two existing population selections. Manual entries for a population are not considered as part of any population selection.
2. For the union or intersection option, the order of the selection IDs in parameters 1 and 2 does not matter. For the minus option, the results are different depending on the order of the selection IDs.

3. A population selection created from the union, intersection, or minus cannot be used as parameter 1 or parameter 2 because there are no rules associated with it. However, a population selection can be created with rules that extract the IDs from the generated population selection with no rules.
4. If you are using the union, intersection, or minus option, you only have to run GLBDATA one time to get IDs for the new population (union, intersection, or minus). You don't have to run GLBDATA for the two existing population selections before you run it for the new population selection.
5. When you create a new population selection from two existing population selections, "header" information for the new population selection is based on parameters 3 (ID) and 4 (description) that are entered for GLBDATA.
  - a. If this is a new ID, the ID and description are added to the Population Selection Definition Rules (GLRSLCT) page. The new population selection has no selection rules.
  - b. If the ID already exists on GLRSLCT without rules associated with it, the description is updated with the description you entered in parameter 4.
  - c. If the ID already exists on GLRSLCT with rules, you'll receive an error message. The GLBDATA process terminates.
6. To avoid a potential problem with GLBDATA adding duplicate IDs to POP SEL on GLAEXTR, use the following steps:
  - a. Before running any popsel that may have duplicate IDs, remove all records from GLBEXTR.
  - b. Go to GLAEXTR, pull up POP SEL, and select the **Delete All** check box.

OR

Delete through SQLPLUS:

```
delete from glbextr where GLBEXTR_APPLICATION = 'MARK_TEST'
AND GLBEXTR_SELECTION = 'SMITH' AND GLBEXTR_CREATOR_ID =
'SAISUSR'
AND GLBEXTR_USER_ID = 'SAISUSR';
commit;
```

- c. Run GLBDATA to get all the correct SYSTEM entry IDs.
- d. Run GLAEXTR and manually add those IDs you need to add, making sure to not to add any MANUAL duplicates as described above.

## Create a manual population

A population is a set of Banner IDs used for reports, processes, and letters. You can create a manual population with the Population Selection Extract Data (GLAEXTR) page.

### Procedure

1. Make sure the application associated with the population is defined on the **Application Definition Rule (GLRAPPL)** page. An application is a functional area that controls a population.

**Note:** When defined, the application can be used repeatedly for every manual population associated with that application.

2. Make sure the population selection associated with the population is defined on the **Population Selection Definition Rules (GLRSLCT)** page. Because this is a manual population, you don't need selection rules, just a name and description.
3. Access the **Population Selection Extract Data (GLAEXTR)** page.
4. Enter the application in the **Application** field.
5. Enter the population selection name in the **Selection ID** field. You can select the down arrow icon to access the **Population Selection Inquiry (GLISLCT)** page to search for a population selection.

**Note:** If the population selection is locked, only the creator ID can create a population with the population selection.

6. Verify the **Creator ID**. The ID associated with the population selection is the default.
7. Go to the next section.
8. Enter each **ID** in the population. You can select the down arrow icon to access the **Person Search (SOAIDEN)** page or the **Non-Person Search (SOACOMP)** page to search for an ID. The **Manual** option button is automatically selected to indicate the ID was added manually.

**Note:** Duplicate IDs cannot be added on GLAEXTR.

9. Save your changes.

## Population selection messages

If a problem arises as you work with the Population Selection Extract Process (GLBDATA), Banner provides diagnostic messages to guide you toward solution.

In addition, you may encounter Oracle messages if GLBDATA does not run successfully.

Listed below are some of the Banner diagnostic messages you may see, with their corrective actions.

### **Application <application> does not exist**

The application entered as a parameter has not been defined on the Application Definition Rules (GLRAPPL) page.

Define the application on GLRAPPL, or enter the correct application for the parameter.

### **Maximum number of dynamic parms exceeded**

More than 100 unique dynamic parameters were found among all population selection and application rules used in the population.

Reduce the number of dynamic parameter to less than 100 by either "hardcoding" values or setting values equal to other field values.

### **No GLRCMPL record for <selection ID>**

No rules were found for the combination of application code, selection ID, and creator ID that were entered as parameters.

---

Reenter rules on the Population Selection Definition Rules (GLRSLCT) page to force the rules to be generated again.

**Private Selection ID. Cannot Access.**

The population selection is locked on the Population Selection Definition Rules (GLRSLCT) page.

Either unlock the population selection on GLRSLCT (if you are the creator), or enter a population selection that is not locked.

**Query does not exist <application/selection/creator>**

The combination of the application code, selection ID, and creator ID that were entered as parameters does not exist on the Population Selection Definition Rules (GLRSLCT) page.

Either create the selection ID under the application and creator ID on GLRSLCT, or enter a combination that is already defined.

## Variable/population selection messages

When you build population selection rules on the Population Selection Definition Rules (GLRSLCT) page and variable rules on the Variable Rules Definition (GLRVRBL) page, the system generates SQL code to extract the IDs and variable data. Both pages call the COBOL process Automatic Letter Compilation Process (GLOLETT).

The following diagnostic messages may be generated during the process.

**MAXIMUM NUMBER OF TABLES ALLOWED HAS BEEN REACHED . . . ABORTING**

More than 15 tables are used in the variable/population selection.

Reduce the number of tables being used to less than 15.

**No GLRVFRM record found for: <application, variable >**

The variable being "compiled" by the Automatic Letter Compilation Process (GLOLETT) could not be found.

Verify that the variable has the 'Select' information entered on the Variable Rules Definition (GLRVRBL) page.

**Only 1 sub-query per variable allowed . . . ABORTING**

A variable being compiled has a subquery on another variable that has a subquery defined. Subqueries can be nested only 1 deep.

Redefine the variables to only use one subquery.

**Select Valid Column . . . Aborting**

A column name found in the variable or population selection could not be found or is found multiple times in the ALL\_TAB\_COLUMNS view. Finding it multiple times implies that the field name might exist on two different tables or views.

---

Create unique field names within Banner tables and views that are used by variables and population selections.

#### **Unknown function . . . Aborting**

The text immediately preceding a left parenthesis in the Select statement of the variable is not one of the fifty (50) functions known to the program.

Change the variable.

#### **Undefined column located . . . Aborting**

A column specified in the variable or population selection is not found in the ALL\_TAB\_COLUMNS view for that table and user.

Change the variable or population selection to include the correct column name. Usually it is a misspelling of a column name in the Select statement or the **Value** field.

#### **Unknown variable/object . . . Aborting**

A table specified in the variable or population selection is not found in the ALL\_TAB\_COLUMNS view for that user, and is considered not valid. This is probably because the user ID running the program has not been granted Select access to a table referenced in the variable or population selection. It does not matter to the program that the user might have DBA access; explicit grants to the table(s) are needed.

Verify that the user ID of the person who is attempting to run the variable/selection process has access to all tables referenced in the rules. To do this, perform a Describe on each table in SQL\*Plus.

#### **Variable <variable> cannot be used here . . . Aborting**

A variable referenced in the Select clause of another variable cannot reference THAT variable in its own Select clause.

Change the variables.

#### **Variable <variable> does not return a numeric value**

The variable specified in the error message is referenced in the Select clause of the variable being compiled. This 'referenced' variable was not compiled first.

Find the variables 'referenced' in the Select statements and compile them first. They can be found with the following SQL statement:

```
SELECT  GLRVFRM_APPLICATION, GLRVFRM_SELECT_CLAUSE
FROM    GENERAL.GLRVFRM
WHERE   (GLRVFRM_SELECT_CLAUSE LIKE '%*%'
AND     GLRVFRM_SELECT_CLAUSE NOT LIKE '%* %')
ORDER BY GLRVFRM_APPLICATION, GLRVFRM_SELECT_CLAUSE
```

**<element> is undefined. Cannot compile.**

An undefined element was found in the Select clause of the variable. The program cannot determine what it is, so compilation terminates.

Find the variable causing the problem, and correct the syntax in the Select clause, or redefine the element.

## Letter Generation

The Letter Generation module lets you generate letters or produce a download file that can be used to produce letters with Microsoft Word or WordPerfect.

Some of the functions you can perform in the Letter Generation module are:

- Define the functional areas (applications) used in the Population Selection and Letter Generation modules.
- Define common rules (objects) that are used in many different population selections and variables.
- Define the variables used in the Population Selection and Letter Generation modules to select a specific piece of data in the database.
- Build paragraphs that include user-created text, variables, and formatting commands.
- Build a letter from these paragraphs.
- Extract variable data from the database for pending letters, or for a specific letter and selected population. (You can use the Population Selection module or a specific Banner™ process to select the population.)
- Merge the extracted variable data into the letter and generate letters, or produce a download file for Microsoft Word or WordPerfect.

**Note:** Ellucian does not support WordPerfect 8.0 and higher.

## Validation pages

Letter Generation pages use the following validation pages.

Validation page	Used By
GTVLETR	GUALETR
Letter Code Validation page	Letter Process page
GTVPARA Paragraph Code Validation page	GUALETR Letter Process page GUAPARA Paragraph page

Validation page	Used By
GTVSYSI	GLRAPPL
System Indicator Validation page	Application Definition Rules page

## Related processes and report

The following processes and report are related to the Letter Generation module.

- The Automatic Letter Compilation Process (GLOLETT) generates SQL statements from the rules entered on the Variable Rules Definition (GLRVRBL) page. This COBOL program is executed automatically when you create or change a variable on GLRVRBL. It adds the necessary pidm joins as part of the SQL statements.
- The Letter Extract Process (GLBLSEL) extracts variable data from the Banner database to be included when letters are printed. This COBOL program is run before executing the Letter Generation Print Process (GLRLETR). GLBLSEL can be run for all pending letters (letters waiting to be printed) for a letter code, or for a letter code for a specific population. If the letter cannot be created because no address existed in SPRADDR for that ID, or because the address was found but it is inactive, a log file will list the names and IDs for those who did not receive the letter. This listing is printed whether or not you elect to print the error report.

The messages are:

- `### Following persons did NOT meet Selection criteria and will not get a letter`
- `### Following person did NOT meet Address criteria and will not get a letter`
- The Letter Generation Print Report (GLRLETR) generates letters directly from Banner, prints a summary report, and updates the General Mail Table (GURMAIL). Alternatively, GLRLETR can produce a download file for Microsoft Word or WordPerfect.

**Note:** IFNULL only works when you run GLRLETR for a Banner extracted letter (Word Processor Extract Option = 0). In addition, the download file will not contain paragraph text or literals.

### Related reference

[Reports & Processes](#) on page 251

## Multiple letters per time frame

For Financial Aid, Advancement, Student, and other products that use a time frame parameter (such as fiscal or aid year, or term code), one method to allow for the letter to be run multiple times is to check the **Allow Duplicates** check box on the Letter Code Validation (GTVLETR) page.

Below is a select clause that can be run in sqlplus that you can use to keep track of people to whom you might have sent duplicate letters. It contains an example to identify those PIDMs that have already received the specific letter in the current fiscal year.

Note that you would need to enter the specific letter and the last day the previous fiscal year ended indicated on the Fiscal Year Validation (ATVFISC) page.

```
select * from gurmail
where gurmail_system_ind not in ('R','S')
and gurmail_letr_code = '&LETRCODE'
and gurmail_date_init > to_date('&&fiscyr_end_date','DD-MON-YY')
and gurmail_date_printed > to_date('&&fiscyr_end_date','DD-MON-YY');
```

**Note:** Inspect both the `gurmail_date_init` and `gurmail_date_printed` columns rather than just the `date_printed`, because there might be some previous years' letters actually printed in the current fiscal year.

## Menu navigation table

Pages in the Letter Generation module can be accessed from the following menu.

Menu	Description
GUIMAIL	Mail Query page  Lists printed letters and pending letters (those waiting to be sent) for an ID.
GUALETR	Letter Process page  Builds a letter from paragraphs created on the Paragraph (GUAPARA) page.
GUAPARA	Paragraph page  Builds a paragraph that can be inserted in letters on the Letter Process (GUALETR) page. A paragraph can include text, variables, and formatting commands.
GLRVRBL	Variable Rules Definition page  Defines a variable, which is a specific piece of data in the database and the set of rules used to select that data.
GLIVRBL	Variable Inquiry page  Displays a list of the variables defined on the GLRVRBL page for an application.
GLROBJT	Object Definition Rules page  Defines an object, which is a set of common rules used in many different population selections and variables.
GLIOBJT	Object Inquiry page  Displays a list of objects defined on the GLROBJT page.

Menu	Description
GLRAPPL	Application Definition Rules page Defines an application, which is a functional area that controls population selections, populations, and variables.
GLIAPPL	Application Inquiry page Displays a list of all applications defined on the GLRAPPL page.
GTVLETR	Letter Code Validation page Defines codes that identify the letters you can generate in Banner.
GTVPARA	Paragraph Code Validation page Defines codes that identify the paragraphs used in Banner letters.
GTVSYSI	System Indicator Validation page Defines codes that identify the Banner applications used at your institution.

Letter Generation also uses the Letter Display (GUQLETR) page, which is not called from the menu. This page displays the details of a letter, including the text, variables, and formatting commands.

## Letter generation procedures

The Letter Generation module allows you to do the following.

- Define the variables used to select a specific piece of data in the database.
- Build letters.
- Extract variable data from the database for a specific letter.
- Generate letters by merging the extracted variable data with a letter.
- Create a download file to merge with a Microsoft Word or WordPerfect text file.

**Note:** Ellucian does not support WordPerfect 8.0 or higher.

Before using these procedures, you should be familiar with the procedures described for the Population Selection module. See *Population Selection*.

Ellucian delivers and supports certain letters, variables, and population selections. Refer to the product-specific Banner documentation for additional information.

**Note:** The overall Letter Generation process is a powerful tool. The coding or modification of variables and population selections requires SQL-like code, which is considered site-specific customization that is not eligible for support.

## Definition of variables

A variable is a specific piece of data in the database and the set of rules used to select that data.

Variables are used to:

- Insert variable data into letters.
- Reference subqueries in application rules, population selection rules, and variable selection rules.

Each variable is associated with an application.

### *Create a variable*

You can use the Variable Rules Definition (GLRVRBL) page to create a variable.

#### Procedure

1. Make sure the application associated with the variable is defined on the **Application Definition Rule (GLRAPPL)** page. An application is a functional area that controls a variable.
2. Access the **Variable Rules Definition (GLRVRBL)** page.
3. Enter the application in the **Application** field.
4. Enter the variable name in the **Variable** field. The name must begin with an asterisk (\*) and must contain at least one alpha character. The maximum number of characters is 30.

You can select the down arrow icon to access the Variable Inquiry (GLIVRBL) page to see the variable names that already exist for the application.

**Note:** The same variable name can be used with different applications and defined with different rules.

5. Go to the Description section.
  - a) Enter a free-page description of the variable in the **Description** field.

(Optional) Select the **Type** of variable if special processing and updating of the database occur when the variable is used in a letter. See the list of types below.

Leave this field blank if none of these type applies.

Type	Description
Checklist	The value of the variable contains information regarding checklist items associated with an admissions application. For example, the Admissions Office uses this type of variable for applicants who need to send information to the institution to continue the admissions process. When you run the Letter Generation Print Report (GLRLETR) for a letter containing a checklist variable, the First Request, Last Request, and Count fields on the Student Checklist Table (SARCHKL) on the Admissions Application (SAAADMS) page are updated for all checklist items for an applicant and term (parameter to GLRLETR) that have not been received yet and are indicated to print.

Type	Description
First	The Letter Extract Process (GLBLSEL) processes this variable first. See <a href="#">Definition of a variable with a first variable type</a> on page 91 for more information.
Manual	You must enter all joins in the Rules section. See <a href="#">Creation of a variable with ID information other than the ID receiving the letter</a> on page 89 for more information.
RORVIEW	The variable looks at one of the following Financial Aid views to determine its value:
ROVCSUM	Third Party Contract Payment Detail
ROVESUM	Billing Exemption Payment Summary
RPVARCO	Contract Resource
RPVAREX	Exemption Resource
RPVATRM	Award by Term
RPVTERM	Applicant Award Term
	Identifying a RORVIEW variable improves performance. The Letter Extract Process (GLBLSEL) populates RORVIEW with a record for each type RORVIEW variable in the letter.
	There are two other Financial Aid RORVIEW views that cannot be used with GLBLSEL. These views are Basic Student Selection (ROVSTDD) and GPA By Term and Level Selection (ROVTRMG). ROVSTDD and ROVTRMG select rows where the RORVIEW_TYPE_IND is A or T, respectively. GLBLSEL inserts records into RORVIEW only when the RORVIEW_TYPE_IND is R, so variables that reference ROVTRMG or ROVSTDD will never extract any data.
Signature	The value of the variable comes from the Initials Code Validation (STVINIT) page. This page maintains initials, descriptions, and titles for people. The initials associated with the value of the variable are placed in the <b>Initials</b> field on the Mail Table (GURMAIL) when the Letter Generation Print Report (GLRLETR) is run in update mode.

6. Go to the Definition section. This is where you identify the data to be selected from the database.

**Note:** The system-generated **Sequence** fields identify the number of pieces of information being selected from the database. The first number defines the sequence number of the record currently displayed. The second number defines the total number of records defined for the variable (for example, 1 of 3).

- a) In the **Select** field, enter the database column from which data will be extracted, literal text, or a combination of both such as 'Dear' || SPRIDEN\_FIRST\_NAME || ', '. SQL functions (such as MAX, MIN, AVG, COUNT, STDDEV, SUM or VARIANCE) are allowed in the **Select**

field. When creating a variable using these functions, be sure to use a table with a PIDM column (i.e. SPRADDR\_PIDM).

**Note:** Database columns entered here are not validated against the data dictionary, so be careful to enter the names correctly. All database columns and functions should be referenced in upper case on the Variable Inquiry (GLRVRBL) page to ensure proper compiles.

You can refer to another variable in the Select statement as long as the variable is already defined and the rules are compiled under the same application as the variable that references them. You must also define a referenced variable in the letter so that the Letter Extract Process (GLBLSEL) can determine the value.

You can model a more complex filter on the following example:

Example where the same table is used in both the query and the subquery:

```
SELECT DISTINCT (SPRIDEN_PIDM) , SYSDATE FROM SATURN.SPBPERS
  A, SATURN.SPRIDEN
WHERE SPBPERS_PIDM = SPRIDEN_PIDM AND SPRIDEN_LAST_NAME = 'Smith'
AND SPRIDEN_CHANGE_IND IS NULL AND SPRIDEN_PIDM NOT IN
  (SELECT SPBPERS_PIDM FROM SATURN.SPBPERS WHERE SPBPERS_DEAD_IND =
    'Y'
  AND SPBPERS_PIDM = A.SBPERS_PIDM )
```

- b) In the **From** field, enter the names of all tables referenced in the **Select** field. Use the format `<owner>.<table><alias>`, separating multiple table names with commas. The owner is required only if your database contains multiple tables with the same name. You can use aliases to reference tables in subqueries within the variable selection rules. Aliases have a maximum length of four characters. Owner and table names are validated against the data dictionary.

To improve performance of the Letter Extract Process (GLBLSEL), list multiple tables in the **From** field from most general to most specific, or largest to smallest. For example, if two tables are being used, one with one record per ID and another with multiple records, list the multiple record table first.

- c) In the **Order By** field, enter the names of the database columns used to sort multiple records returned from the database. Use commas to separate multiple column names. These database column names are validated against the data dictionary. SQL functions (such as MAX or MIN) are not allowed with these field names.
- d) In the **Group By** field, enter the names of the database columns used to group multiple records returned from the database. Use commas to separate multiple column names. These database columns are validated against the data dictionary. SQL functions (such as MAX or MIN) are not allowed with these field names.
- e) In the **Description** field, enter an optional description of this selection within the variable. This is an 80-character field.

7. Go to the Rules section. This is where you enter the selection rules that determine how data is selected. PIDM join rules are not required except for a Manual type variable. The Automatic Letter Compilation Process (GLOLETT) adds the necessary PIDM joins for other variable types.

**Note:** Use open and closed parentheses to group nested statements for logical evaluation. You can use up to three levels of nested statements. The number of open parentheses on a line must equal the number of closed parentheses.

- a) In the **Data Element** field, enter the name of the database column used in the selection rule. The name must be a valid database column in the data dictionary. SQL functions (such as MAX or MIN) are *not* allowed with these column names.

To reference an object, enter \*INCL followed by the object name (for example, \*INCL AID\_PERIOD). Then go to the next item. The rules from the AID\_PERIOD object are automatically added to the variable rule. You can click the down arrow icon to access the Object Inquiry (GLIOBJT) page to search for a valid object.

- b) In the **Operator** field, enter an SQL operator (=, <>, >, <, and so forth). The operator is used to compare the **Data Element** and **Value** fields.

For date comparisons, avoid using an equal sign (=) because dates are often stored with hours, minutes, and seconds. A better approach is to use less than (<), greater than (>), less than or equal (<=), or greater than or equal (>=). You might need an extra condition. For example, ACTIVITY\_DATE is stored with hours, minutes, and seconds. Use these statements to find addresses changed on March 1, 2003:

```
SPRADDR_ACTIVITY_DATE >= '01-MAR-03' AND SPRADDR_ACTIVITY_DATE <
'02-MAR-03'
```

IN checks for inclusion in a list of values:

```
GOREMAL_EMAL_CODE IN ('ACAD','BUS','HOME')
```

NOT IN checks for exclusion from a list of values:

```
GOREMAL_EMAL_CODE NOT IN ('ACAD','BUS','HOME')
```

- c) In the **Value** field, enter the value that is compared with the **Data Element** based on the **Operator**. This can be a constant literal, another database column name or alias, combination of a constant literal and database column name, dynamic parameter, or subquery. Use upper case.

**Note:** Do not enter a value if the **Operator** contains NULL or IS NOT NULL.

Constant literal: The data type of the **Data Element** determines the format of the literal. Values that are compared to character data elements must be enclosed in single quotes. Values that are compared to numeric data elements must be numeric. Values that are compared to date data elements must be in the format 'DD-MON-YY' or 'DD-MON-YYYY'. Single quotes are not used with SYSDATE. Use the operator AND between the ranges. For

example, enter '01-JAN-03' AND '31-JAN-03'. Use the same format for both years (YY or YYYY).

**Note:** The operator `BETWEEN` cannot execute dynamic parameters in a Selection ID or Variable. Dynamic parameters contained within single quotes are treated as literals.

Another database column name: The **Value** is validated against the data dictionary. If the data types (character, numeric, or date) of the **Value** and **Data Element** are not the same, a warning appears. You can override the warning and keep the comparison.

Dynamic parameter: Enter an ampersand (&) followed by text (for example, &Letter\_Code). When you extract a variable with the Letter Extract Process (GLBLSEL), the system prompts for each dynamic parameter in the application rules and variable rules.

Subquery: Enter (\*SUB<variable>). The parentheses are required. The literal \*SUB indicates this is a subquery or a reference to another variable. The `variable` is a valid variable name already defined on the Variable Rules Definition (GLRVRBL) page and compiled in this application. You can click the down arrow icon to access the Variable Inquiry (GLIVRBL) page to search for a variable. If you select a variable from the list, the system gives it the proper syntax. A variable used as a subquery cannot have another subquery defined within it. A variable can have only one subquery. If defined, it must be the last rule.

8. In the **AND/OR** field, enter the connector that links rules with AND or OR logic. All lines in the Rules section, except the last line, must contain a connector.
9. After all the rules are entered, save your changes.
10. Exit the page. The GLOLETT process will run to compile the variable only after you exit the GLRVRBL page.

### Task notes

Remember the following while performing this task.

- When using a dynamic parameter in a variable, the field that is being compared to the dynamic parameter should, if possible, be from the table that is used in the Select statement.
- When using a dynamic parameter with an IN or NOT IN operator do not include left and right parentheses. Do not include spaces when entering the value for the dynamic parameter. Define the IN statement similar to the following:

```
column_name IN &Term
```

- GLBLSEL will generate an 88 level prompt for &Term. Enter the values within single quotes with the parentheses, without using spaces:

```
88 &Term ('200111', '200222', '200333')
```

- LIKE compares a character value to a pattern and may include wildcards. The following wildcards may be used:
  - an underscore (\_) matches exactly one character
  - a percent sign (%) matches zero or more characters

- To find SPRIDEN\_LAST\_NAME values like 'Smith' and 'Smithsonian', the following may be used:  
`SPRIDEN_LAST_NAME LIKE 'Smith%'`
- NOT LIKE compares a character value to a pattern and excludes the matched values. For example, to exclude SPRIDEN\_LAST\_NAME values like 'Smith' and 'Smithsonian':  
`SPRIDEN_LAST_NAME NOT LIKE 'Smith%'`
- IS NULL selects rows which have a null value in a particular column. For example:  
`GURMAIL_DATE_PRINTED IS NULL`
- IS NOT NULL selects rows which have a non-null value. For example:  
`GURMAIL_DATE_PRINTED IS NOT NULL`
- BETWEEN tests whether a value is within a range of values by testing "greater than or equal to <low value> and less than or equal to <high value>". For example:  
`GURMAIL_TERM_CODE BETWEEN '20100' AND '20999'`
- To improve processing time, certain criteria (such as whether a person is alive or has a current ID) should be specified through population selection rules rather than in variables.
- Columns from the Address View (SPVADDS) or any view using collector table records, cannot be concatenated with columns from other tables in the same Select statement on GLRVRBL. For example, Mr. John Smith cannot be extracted from a single variable because Mr. is the prefix being extracted from the Person Table (SPBPERS) and John Smith is the name being extracted from the Address View (SPVADDS). Creating two separate variables, one for the prefix and one for the name, and printing them together is a solution. A second solution would be to extract the name from the Identification Table (SPRIDEN) rather than the Address View. If the second solution is used, the prefix can be extracted in the same variable and concatenated to the name.
- A variable cannot have multiple sequences if the SPVADDS view is being used. The address variables must be broken into their component pieces such as street line 1, city, and state.
- Rules entered in the Rules section on the GLRVRBL page are ignored for variables that select columns from the SPVADDS view.

### *Copy variable rules*

You can copy the rules for an existing variable to create a new variable. A copied variable can be changed as needed.

#### **Procedure**

1. Access the **Variable Rules Definition Rules (GLRVRBL)** page.
2. Enter the application associated with the variable you want to copy in the **Application** field.
3. Enter the variable you want to copy in the **Variable** field. You can select the down arrow icon to access the **Variable Inquiry (GLIVRBL)** page to search for a variable.
4. To access the Variable Copy window, select Copy from the Options menu. Information in the Copy From section defaults from the main window.

5. Enter the application associated with the new variable in the Copy To **Application** field. You can select the down arrow icon to access the **Application Inquiry (GLIAPPL)** page to search for an application.
6. Enter the new variable in the Copy To **Variable** field. The name must begin with an asterisk (\*).
7. Save your changes. The main window reappears with the cursor in the **Description** field.
8. Follow the steps in [Create a variable](#) on page 80, starting with step 5 on page 80 to change and save rules for the new variable.

### *Creation of a multiple-sequence variable*

You can create a variable with multiple sequences. Each sequence can have its own definition elements such as Select, From, Order By, Group By, and selection rules.

Situations when multiple sequence variables are valuable include:

- Bringing back a value for each sequence without creating multiple variables
- Bringing back a single value that depends on the characteristics of the ID

#### *Bring back a value for each sequence without creating multiple variables*

It is sometimes easier and gives better results to create a single variable with multiple sequences than to create multiple variables.

#### **About this task**

For example, you want to print an individual's first, last, and middle names on a letter in this format:

Last: Smith

First: Ron

Middle: James

You could create three variables, one for each part of the name. Another method is to create one variable with three sequences, one for each part of the name:

#### **Procedure**

1. Enter `Full Name` as the variable description in the **Description** field.
2. Define the first variable sequence:

<b>Sequence</b>	<b>1 of 3</b>
Select	'Last: '  SPRIDEN_LAST_NAME
From	SPRIDEN

---

<b>Sequence</b>	<b>1 of 3</b>
Data Element	SPRIDEN_CHANGE_IND
Operator	IS NULL
Value	

---

This sequence concatenates the text of 'Last:' with the value of the last name. Notice the rule to check that the current name record is accessed (SPRIDEN\_CHANGE\_IND IS NULL).

3. Define the second variable sequence:

<b>Sequence</b>	<b>2 of 3</b>
Select	'First: '  SPRIDEN_FIRST_NAME
From	SPRIDEN
Data Element	SPRIDEN_CHANGE_IND
Operator	IS NULL
Value	

---

This sequence concatenates the text of 'First:' with the first name. Again note the rule to check that the current name record is accessed.

4. Define the third variable sequence:

<b>Sequence</b>	<b>3 of 3</b>
Select	'Middle: '  SPRIDEN_MIDDLE_NAM
From	SPRIDEN
Data Element	SPRIDEN_CHANGE_IND
Operator	IS NULL
Value	

---

This sequence concatenates the text of 'Middle:' with the middle initial. You must enter the same rule on all sequences to ensure the current name record is returned. You have created only one variable. If an ID doesn't have a middle name, the printed letter will not have a blank.

*Bring back a single value that depends on the characteristics of the ID*

A variable can sometimes return only one value for an ID, but, depending on the characteristics of the ID, the value could differ.

#### **About this task**

For example, you're sending the same letter to both people and organizations. You could define, as a single variable, a variable that has either first and last name (if a person) or name (if an organization). But because an ID is a person or an organization (not both), you can use a multiple sequence variable.

**Procedure**

- 1. Define the first variable sequence:

<b>Sequence</b>	<b>1 of 2</b>
Select	SPRIDEN_FIRST_NAME  ' '  SPRIDEN_LAST_NAME
From	SPRIDEN
Data Element	SPRIDEN_CHANGE_IND
Operator	IS NULL
Value	
Data Element	SPRIDEN_ENTITY_IND
Operator	=
Value	'P'

This sequence concatenates the first name and last name, with a space between, based on the rules established for the person. Notice the rule to check that the current name record is accessed (SPRIDEN\_CHANGE\_IND IS NULL).

- 2. Define the second variable sequence:

<b>Sequence</b>	<b>2 of 2</b>
Select	SPRIDEN_LAST_NAME  '
From	SPRIDEN
Data Element	SPRIDEN_CHANGE_IND
Operator	IS NULL
Value	
Data Element	SPRIDEN_ENTITY_IND
Operator	=
Value	'C'

This sequence retrieves only the last name field because that is where the organization name is stored. Notice the rule that this sequence will be met only by IDs that are organizations (SPRIDEN\_ENTITY\_IND = 'C'). Again note the rule to check that the current name record is accessed (SPRIDEN\_CHANGE\_IND IS NULL).

The rules on each sequence are mutually exclusive, so any ID meets the criteria of only one sequence. You have created fewer variables, which results in simpler letter definitions for determining whether a person or an organization is being processed.

---

## *Creation of a variable with ID information other than the ID receiving the letter*

Some variables have ID information other than the ID receiving the letter.

Examples of this type of variable include:

- Spouse ID information
- Roommate ID information
- Employer ID information
- Advisor ID information

Rules for these variables are defined differently because they involve multiple IDs (PIDMs). Two conditions must exist:

- The variable **Type** must be defined on the Variable Rules Definition (GLRVRBL) page as *Manual*. This means that all joins must be entered in the Rules section, including PIDM joins that automatically take place in other variable types.
- The first table in the **From** field must be the table that contains the column from the Rules section that references the PIDM receiving the letter. This is necessary for the Letter Extract Process (GLBLSEL) to correctly extract the data for the variable.

## *Sort variables*

When you use the Letter Generation Print Report (GLRLETR) to produce letters directly in Banner, not through the download option, you may want to sort the letters by a variable such as name, ZIP code, or postal code. The GLRLETR process uses a sort parameter.

### **About this task**

**Note:** Use a sort variable that returns a single value. If the sort variable returns more than one value, the process will generate duplicate letters.

Sometimes you may want to sort on a variable that is not being printed in the letter by itself. For example, the variable for name might concatenate first and last name. You want to sort the letter by last name, which is not a variable being printed in the letter. Because the name variable is a concatenation of fields, it cannot be used as the sort variable. Here's how you can accomplish the task:

### **Procedure**

1. Use the **Variable Rules Definition (GLRVRBL)** page to create a variable that is always NULL. This is a simple variable to create, and it controls logic flow in the letter:
  - Enter \*NULL\_VAR in the **Variable** field.
  - Enter Null Variable in the **Description** field.
  - Enter two single quotes ( ' ' ) in the **Select** field.
  - Enter DUAL in the **From** field.
  - Don't enter any rules for the variable.

2. Use the Paragraph (GUAPARA) page to create a paragraph that includes:
  - An ^IFNULL check on the \*NULL\_VAR variable.
  - A branch around the sort variable. This branch prevents the variable from being printed but allows its value to be extracted by the Letter Extract Process (GLBLSEL) and used as a sort value by the Letter Generation Print Report (GLRLETR).
  - The sort variable on a line by itself, between the check on the \*NULL\_VAR and the location to which the logic branches.
3. Use the **Letter Process (GUALETR)** page to build a letter that includes the paragraph.

## Results

Example:

This sample paragraph checks to see if a null variable is null (which it will always be) and branches to another location, preventing the lines following the check from being printed:

- ^IFNULL\*NULL\_VAR &END\_PARA
- \*NULL\_VAR
- \*BAMT
- \*CAMT
- \*ORES\_AMT
- \*ERES\_AMT
- \*CRES\_AMT
- \*RESOURCES
- \*TERM01\_TOTAL
- \*TERM02\_TOTAL
- \*TERM03\_TOTAL
- &END\_PARA

This paragraph checks the value of \*NULL\_VAR, and if it is null, branches to the line that starts with &END\_PARA. The variables between the ^IFNULL check and the &END\_PARA line are not printed in the letter. These variables must be listed because their values are used for other purposes (other variables have these variables in their Select statements).

**Note:** The \*NULL\_VAR must be listed even though it is in the ^IFNULL line. This is because the GLBLSEL process extracts data only for variables that start in position 1. To correctly process the ^IFNULL check on the \*NULL\_VAR, GLBLSEL must know the value of \*NULL\_VAR. The only way it can know the value is if it is on a line by itself like all other variables.

### *Creation of a hidden variable*

The Letter Extract Process (GLBLSEL) only extracts variables starting in column 1 and appearing on a separate line in the letter. To extract variables found within another variable's Select clause, or variables only referenced in ^IFNULL statements, the variables must be hidden on the letter.

- Define a variable that will always be null.
- Enter this variable on the letter just before all other variables to be hidden.
- Place an ^IFNULL condition above the dummy null variable. This causes the logic to skip around the null variable and hidden variables.

### *Definition of a variable with a first variable type*

When the Letter Extract Process (GLBLSEL) is run, it must identify the variable it will process first to determine whether the ID should receive the letter.

The first processed variable must return only one value for an ID, because it becomes the key of extracting the values of the other variables in this letter. If the first variable returns more than one value for an ID, then all other variables in the letter have that many values multiplied by the number of values it should have returned. Also, if the first variable returns no value for an ID, no other variable in the letter returns a value for that ID, and the ID does not receive a letter.

There are two ways to identify the first variable:

- Using the default first variable
- Defining the first variable on GLRVRBL

**Warning!** If there is no default first variable and no first variable defined on GLRVRBL, the first variable that GLBSLEL processes is unpredictable. The output of the variables in the letter can cause unexpected results.

#### *Use of the the default first variable*

The default first variable that GLBLSEL uses is a variable that defines an address using the SPVADDS view. This view contains one address per ID based on the address hierarchy entered for the address type parameters on GLBLSEL.

This means that every ID receiving the letter being processed needs to have an effective address with an address type that matches one of the address parameter values entered during processing. If it does, then the SPVADDS variable returns one value per ID and the other variables in the letter return the correct number of values. If the ID does not have an effective address with an address type that matches one of the address parameter values entered during processing, no value will be in the SPVADDS view for the ID. The SPVADDS variable returns no value, and the ID does not receive a letter.

On the Variable Definition Rules (GLRVRBL) page, an SPVADDS\_NAME variable is defined like this:

Sequence	1 of 1
Select	SPVADDS_LAST_NAME
From	SPVADDS

This variable retrieves the last name of the ID if the ID has an address of one of the address types entered for the address type (parameter 10) when you run GLBLSEL.

*Definition of the first variable on GLRVRBL*

Another way to identify the first variable that GLBLSEL processes is to define the variable type as First on the Variable Definition Rules (GLRVRBL) page. This variable, when used in a letter not containing SPVADDS - related variables, indicates that it is the first variable GLBLSEL should process.

Using a first type variable allows you to specify an address not necessarily found in the SPVADDS view. Some of the Banner products have specific address types that are to be used for a letter, and the first-type variable allows those addresses to be used. (Those address variables are probably defined using SPRADDR field names.)

In defining a first-type variable, two important items must be considered:

- The variable must be ID-related. That is, it must be a table where the ID has a record and it cannot be a variable that uses a non-PIDM table like DUAL or GUBINST.
- The variable must return only one value per ID. If more than one value is returned, all other variables in the letter will have multiple values. If no value is returned, the ID will not receive a letter.

If more than one variable in a letter is defined as first-type, there is no way to determine which one GLBLSEL will process first. However, if all first-type variables follow these two guidelines, it is not a problem to have multiple first-type variables in a letter.

**Warning!** Even if a first-type variable is used and no SPVADDS variable is used, the address type parameter on GLBLSEL must be entered with at least one value.

**Example:**

Sequence	1 of 1
Select	SPRIDEN_LAST_NAME
From	SPRIDEN
Data Element	SPRIDEN_CHANGE_IND
Operator	IS NULL
Value	

SPRIDEN\_CHANGE\_IND IS NULL ensures that the current name record is accessed, not any previous last names. This guarantees that only one value per ID is selected.

---

## Build letters

You can use the Letter Code Validation (GTVLETR) page to build letters.

### Procedure

1. Use the **Letter Code Validation (GTVLETR)** page to create a letter code and description for the letter. You can identify whether duplicate letters are allowed.
2. Use the **Paragraph Code Validation (GTVPARA)** page to create a paragraph code and description for each paragraph in the letter.
3. Use the **Variable Definition Rules (GLRVRBL)** page to define the variables used in the paragraphs and build their associated selection rules. Examples include name, address, and salutations.

**Note:** The GBLSEL process can handle up to about 2500 variables per letter. The exact number depends on the length of the variable name; if you use shorter names you may be able to use more variables. This is controlled by the WS-PARM-LIST value in GBLSEL.pco. If you exceed the limit, an error message **"\*ERROR\* Length of variables has exceeded max limit"** is displayed and GBLSEL stops responding. value in GBLSEL.pco.

4. Use the **Paragraph (GUAPARA)** page to build individual paragraphs that can be used in letters. Paragraphs contain user-defined text, variables, and formatting commands (for example, underline and center). Whenever possible, build paragraphs that can be used in multiple letters.
5. Use the **Letter Process (GUALETR)** page to build the letter. Identify the paragraphs in the letter and the sequence in which the paragraphs should appear.

### Task notes

Remember the following while performing this task.

- Letter Generation does not support the GOTO command. You can simulate this command by using the ^IFNULL condition on a variable that is always null.
- Variables whose data can contain a pound sign (#), such as the street line of an address, should be preceded by a #CL formatting command and followed by a pound sign. This prevents Letter Generation from treating the pound sign in the variable as a formatting command.
- A page break should exist at the top of each letter (after any table definitions) so that each copy of the letter starts on a new page. The page break should be in a paragraph by itself.
- If the letter will be created from a download file, the letter only needs to contain one paragraph. This paragraph must contain a list of the variables used in the letter. Text and formatting commands are ignored.
- If additional table definitions need to be used in a letter, all table definitions must be defined in a paragraph by themselves. This must be the first paragraph in the letter.
- Use caution if you use the Ellucian-delivered variable names in your own letters. The delivered variables have been created specifically for the Ellucian-supported letters and may need modifications in other letter extract selections.

## Facility Report formatting emulation commands

Use the following formatting commands when building paragraphs on the Paragraph (GUAPARA) page. Formatting commands must appear on a line by themselves.

These conventions are used in following table:

- The word closed indicates that the command must be terminated by a pound sign (#) after the information about the command. For example, you must identify the last character of the text to be underlined by inserting a pound sign (#) after the last character to be underlined. The pound sign does not have to appear on a line by itself.
- The character x indicates text or variable information.
- The character n indicates a numeric value.

Code	Description
#B	Blank — Insert one blank line in the output text.
#CEN xxx#	Center Text — Center the text or variable "xxx" in the current column. Closed.
#CL xxx#	Column Literal — Suspend formatting for all text or variables in the current column for #CL through #. Closed.  Variables containing multiple sequence numbers will not format properly using the column literal. If you want this type of formatting, each sequence number must be a separate variable.
#CONCAT x	Concatenate — Place x next to the preceding word without inserting a space between them. Frequently used to place punctuation after a variable.  A backslash (\) is required to concatenate a period (.), for example:  *VARIABLE#CONCAT ,*VARIABLE#CONCAT !*VARIABLE#CONCAT \.  A trailing space is required after the #CONCAT command and before the x string.
#CS n	Column Skip — Skip n lines in the current column.
#CUL xxx#	Center with Underline — Center and underline the text or variable xxx following the #CUL command within the current column. Closed.

Code	Description
#DT <i>n s1 e1 s2 e2 ...sn en #</i>	<p>Define Table — Define the column boundaries for the specified table where <i>n</i> is the unique table number, <i>s1</i> is the starting position of column 1, <i>e1</i> is the ending position of column 1, and <i>s2</i> through <i>en</i> are the starting and ending positions of other columns.</p> <p>Table numbers must be within the range of 1 through 25.</p> <p>The #DT command is similar to setting formatting lines and section stops in word processing. Multiple tables can be defined within the same letter, but must be placed as the first paragraphs in the letter. They must be in a paragraph by themselves. #DT commands are the only commands that should precede the #NP command at the top of the letter.</p> <p>Make sure the first paragraph has only #DT commands. You will not receive an error message if the first paragraph is not a #DT paragraph, but the letter will not process.</p> <p>A #DT, seq#1 paragraph is necessary when the letter contains a #T command. You do not need the #DT if the #T is not present.</p> <p>#DT is not required if the GLRLETR parameter 02, <b>Word Processor Extract Option</b> is 1 (Word) or 2 (WordPerfect). #DT is required if the GLRLETR parameter 02 is 0 (Banner).</p> <p>IFNULL only works when you run GLRLETR for a Banner extracted letter (Word Processor Extract Option = 0). In addition, the download file will not contain paragraph text or literals.</p>
#FR	<p>Flush Right — Justify both left and right margins. This is the default setting.</p> <p>When using #FR, large gaps may appear between words so that both margins align properly.</p>
#I <i>n</i>	<p>Indent — Indents all the following text or variables by <i>n</i> number of spaces in the current column. This is different from #P which only indents the first line. To terminate the indent command, use the #TE command at the end of last line of text to be indented.</p>
#N	<p>New Line — Advance to the next line in the current column.</p>
#NC	<p>New Column — Advance to the next column.</p>
#NP	<p>New Page — End the current page and start a new page. To prevent page creep, the #NP command should be placed as the first command in a letter and should be the only command in a paragraph. It is preceded only by a paragraph with #DT commands.</p>
#PAGE <i>t b</i>	<p>Page Boundary — Define the top and bottom page boundaries where <i>t</i> is the top line and <i>b</i> is the bottom line.</p>
#P	<p>Paragraph — Start a new line within the current column. Indent five spaces at the beginning of the line.</p>
#R	<p>Right Justify — Set or reset the switch to right justify all text or variables in the current column.</p>

Code	Description
#RR	Ragged Right — Left justify all text or variables, but leave the right margin unjustified.
#S <i>n</i>	Line Skip — Skip <i>n</i> lines.
#SPN <i>t p sl bn sn #</i>	<p>Start Page Numbering — Define page numbering where <i>t</i> is the type of numbering:</p> <p>1 = Section Page Numbering [<i>m-n</i>]</p> <p>2 = Letter Page Numbering [<i>n</i> - from page 2 onward]</p> <p>3 = Period Page Numbering [<i>n</i>]</p> <p>4 = Plain Page Numbering [<i>n</i>]</p> <p><i>p</i> is the character position where the number is printed; <i>sl</i> is the number of lines to skip after printing the number; <i>bn</i> is the number of the first output page; and <i>sn</i> is the section number if type 1 was selected. Closed.</p>
#T <i>n</i>	<p>Table — Use the column rules for table <i>n</i> previously defined in the #DT command.</p> <p>Tables do not close when a new table is invoked. Remember to use the #TE command before invoking a new table.</p>
#TE	Table End — End one table before invoking another.
#TTL <i>y xxx #</i>	<p>Title — Underline a specific title at the top of each page. <i>y</i> is the length of line to center. Closed.</p> <p>If a new page formatting command (for example, #NP) is in the same letter as a title command, place the new page marker directly after the title command in the letter.</p>
#UL CLOSED	#UL Underline. Closed.
^IFNULL *VARIABLE &BRANCH	<p>If *VARIABLE returns a null value, skip all actions (text, variables, and formatting commands) up to &amp;BRANCH. &amp;BRANCH must be a label that begins with an ampersand(&amp;), starts in the first position of a line in a paragraph, and is the only item on that line.</p> <p>*VARIABLE is the variable to be checked for null values. *VARIABLE must also be identified elsewhere in the letter on a line by itself.</p>

## Extraction of variables with GLBLSEL

The Letter Extract Process (GLBLSEL) extracts values from the database for the variables that appear in a specified letter. The extracted data is inserted into the Letter Collector Table (GLRCOLR).

You can run GLBLSEL from the Process Submission Control (GJAPCTL) page or from the operating system.

## Use Job Submission

You can process all pending letters (those waiting to be printed) for a specific letter code, or you can process the letter code for a specific population.

### About this task

**Note:** If you process the letter code for a specific population, the population must be extracted with the Population Selection Extract Process (GLBDATA) before you run GLBLSEL.

### Procedure

1. If you are extracting variables for a specific population, make sure the population has been extracted with the Population Selection Extract Process (GLBDATA).
2. Access the **Process Submission Control (GJAPCTL)** page.
3. Enter `GLBLSEL` in the **Process** field.
4. If the process has more than one job parameter set, enter the name of the set in the **Parameter Set** field. You can click the down arrow icon to access the Job Parameter Set Rule (GJRJPRM) page to search for a job parameter set.
5. **Optional:** If you want to view, save, or print online, enter `DATABASE` in the **Printer** field.
6. Go to the Parameter Values section. Parameters defined for the process appear. Default parameter values appear, if they have been defined.
7. Enter the following parameter values:

Parameter Number	Parameter	Value
1	Application	Application associated with the letter being processed. This must be a valid application defined on the Application Definition Rules (GLRAPPL) page. This must be the same application associated with the population selection (if being used) and all variables in the letter. One application can be processed per run.
2	Process Pending Letters	Code that determines how the letter code is processed:  Y Process all pending letters for the letter code.  N Process the letter code for a specific population. The population must have been previously extracted with the Population Selection Extract Process (GLBDATA).  If you are running GLBLSEL from the operating system, system prompts give you the ability to process all pending letters for the application or all pending letters for a specific letter code. If you are running online from GJAPCTL, you can only process pending letters for a specific letter code.

Parameter Number	Parameter	Value
3	Letter Code	Code of the letter being processed. This must be a valid letter defined on the Letter Code Validation (GTVLETR) page. One letter can be processed per run.
4	Selection ID	ID of the population selection for which the letter is being processed. This must be a valid population selection defined on the Population Selection Definition Rules (GLRSLCT) page and must be associated with the application entered in parameter 1. A population selection is required if parameter 2 is set to N.
5	Creator ID	Oracle ID of the user who created the population selection. A creator ID is required if you entered a population selection in parameter 4.
6	User ID	Oracle ID of the user who extracted the population with the Population Selection Extract Process (GLBDATA). A user ID is required if you entered a population selection in parameter 4.  A population must exist for the combination of application, selection ID, creator ID, and user ID.
7	Term Code	Code of the term for which you want to process pending letters. This must be a valid code on the Term Code Validation (STVTERM) page. This parameter is used only if you are processing pending letters in the Student System. One term can be processed per run.
8	Aid Year	Aid year for which you want to process pending letters. This parameter is used only if you are processing pending letters in the Financial Aid System. One aid year can be processed per run.
9	Address Selection Date	Address date for which the address of choice must be effective. If blank, the current date is used.
10	Address Type	Type codes of the addresses you want to process, prefixed by the priority of each type code. The first character is the priority, and the second and third characters are the address type code from the Address Type Validation (STVATYP) page. For example, 1MA means the mailing address (MA) is the first choice; 2PR means the permanent address (PR) is the second choice. Enter each choice on a separate line.  You can have up to 9 entries, and the valid priority numbers are 1 - 9. More than one entry can have the same priority.
11	Detailed Error Report	Y Write error messages to the <code>glblsel1.log</code> file for IDs for which variable data could not be extracted.  N Do not write error messages to the log file.

Parameter Number	Parameter	Value
12	Detailed Execution Report	<ul style="list-style-type: none"> <li>• S = Display SQL statements.</li> <li>• I = Display SQL statements and inserts.</li> <li>• Y = Display paragraphs.</li> </ul>

8. Go to the Submission section.
9. Select the **Hold** option button or the **Submit** option button.
10. Select the Save function.
11. **Optional:** If the letter contains variables with dynamic parameters, the cursor returns to the Parameter Values section. Enter values for the dynamic parameters in parameter 88. Select the Save function again.

**Note:** You must enter a non-blank value for each 88 level prompt.

### Related concepts

[Pending letters](#) on page 100

### *Use of the operating system*

Check with your technical personnel for the appropriate command to use at your institution.

For example:

UNIX:	<code>glblsel.shl username password</code>
OpenVMS:	<code>@glblsel username password\</code>

is that you can process pending letters for all letter codes within an application. With GJAPCTL you are limited to processing pending letters for a specific letter code.

**Note:** Interactively entering job parameters from the host is no longer supported. Parameters for all jobs must be entered on the Process Submission Controls (GJAPCTL) page.

### *Task notes*

Remember the following while performing this task.

- GLBLSEL does not write a record to the Letter Collector Table (GLRCOLR) if the value of the variable selected is blank. For example, if the variable is a birthdate (\*BDATE) and the person's birthdate is not on the system, no record is written for this person for birthdate. Only variables requested in the paragraphs contained in the letter are written to GLRCOLR.
- If you are processing pending letters and multiple applications are associated with the system indicator, GLBLSEL extracts the variables for the application entered as parameter 1 and not necessarily the application associated with the variables in the letters.

- If different pending letters use the same format table definitions (for example, DT #1), the formatting of the letters causes errors and indicates that the table is defined multiple times.
- Letters are not extracted unless an effective address is found for the person which meets one of the address types entered in GLBLSEL and a first type variable is not used. This applies to both pending and nonpending letters. If a letter could not be created because no address existed in SPRADDR for that ID or because an address was found, but it was inactive, Banner lists that person's name and ID in the log file for GLBLSEL.
- When DATABASE is specified in the **Printer** field, GLBLSEL creates a `.log` for reviewing output, but not a `.lis`.

### *Pending letters*

Pending letters are letters that were created on the system-specific Mail (xUAMAIL) page or created through a process but not yet printed. You can filter pending letters or all letters for an ID, regardless of the Banner system, on the Mail Query (GUIMAIL) page.

Check the appropriate Banner system documentation to determine which processes may create a pending letter.

GLBLSEL identifies pending letters as those letters on GUIMAIL that meet all of the following conditions:

- The Letter code on GUIMAIL matches the letter code entered as parameter 3 for GLBLSEL.
- The Term on GUIMAIL matches the term in parameter 7 for GLBLSEL (Student System only).
- The Initiated plus the Wait days on GUIMAIL is less than or equal to the current date.
- The Printed date on GUIMAIL is blank.

If you are running GLBLSEL from the operating system, you can also process pending letters for all letter codes within an application. Rather than checking for a match of the Letter code, GLBLSEL checks to make sure the System indicator on GUIMAIL matches the system indicator of the application in parameter 1.

#### **Related tasks**

[Create a download file with GLRLETR](#) on page 105

### **Letter Generation from Banner with GLRLETR**

The Letter Generation Print Report (GLRLETR) can generate letters directly from Banner. The system reads the paragraphs within a letter in the sequence specified. Text is formatted and printed.

When a variable is encountered (identified by an asterisk and a variable name), the value of the variable name is extracted from the Letter Collector Table (GLRCOLR) and merged into the letter. When an RPF command is read, the letter is formatted as specified. The General Mail (GURMAIL) table is updated.

**Note:** GLRLETR can also create a download file that can be merged with a word processing text file. See

GLRLETR can be run through Job Submission or through the operating system.

**Note:** Interactively entering job parameters from the host is no longer supported. Parameters for all jobs must be entered on the Process Submission Controls (GJAPCTL) page.

### Related tasks

[Create a download file with GLRLETR](#) on page 105

### *Use Job Submission*

You can run GLRLETR through Job Submission.

### Procedure

1. Make sure the letter was built on the **Letter Process (GUALETR)** page.
2. If a population is being used, make sure the population was selected with the Population Selection Extract (GLBDATA) process.
3. Make sure variable data was extracted from the database with the Letter Extract (GLBLSEL) process.
4. Access the **Process Submission Control (GJAPCTL)** page.
5. Enter `GLRLETR` in the **Process** field.
6. If the process has more than one job parameter set, enter the name of the set in the **Parameter Set** field. You can click the down arrow icon to access the **Job Parameter Set Rule (GJRJPRM)** page to search for a job parameter set.
7. **Optional:** If you want to view, save, or print online, enter `DATABASE` in the **Printer** field.
8. Go to the Parameter Values section. Parameters defined for the process appear. Default parameter values appear, if they have been defined.
9. Enter the following parameter values:

Parameter Number	Parameter	Value
1	Application Code	Application associated with the letter being processed. This must be a valid application defined on the Application Definition Rules (GLRAPPL) page. One application can be processed per run.
2	Word Processor Extract Option	Code that indicates whether letters are generated directly from Process or created from a download file. Enter the value 0 to generate letters directly from Banner.  If this option is 1 (Word) or 2 (WordPerfect), you do not need a #DT paragraph.

Parameter Number	Parameter	Value
3	Process ALL Pending Letters	<p>Code that determines what letters are printed:</p> <p>Y Print all pending letters extracted for the application code.</p> <p>N Print a specific letter code. This is the default value.</p> <p>Process ALL Pending Letters only works when the Word Processor Extract Option is 0 (extracted directly from Banner)</p>
4	Letter Code	<p>Code of the letter being printed. This must be a valid letter code defined on the Letter Code Validation (GTVLETR) page. One letter can be processed per run.</p>
5	Sort Variable	<p>Name of the variable used to sort letters in a specific order. The variable name must start with an asterisk (*). Use uppercase. Examples of sort variables are ZIP/postal code and name.</p> <p>If the variable is not in the letter, no letters are printed and the Control Report indicates the sort variable is not valid.</p> <p>Use a sort variable that returns a single value. If the sort variable returns more than one value, the process will generate duplicate letters.</p>
6	Term Code	<p>Code of the term for which you want to print letters. This must be a valid code on the Term Code Validation (STVTERM) page. One term code can be processed per run. This code is required if you are processing letters in the Student System.</p> <p><b>Warning!</b> Warning! If you are processing GLRLETR through Job Submission, this parameter is required regardless of the system. However, it is used only to process letters in the Student System.</p>

Parameter Number	Parameter	Value
7	Module Code	<p>One-character code that identifies the module associated with the letter being printed. Examples include <b>A</b> (Admissions), <b>G</b> (Gift/Pledge), <b>C</b> (Constituent), <b>R</b> (Recruiting), <b>B</b> (Billing), <b>H</b> (History), and <b>F</b> (Registration). This parameter is not validated.</p> <p>Module codes vary by Banner product.</p> <p>GLRLETR updates the print date in the GURMAIL Table for published materials that match this module code. A list of the recipients and their materials is included in the report control information. Published materials are items that are sent to individuals, but are not printed by Letter Generation. Examples include college catalogs, sports brochures, and pre-printed pages.</p> <p><b>Warning!</b> Warning! This parameter is not required if you are processing from the operating system. A value is required, however, if you are processing from Job Submission. If updates should not be made for published materials, enter a module code that is not currently used.</p>
8	Audit Indicator	<p><b>Y</b> Print one sample letter for each letter code extracted. No updates occur. <a href="#">Pending letters</a> on page 100</p> <p><b>N</b> Generate letters, generate a summary report, update the print dates for generated letters on the Mail Query (GUIMAIL) page, and delete all data in the Letter Collector Table (GLRCOLR) for the letters selected to print.</p>
9	Free Format Date 1	Free-page date that is printed on the requested letter for variable *DATE1. *DATE1 can be a variable on a letter that is not built on the Variable Definition Rules (GLRVRBL) page; the value of this parameter becomes the variable value. The maximum length of this date is 30 characters.
10	Free Format Date 2	Free-page date that is printed on the requested letter for variable *DATE2. *DATE2 can be a variable on a letter that is not built on the Variable Definition Rules (GLRVRBL) page; the value of this parameter becomes the variable value. The maximum length of this date is 30 characters.
11	Free Format Date 3	Free-page date that is printed on the requested letter for variable *DATE3. *DATE3 can be a variable on a letter that is not built on the Variable Definition Rules (GLRVRBL) page; the value of this parameter becomes the variable value. The maximum length of this date is 30 characters.
12	Aid Year Code	Aid year for which you want to print letters. This must be a valid code on the Institution Financial Aid Options (ROAINST) page. This parameter is required if the application code in parameter 1 is associated with the Financial Aid System.

10. Go to the Submission section.
11. Select the **Hold** option button or the **Submit** option button.
12. Save your changes.
13. Print the letter using the operating system's print command.

### Related concepts

[Pending letters](#) on page 100

### *Use the operating system*

The Letter Generation Print Report (GLRLETR) can generate letters directly from Banner. The system reads the paragraphs within a letter in the sequence specified. Text is formatted and printed.

### Procedure

1. Use the appropriate command for your institution. For example:

---

UNIX:	<code>glrletr -r userid/password</code>
-------	---

---

OpenVMS:	<code>runproc glrletr -r userid/password</code>
----------	---

---

The resulting output file (glrletr.rpf) contains formatting commands and instructions, boilerplate text, and variable text that will be substituted in each letter.

2. Enter this command to format the results:

---

UNIX:	<code>guaprpf -f glrletr</code>
-------	---------------------------------

---

OpenVMS:	<code>runproc guaprpf -f glrletr</code>
----------	---

---

The resulting output file is named `glrletr.lis`. If you want to specify a different name for the output file, format the command like this:

---

UNIX:	<code>guaprpf -f -o outputfilename glrletr</code>
-------	---

---

OpenVMS:	<code>runproc guaprpf -f -o outputfilename glrletr</code>
----------	---

---

3. Print the letter using the operating system's print command.

**Note:** Interactively entering job parameters from the host is no longer supported. Parameters for all jobs must be entered on the Process Submission Controls (GJAPCTL) page.

### *Task notes*

Remember the following while performing this task.

- A letter is not generated for an ID if the letter code has a duplicate indicator of N on the Letter Code Validation (GTVLETR) page and the ID already has an entry on the Mail Query (GUIMAIL) page for the letter.
- A letter is not generated for an ID if **Date Printed** is not blank.

- If a checklist variable is used in a letter, the request dates and request count on the Admissions Checklist section of the Admissions Application (SAAADMS) page are updated.
- If a variable name is found in a letter but does not exist on the extract file, nothing is printed. For example, if the letter is requesting some action by the person as of a certain date and the date parameters are not entered in the extract program, the text appears but the date does not. In this example, the date should appear after the word "by," but the date does not exist:

```
Please send your transcript to my office by or you will be unable to register.
```

- Only one letter is created in a run for a letter code and person.
- If multiple items for a variable are extracted, the first value is printed and a line is skipped before the next value is printed. If there is a single value variable, no line is skipped.

In the following example, there is a single date and a single term. Multiple \*CHKL variables have been extracted. The paragraph reads as follows:

Line 1: The following items are requested by

Line 2: \*DATE1

Line 3: in order for you to register by

Line 4: \*TERM

Line 5: #CONCAT \.

Line 6: #S 2

Line 7: \*CHKL

Line 8: #S 2

Line 9: Thank you.

The result is:

```
The following items are requested by August 1, 2002 in order for you to register by Fall 2003.
```

```
0001 High School Transcript
```

```
0004 Tuition Deposit
```

```
Thank you.
```

## Create a download file with GLRLETR

The Letter Generation Print Report (GLRLETR) can create a download file that can be merged with a text file created by certain word processors. Supported tools are Microsoft Word for Windows (version 2.0 or higher) and WordPerfect (version 4.2 or higher).

### About this task

This download option allows you to print letters using all available formatting, styles, and fonts of your word processor.

**Note:** Ellucian does not support WordPerfect 8.0 and higher.

GLRLETR can also generate a letter directly in Banner.

The download option of GLRLETR creates two files:

- The download file contains a "header record" with all of the variables used in the letter and records for each ID in the population. The name of the download file depends on the run sequence number produced by job submission and ends with a .DOC extension. For example, GLRLETR\_1234.DOC is a valid name, where 1234 is the run sequence number.
- A control report contains information about the letters that were processed. This information includes the number of "letters" produced, referring to the number of IDs that had data extracted.

**Note:** IFNULL only works when you run GLRLETR for a Banner extracted letter (Word Processor Extract Option = 0). In addition, the download file will not contain paragraph text or literals.

Use these steps to create a download file:

#### Procedure

1. Make sure the letter was built on the **Letter Process (GUALETR)** page.

**Note:** The letter only needs to contain one paragraph. This paragraph must contain a list of the variables used in the letter. (Text and formatting commands are ignored.) Variables must be defined on the Variable Definition Rules (GLRVRBL) page. Each variable must be entered on a separate line. The order of the variables does not matter.

2. If a population is being used, make sure the population was selected with the Population Selection Extract Process (GLBDATA).
3. Make sure variable data was extracted from the database with the Letter Extract Process (GLBLSEL).
4. Access the **Process Submission Control (GJAPCTL)** page.
5. Enter GLRLETR in the **Process** field.
6. If the process has more than one job parameter set, enter the name of the set in the **Parameter Set** field. You can click the down arrow icon to access the Job Parameter Set Rule (GJRJPRM) page to search for a job parameter set.
7. **Optional:** If you want to view, save, or print online, enter DATABASE in the **Printer** field.
8. Go to the Parameter Values section. Parameters defined for the process appear. Default parameter values appear, if they have been defined.
9. Enter the following parameter values:

Parameter Number	Parameter	Value
1	Application Code	Application associated with the letter being processed. This must be a valid application defined on the Application Definition Rules (GLRAPPL) page. One application can be processed per run.

Parameter Number	Parameter	Value
2	Word Processor Extract Option	<p>Code that indicates whether letters are generated directly from Banner or created from a download file. Enter one of these values:</p> <ul style="list-style-type: none"> <li>• 0 = Letters are generated directly from Banner.</li> <li>• 1 = Produce an output file for Word.</li> <li>• 2 = Produce an output file for WordPerfect.</li> </ul>
3	Process ALL Pending Letters	<p>Code that determines what letters are printed:</p> <ul style="list-style-type: none"> <li>• Y = Print all pending letters for the application code.</li> <li>• N = Print a specific letter code (default).</li> </ul> <p>Process ALL Pending Letters is only valid when the <b>Word Processor Extract Option</b> is 0 (letters produced directly from Banner).</p>
4	Letter Code	Code of the letter being printed. This must be a valid letter code defined on the Letter Code Validation (GTVLETR) page. One letter can be processed per run.
6	Term Code	Code of the term for which you want to print letters. This must be a valid code on the Term Code Validation (STVTERM) page. This parameter is required if the application code in parameter 1 is associated with the Student System.
7	Module Code	<p>One-character code that identifies the module associated with the letter being printed. This code updates pending published letter codes in the GURMAIL Table with a print date and lists the information in the report control information. Examples include:</p> <ul style="list-style-type: none"> <li>• A = Admissions</li> <li>• G = Gift/Pledge</li> <li>• C = Constituent</li> <li>• R = Recruiting</li> <li>• B = Billing</li> <li>• H = History</li> <li>• F = Registration.</li> </ul> <p>This parameter is not validated.</p> <p>Module codes vary by Banner product.</p>

Parameter Number	Parameter	Value
8	Audit Indicator	<ul style="list-style-type: none"> <li>Y = Print one sample letter for each letter code extracted. No updates occur.</li> <li>N = Generate letters, generate a summary report, update the print dates for generated letters on the Mail Query (GUIMAIL) page, and delete all the data in the Letter Collector Table (GLRCOLR) for the letters selected to print.</li> </ul>
12	Aid Year Code	Aid year for which you want to print letters. This must be a valid code on the Institution Financial Aid Options (ROAINST) page. This parameter is required if the application code in parameter 1 is associated with the Financial Aid System.

- Go to the Submission section.
- Select the **Hold** option button or the **Submit** option button.
- Save your changes.
 

**Result:** This creates a download file.
- Use your institution's procedures to merge the letter into your word processing environment. Check your word processor's documentation for instructions on using the "mail merge" feature.

**Note:** The WordPerfect download file is a binary file. Make sure you indicate in your communication software that a binary file is being downloaded.

### Related concepts

[Letter Generation from Banner with GLRLETR](#) on page 100

[Pending letters](#) on page 100

### Task notes

Remember the following while performing this task.

- When you produce a download file, you can produce only one letter (that is, one letter code) for a single run of GLRLETR. Each letter needs its own unique header record and, therefore, its own data file.
- The three date parameters (\*DATE1, \*DATE2, and \*DATE3) are ignored if they are defined in the letter. The feature of entering dates dynamically can be accomplished in MS Word for Windows and WordPerfect (DOS version).
- The Mail Table (pages \*UAMAIL) is updated when you use the extract option.
- Other GLRLETR processing performed when creating a letter in Banner (option 0) still occurs (such as signature variables and duplicate letter checking).
- IFNULL only works when you run GLRLETR for a Banner extracted letter (Word Processor Extract Option = 0). In addition, the download file will not contain paragraph text or literals.

---

## Letter generation messages

As you work with the Letter Generation programs, Banner provides diagnostic messages to alert you to problem that might occur along the way and gives you directions to remedy the situation. Messages may indicate a data entry mistake, such as a not valid or missing value, or other problem.

If an Oracle error occurs during the running of the GLBLSEL process, the message usually ends with the word "Aborting." To help you diagnose and correct these situations, the system displays an error number in the glblsel.log file as "SQLCODE=#####".

Listed below are some of the common Banner diagnostic messages you may see, with their corrective actions.

### **<address type> is not valid**

The address type entered as a parameter is not defined on the Address Type Code Validation (STVATYP) page.

Define the address type on STVATYP, or enter the correct address type for the parameter.

### **Application <application> does not exist**

The application entered as a parameter is not defined on the Application Definition Rules (GLRAPPL) page.

Define the application on GLRAPPL, or enter the correct application for the parameter.

### **CANNOT PROCESS ALL VARIABLES**

No compiled variables (GLRCMPL records) were found for any variables in the letter.

Recompile all variables, and re-run GLBLSEL. (Recompiling requires running GLBPARM and GLOLETT.)

### **Letter <letter> does not exist**

The letter code entered as a parameter is not defined on the Letter Code Validation (GTVLETR) page.

Define the letter code on GTVLETR, or enter the correct letter code for the parameter.

### **Program must be run using Pending Letters or Selection**

Running GLBLSEL requires either choosing pending letters or entering a population. Pending letters were not chosen, and a population was not entered.

Run GLBLSEL again, either choosing pending letters or entering a population.

### **Term <term> does not exist**

The term code entered as a parameter is not defined on the Term Code Validation (STVTERM) page.

Define the term code on STVTERM, or enter the correct term code for the parameter.

**Variable <variable> on letter <letter> is not owned by application <application>**

A variable defined in the letter does not belong to the application entered as the parameter.

Use the Variable Definition (GLRVRBL) page to copy the variable from the application that does own the variable to the one entered for the parameter.

In a letter generated directly by the Letter Generation module (rather than by downloading), a variable's name, rather than the translation value for the variable, appears in the text of the letter. For example, the variable "\*\*freestone" rather than the value "John" appears.

Either the generated letter has multiple tables defined (that is, #DT commands) and the #DT commands are not the first paragraph of the letter, or the #DT command paragraphs have commands other than #DT (for example, #NP).

Use the Letter Process (GUALETR) page to review the first paragraph of the letter. Make sure the first paragraph has only #DT commands. Use the Paragraph (GUAPARA) page to make any modifications. Rerun the Letter Extract Process (GLBLESEL) and the Letter Generation Print Report (GLRLETR).

**Note:** If you ran GLRLETR in audit mode when you determined the error, you only need to run GLRLETR. There's no need to run GLBLESEL again.

## General International Management

The General International Management module lets you store information about foreign students attending your institution and create reports with that information. It has been designed to help institutions meet the requirements of the United States Bureau of Citizenship and Immigration Services (BCIS).

If your institution is not located in the USA, you may not need this module.

Some of the functions you can perform in the General International Management module are:

- Store and maintain visa information for students, applicants, and employees
- Track visas for students, applicants and employees
- Create reports to track expiring visa documents
- Collect and report on race/ethnicity codes

## Validation pages

International Management pages use the following validation pages.

Validation page	Used By
GTVCELG	GOAINTL
Certification of Eligibility Validation page	Visa International Information page

<b>Validation page</b>	<b>Used By</b>
GTVDOCM	GOAINTL
Documentation Code Validation page	Visa International Information page
GTVSRCE	GOAINTL
Source Code Validation page	Visa International Information page
GTVSVCC	GOASEVS
SEVIS Category Code Validation page	SEVIS Information page
GTVSVCP	GOASEVS
SEVIS Consular Post Validation page	SEVIS Information page
GTVSVCR	GOASEVS
SEVIS Creation Reason Code Validation page	SEVIS Information page
GTVSVDT	GOASEVS
SEVIS Dependent Termination Code Validation page	SEVIS Information page
GTVSVEL	GOASEVS
SEVIS Education Level Code Validation page	SEVIS Information page
GTVSVEP	GOASEVS
SEVIS EV End Program Reason Code Validation page	SEVIS Information page
GTVSVFT	GOASEVS
SEVIS Drop Below Full Time Reason Code Validation page	SEVIS Information page
GTVSVGO	GOASEVS
SEVIS Governmental Organization Code Validation page	SEVIS Information page

<b>Validation page</b>	<b>Used By</b>
GTVSVIO	GOASEVS
SEVIS International Organization Code Validation page	SEVIS Information page
GTVSVIT	GOASEVS
SEVIS Infraction Type Code Validation page	SEVIS Information page
GTVSVPC	GOASEVS
SEVIS Exchange Visitor Position Code Validation page	SEVIS Information page
GTVSVRP	GOASEVS
SEVIS Request for page Reprint Code Validation page	SEVIS Information page
GTVSVTR	GOASEVS
SEVIS Termination Reason Code Validation page	SEVIS Information page
GTVSVAP	GORSVSQ
SEVIS Auto-populate Code Validation page	SEVIS Business Rules page
GTVSVBA	GORSVSQ
SEVIS Business Action Code Validation page	SEVIS Business Rules page
GTVVISS	GOAINTL
Visa Issuing Authority Validation page	Visa International Information page
GTVRRAC	GORRACE
Regulatory Race Validation page	Race Rules page

## Menu navigation Table

Pages in the General International Management module can be accessed from the following menus.

Menu	Description
*GENMVISA	General Multi Visa Menu  Contains the menus that help you track visa information for students, applicants, and employees
*GENSEVIS	General SEVIS Menu  Contains the menus that help you manage your institution's relationship with the Bureau.
GOAINTL	Visa International Information page  Allows you to store and display information about the visas held by students, applicants, and employees.
GTVCELG	Certification of Eligibility Validation page  Provides a list of certifications of eligibility for employment. Some examples, in the United States, are the I-20 and IAP-66.
GTVDOCM	Documentation Code Validation page  Provides a list of documents that could be used to validate a visa request.
GTVSRCE	Visa Source Code Validation page  Provides a list of documents that could be used to validate a visa request.
GTVVISS	Visa Issuing Authority Validation page  Lists the codes representing the agencies that may issue visas.
GOASEVS	SEVIS Information page  Allows you to store information about students and exchange visitors so it can be sent to the Bureau using the Internet. It contains SEVIS-specific data elements and dependent relationship information.
GTVSVCC	SEVIS Category Code Validation page  Allows you to store data for the valid SEVIS exchange visitor category codes.
GTVSVCP	SEVIS Consular Post Code Validation page  Allows you to store data for the valid SEVIS consular post codes.

<b>Menu</b>	<b>Description</b>
GTVSVCR	SEVIS Creation Reason Code Validation page  Contains the codes that represent why the student or exchange visitor records were created, such as initial attendance or transfer.
GTVSVDT	SEVIS Dependent Termination Code Validation page  Stores codes representing the reasons a person's dependent is no longer included on the record. For example, the dependent may have left the United States.
GTVSVEL	SEVIS Education Level Code Validation page  Provides codes representing education levels, for example, associate, bachelor, and other university-obtained degrees.
GTVSVEP	SEVIS EV End Program Reason Code Validation page  Stores codes representing the reasons an exchange visitor's program could be ended.
GTVSVFT	SEVIS Drop Below Full Time Reason Code Validation page  Stores SEVIS drop below full time reason codes. They describe why the student did not carry enough credits to be considered a full-time student. Examples include illness and difficulty learning English.
GTVSVGO	SEVIS Governmental Organization Code Validation page  Stores SEVIS governmental organization codes. They describe the government organization that allowed the EV to enter the United States. An example would be the Department of State.
GTVSVIO	SEVIS International Organization Code Validation page  Stores SEVIS EV infraction codes. They describe the international organization that is sponsoring the EV while in the United States. An example would be the World Health Organization.
GTVSVIT	SEVIS Infraction Type Code Validation page  Stores SEVIS EV infraction type codes. An example would be the failure to extend a DS-2019 in a timely manner.
GTVSVRP	SEVIS Request for page Reprint Code Validation page  Stores codes representing reasons for reprinting Visa request pages. The student may have lost the original, or it may have been damaged.

Menu	Description
GTVSVTR	SEVIS Termination Reason Code Validation page  Stores SEVIS termination reason codes. They indicate why the student or exchange visitor was terminated from the school (expulsion, delinquency, and so on.).
GTVSVAP	SEVIS Auto-populate Code Validation page  Stores the fields in the GOBSEVS table that will be populated automatically (auto-populated) from other Extraction tables. Column names from the GOBSEVS table have been delivered.
GTVSVBA	SEVIS Business Action Code Validation page  Allows you to define business action codes and the procedures they will execute. Two business actions are delivered as seed data; CREATE_STUDENT and CREATE_EV.
GORSVSQ	SEVIS Business Rules page  Allows you to associate business actions or auto-populations with process code/rule code combinations.

## General international management procedures

General international management procedures include visa tracking.

### Visa tracking

The International Information (GOINTL) page tracks Visa information.

### *Setup of supporting pages*

You can begin by entering information in the following validation pages.

- Nation Code Validation (STVNATN) page
- Visa Type Code Validation (STVVTYPE) page
- Port of Entry Code Validation (STVPENT) page
- Language Code Validation (STVLANG) page
- International Student Sponsor Code Validation (STVSPON) page
- Employment Type Validation (STVEMPT) page
- Admission Request Checklist Code Validation (STVADMR) page
- Visa Issuing Authority Validation (GTVVISS) page
- Visa Source Code Validation (GTVSRCE) page

- Visa Document Code Validation (GTVDOCM) page
- Certification of Eligibility Validation (GTVCELG) page

### *Enter visa information*

Visa tracking information is stored on the Visa International Information (GOAINTL) page. To enter visa information about an international student.

#### **About this task**

**Note:** A student, prospect, or employee must exist in Banner (have a Banner ID) before you can enter information about them into GOAINTL.

#### **Procedure**

1. Enter the person's ID in the key block, or search for it by selecting the pull-down arrow.
2. Use <Ctrl><PgDn> to move into the Visa Information section on the Visa section.
3. Enter the data into the Visa Information section.
4. Save your changes.
5. Navigate to the Document section.
6. Enter information about the person's supporting documents.
7. Save your changes.
8. Navigate to the Passport Information section.
9. Enter information about the person's passport, and their admission and departure.
10. Save your changes.
11. Navigate to the Certification of Eligibility section.
12. Enter information about the documents that prove the person's eligibility.
13. Save your changes.
14. Navigate to the Nationality section.
15. Enter information about the person's Nationality and about family members who have accompanied them to the United States.
16. Save your changes.

### *Deletion of records*

Previously, you could not delete GOAINTL records; they were all stored as history. Now you can delete visa information from the Visa Information section. You cannot change the visa type, you can only delete the record.

**Note:** You cannot delete a record if there are supporting documents for it. You will receive an error message, and you will not be able to save your change. You must first go to the Document section and delete all the items listed there.

### *Overlap visa dates*

GOAINTL has always supported multiple visas for one person, but none of the dates could overlap. If they did, you would receive an error message and you could not save the record.

Now people can have visas with overlapping dates. Banner will display an informational message, but you do not need to take any special actions as a result of it.

### *Display multiple visas*

GOAINTL had displayed multiple visas sorted by the date, now it displays them by sequence number. The lowest number (the visa added earliest) appears on the page first, and you can scroll down to see the rest, sorted lowest to highest.

## **Student and Exchange Visitors Information System (SEVIS)**

The Bureau of Citizenship and Immigration Services (BCIS), part of the U.S. Department of Homeland Security, is asking institutions in the United States to provide information about non-immigrant students and exchange visitors using the Internet.

The Student and Exchange Visitors Information System (SEVIS) provides tracking, monitoring, and access to accurate and current information on non-immigrant students (those with an F or M visa) and exchange visitors (those with a J visa), and on their dependents. Using SEVIS ensures that information is collected in a usable, shareable electronic format from the beginning, before the State Department issues the visa, and provides current, accurate data throughout the person's course of study or program.

All institutions must be certified by the Bureau of Citizenship and Immigration Services to participate in SEVIS. The certification process will provide each institution with the appropriate login IDs and passwords.

For more information about SEVIS, please refer to the Bureau of Citizenship and Immigration Service's web site.

**Note:** The Bureau of Citizenship and Immigration Services was formerly known as the Immigration and Naturalization Service (INS).

In 2008, Ellucian provided notice that they would no longer enhance or upgrade existing SEVIS related objects and processes in Banner. You can find further clarification of this support statement in *FAQ 1-4ZW5AZ - What is Ellucian's support with regard to SEVIS and visa case management?*. As stated in that communication, support for Banner SEVIS/SEVISTA batch processing ended with the option for current customers to license SEVIS Connection from March 2008 through September 2009. For institutions needing SEVIS batch processing, Ellucian provides International Student and Scholar Management - a premier visa case management system for international student / scholar offices managing international student and exchange visitor information and SEVIS regulatory processes. While Ellucian transformed certain SEVIS forms to Banner 9 administrative pages, maintenance, enhancements and regulatory updates remain ceased.

You can find guidance for SEVIS functionality and processing in the Banner General User Guide, versions 9.3.11 and earlier found in the BannerDocumentation library of the Ellucian Customer Center.

## System Functions/Administration

The System Functions/Administration module allows you to set up, operate, and monitor Banner™. Many pages in this module are used primarily by members of your data center to define and monitor the ongoing use of the system. Other pages are useful to end users.

Some of the functions you can perform in the System Functions/Administration module are:

- Define the currency codes used in the system
- Define bank codes, bank routing information, and direct deposit information
- Display and maintain information used with EDI (Electronic Data Interchange)
- Define the codes and rules used by the Desktop Tools application to access data from a PC application
- Define the codes and rules used by the Event Queue Maintenance module to define and track events as they occur in the Banner database
- Create and maintain custom menus for your institution
- Create or copy personal menus
- Establish personal preferences for the logged in user ID
- Create new objects
- Define and submit QuickFlows
- Extend the Banner data model with the Supplemental Data Engine.
- Set up VBS (Value-Based Security)
- Track changes to a Social Security Number (SSN), Social Insurance Number (SIN), or Tax Filing Number (TFN)
- Cross-reference institution-defined codes with valid integration partner system codes

## Validation pages

Systems Functions/Administration pages use the following validation pages.

Validation page	Used By
FTVACCT	GXR BANK
Account Code Validation page	Bank Code Rule page
FTVCOAS	GXR BANK
Chart of Accounts Validation page	Bank Code Rule page
FTVFUND	GXR BANK
Fund Code Validation page	Bank Code Rule page

<b>Validation page</b>	<b>Used By</b>
GTVCURR Currency Codes Validation page	GUACURR Currency Code Maintenance page GUAINST Installation Control page GXR BANK Bank Code Rule page
GTVDADD Desktop Tools - Add-In Validation page	GOADADD Desktop Tools - Add-In Application page
GTVDPRP Desktop Tools - Step Property Validation page	GORDPRP Desktop Tools - Step Property Values Rule page GORDSTP Desktop Tools - Step Type Properties Rule page
GTVDSTP Desktop Tools - Step Type Validation page	GOADSTE Desktop Tools - Wizard Steps Setup Application page GORDSTP Desktop Tools - Step Type Properties Rule page
GTVEQNM Event Queue Code Validation page	GOAEQRM Event Queue Record Maintenance page GOREQNM Event Queue Name Definition page
GTVEQPG Parameter Group Code Validation page	GOREQNM Event Queue Name Definition page GOREQPG Parameter Group Rule page
GTVEQPM Parameter Code Validation page	GOREQPG Parameter Group Rule page

<b>Validation page</b>	<b>Used By</b>
GTVEQTS	GOAEQRM
Target System Code Validation page	Event Queue Record Maintenance page GOREQNM Event Queue Name Definition page
GTVINTP	GORINTG
Integration Partner System Code Validation page	Integration Partner System Rules page
GTVOBJT	GUAOBS
Object Code Validation page	Object Maintenance page GUTGMNU Menu Maintenance page
GTVQUIK	GUAQUIK
QuickFlow Code Validation page	QuickFlow Definition page
GTVSCOD	GUACURR
EDI/ISO Standard Code Validation page	Currency Codes Validation page
GTVSYSI	GUAOBS
System Indicator Validation page	Object Maintenance page GUTGMNU Menu Maintenance page GUTMENU General Menu Maintenance page
GTVVAPP	GOABACR
Value-Based Security Application Codes page	Value-Based Security Access Rules page GOAVUSR Value-Based Security Restricted Users page
GTVVBTY	GTVVAPP
Value-Based Security Object Types page	Value-Based Security Application Codes page

<b>Validation page</b>	<b>Used By</b>
GTVVOBJ	GOABACR
Value-Based Security Objects page	Value-Based Security Access Rules page GOAPCRL Value-Based Security Pattern Control Rules page
GXVDIRD	GXADIRD
Bank Routing Number Validation page	Direct Deposit Recipient page
STVCAMP	GOABACR
Campus Code Validation page	Value-Based Security Access Rules page
STVROLL	GOABACR
College Code Validation page	Value-Based Security Access Rules page
STVDEPT	GOABACR
Department Code Validation page	Value-Based Security Access Rules page
STVLEVL	GOABACR
Level Code Validation page	Value-Based Security Access Rules page
STVNATN	GTVZIPC
Nation Code Validation page	ZIP/Postal Code Validation page GUACURR Currency Code Maintenance page GUAINST Installation Control page

## Related process

The Print Dynamic Help for a page Process (GURHELP) prints Dynamic Help for selected pages. You can print page-level, section-level, and field-level help.

## Menu navigation table

Pages in the System Functions/Administration module can be accessed from the following menus.

Menu	Description
*GENCURRE	Banking and Currency Menu  Provides access to the pages used to define currency codes, bank codes, bank routing information, and direct deposit information.
*GENEDI	Electronic Data Interchange Menu  Provides access to the pages used to maintain EDI information.
*GENDTOOLS	Desktop Tools Menu  Provides access to the pages used to define the codes and rules used by the Desktop Tools application.
*GENEQS	Event Queue Maintenance Menu  Provides access to the pages used to define the codes and rules used by the Event Queue Maintenance module.
*GENMENU	Menu/Preference Maintenance Menu  Provides access to the pages used to customize menus for your institution, change an Oracle password, establish personal preferences for the logged in user ID, create personal menus, and copy personal menus.  <b>Note:</b> The Main Menu (GUAGMNU) page is not available in Banner 9x administrative applications and is replaced by the Application Navigator home page. Items such as (but not limited to) personalized links and general messaging are not included in Banner 9x administrative application functionality.
*GENOBS	Object Maintenance Menu  Provides access to the pages used to create Banner objects.
*GENQUIK	QuickFlow Process Menu  Provides access to the pages used to define and submit QuickFlows.

<b>Menu</b>	<b>Description</b>
*GENMISC	Miscellaneous General Pages Provides access to miscellaneous General pages.
*GENMSSG	Messaging Provides access to messaging functions.
*GENFGAC	Fine-Grained Access Control Menu Provides access to pages to set up Value-Based Security, PII Security, and Masking.
*GENMATCH	Common Matching Menu Provides access to pages for setting up Common Matching.
*GENINTCOMP	Integration Component Management Menu Provides access to Integration Components pages.
*GENSDE	Supplemental Data Engine Menu Provides access to pages for setting up Banner supplemental data.
*GENMDUU	Mass Data Update Utility Menu Provides access to pages for mass data updates.
*GENPROXY	Proxy Access Pages Menu Provides access to pages for setting up Proxy Access.

System Functions/Administration also uses some pages that cannot be called from a menu:

- The About Banner (GUAABOT) page displays information about Banner, including the name and version number of the page from which GUAABOT was called, your session ID, the 8x installed version for each installation with the most current version, and the 9x installed version for each application (baseline and localized) with the most current version, sorted alphabetically by application.
- The Calculator (GUACALC) page displays a calculator. You can access this page by double-clicking any numeric field on a page, using a button on the Banner tool bar, or using Direct Access.
- The Calendar (GUACALN) page displays a calendar. You can access this page by double-clicking any date field on a page, using a button on the Banner tool bar, or using Direct Access.
- The Direct Access (GUAPARM) page is used to directly access pages, jobs, menus, and QuickFlows by name. You can access this page from the File pull-down menu.
- The Display Banner Versions and Patches (GUIVERS) page is used to display Banner versions and patches by product and the 8x installed version for each product with the most current version. This page allows you to easily check your installed product versions and patches.

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You can access this page directly, but it is not found on a menu. It is also accessible through the About Banner (GUAABOT) page or the Installation Controls (GUAINST) page. On either page, click the **Display Installed Patch Information** button to display the GUIVERS page.

## System Functions/Administration procedures

The System Functions/Administration module lets you set up, operate, and monitor Banner.

With this module you can:

- Establish currency conversions.
- Set up events in the Event Queue Maintenance module.
- Customize menus.
- Manage the Data Extract feature.
- Create and use QuickFlows.
- Set up Value-Based Security with Fined-Grained Access Controls.
- Set up and use Common Matching.
- Manage integration components for your institution.
- Set up Electronic Data Interchange (EDI).
- Manage Banner objects.
- Set up Supplemental Data. See *Supplemental Data Engine*.

### Establish currency conversions

Banner can process foreign currencies. The base currency for your institution, referenced on the Institutional Description Table (GUBINST), is used in all foreign currency calculations. The currency codes, with daily or periodic rates, are maintained on the Currency Code Maintenance (GUACURR) page.

#### About this task

Currency conversions are used in the Purchasing and Procurement, Accounts Payable, and General Ledger modules of the Finance System. Unless otherwise specified, amounts are entered in the installation's base currency that is referenced on the Installation Control (GUAINST) page. When dealing with a foreign currency, you can enter a currency code in the **Currency Code** field. The system automatically calculates the converted amount (entered amount divided by the exchange rate).

To process transactions in a foreign currency, the associated currency code (for example, EUR for Euros) must be defined on the Currency Conversion Validation Table (GTVCURR). You can produce statements or invoices in foreign currencies.

#### Procedure

1. Determine which foreign currencies are used at your institution.

2. Use the Currency **Code Maintenance (GUACURR)** page to create your currency records. This updates the Currency Conversion Validation Table (GTVCURR).

## Creation of bank information

The Bank Code Rule (GXR BANK) page is used to do the following.

- Define bank codes for your institution's bank accounts
- Link bank funds and bank accounts with your cash accounts
- Define Automatic Clearing House (ACH) information for your institution's bank accounts

The first two actions are performed on the main window of GXR BANK. ACH information is entered on the ACH Rules window of the page.

You can create several records for a particular bank code. Only one record per bank code is valid for a defined effective date range. Each record, however, can be distinguished by a different bank name.

As illustrated in the procedures below, new bank codes are defined in data entry mode; and additional records for a previously defined bank code are accessible in filter mode. Any modifications to existing bank records must be done after executing a filter.

### *Define a new bank code*

You can use the Bank Code Rule (GXR BANK) page to define new bank codes.

#### Procedure

1. Access the **Bank Code Rule (GXR BANK)** page. The system displays a message indicating that the page is in filter mode. Select **OK**.
2. Enter the bank code in the **Bank** field.

You can use the down arrow icon to access a list of previously defined bank codes. If more than one bank name exists for the same bank code, use the down arrow to view other bank names with that code.

3. Enter the name to be associated with the bank code in the **Name** field.
4. Select the **Active Status** check box if the bank is available for use within Banner. Clear this check box if the bank is not active.
5. Enter the effective date of the bank record in the **Effective Date** field. The default value of this field is today's date. This value can be changed.
6. **Optional:** Enter the date that the bank code record is no longer valid in the **Termination Date** field. You can enter a past or future date.

**Note:** If you want a bank code to be valid for only a certain length of time, you can enter an effective date (when you can start using the bank code) and a termination date (when the bank code can no longer be used).

- 
7. (Used only by Banner Finance) Enter the currency code for this bank in the **Base Currency** field, for example, USD may represent U.S. dollars. You can double-click in the field to access the Currency Code Validation (GTVCURR) page and search for a currency code.
  8. Enter the identification number for the bank in the **Bank ID** field. You can select the down arrow icon to access the Non-Person Search (SOACOMP) page and search for a bank ID.

**Note:** When you save a bank code, Banner creates an identification record in the Identification Table (spriden) for the bank ID and bank name. Use the Identification (FOAIDEN) page for Finance or PPAIDEN for Human Resources) to update existing bank names.

9. Enter the bank account number in the **Bank Account Number** field.

If the bank code you're defining is to be used with the Banner Finance System, identify the Banner bank funds and bank accounts associated with your cash account. (See the Linking Bank Funds and Bank Accounts with Cash Accounts sub-procedure below for instructions on providing this information.)

10. Select the **ACH Status** check box if the ACH functionality is active for the bank. Clear this check box if it is not.

If you selected the check box, you must specify the information required for sending direct deposit tapes from your bank to the Automatic Clearing House (ACH). (See the Creating ACH Information for a Bank Account sub-procedure below for instructions on providing this information.)

If you did not select it, continue to step 11.

11. Save the record.

### *Link bank funds and bank accounts with cash accounts (for finance only)*

This sub-procedure of the Defining a New Bank Code procedure is used to identify the Banner Finance bank funds and bank accounts to be associated with the bank code.

You must perform all the steps in this sub-procedures if the bank code you are defining will be used with the Banner Finance System.

**Note:** The fields referenced in the sub-procedure are active and navigable only if the Banner Finance System is installed at your site.

#### *Sub-procedure*

Perform these steps after performing step 9 of the main procedure.

#### **Procedure**

1. Enter the code identifying the Chart of Accounts (COA) for the Banner accounts in the **Chart of Accounts** field. You can double click in the field to access the Chart of Accounts List (FTVCOAS) and search for a COA code.
2. Enter the code identifying the bank fund (that is, the account that represents the accumulation, or total, of all your institution's cash accounts) in the **Bank Fund** field. You can double click in the field to access the **Fund Code Validation (FTVFUND)** page and search for a bank fund.

3. Enter the code identifying the account used for cash transactions in the **Cash Account** field. You can double-click in the field to access the Account Code Validation (FTVACCT) page and search for an account code.
4. Enter the code identifying the interfund account in the **Interfund Account** field. The interfund account acts as an intermediate account that can hold money temporarily before the money is sent to the final destination accounts.
5. Go to step 10 of the Defining a New Bank Code procedure.

### *Creation ACH Information for a bank account*

This sub-procedure of the Defining a New Bank Code procedure is used to specify the information required for sending direct deposit tapes from your bank to the Automatic Clearing House (ACH).

This information must be defined for a bank account if funds are to be transferred from that account to another account. It is sent with the direct deposit tapes submitted to your bank. The information is available from your bank or clearing house.

#### *Sub-procedure*

Performs the steps in this sub-procedure after performing step 9 in the main procedure.

#### **Procedure**

1. Access the ACH Rules window of GXR BANK by selecting **ACH Rules** from the Options menu.
2. Enter the routing number of the ACH operator or receiving point to which the direct deposit files are sent in the **Destination ID** field.
3. Enter the name associated with the destination ID in the **Destination Name** field.
4. Enter the routing number of the ACH operator or sending point that is sending the direct deposit files in the **Origin ID** field.
5. Enter the name associated with the origin ID in the **Origin Name** field.
6. Enter the short name to be associated with the origin ID in **Short Name** field. The default short name comes from the **Origin Name** field; it matches the first 16 characters in this field. This value can be overridden.

**Note:** The name entered in this field will be used as the origin name for a Canadian magnetic tape deposit.

7. Enter the routing number of the Deposit Finance Institution originating entries in the **Originating Bank Routing Number** field.
8. Complete the **Organization Number Type** field by selecting the radio group entry identifying the type of identification number that your institution uses for direct deposit processing.
9. Enter your institution's identification number for direct deposit processing in the **Organization ID Number** field. Enter a number of the type specified in the **Organization Number Type** field.
10. Save the record.

---

## Update bank code records

Any updates to bank code records (i.e., the creation of new records or modifications to existing records) must be done upon executing a filter.

### Procedure

1. Access the **Bank Code Rule (GXR BANK)** page. The system displays a message indicating that the page is in data entry mode. Select **OK** and go to step 2.

**Note:** To determine whether records currently exist for a particular bank code, use the down arrow icon for the **Bank** field to access a list of previously defined bank codes. If more than one bank name exists for the same bank code, use the down arrow to view other bank names with that code. Do this before performing step 2.

2. Enter filter mode.
3. Enter the bank code for the record you want to modify or duplicate.
4. Execute the filter.
5. If additional records have previously been created for the bank code, scroll through the records until the version that you want to modify or duplicate is displayed.

**Note:** If a more recent record exists, its date is displayed in the **Next Change Date** field.

If you want to modify the displayed record, go to step 7. If you want to create a new record, go to step 6.

6. Duplicate the displayed record.
7. Make your changes on the original or duplicated record.
8. Save the record.

## Direct deposit email notification

The system supports sending email notifications to the preferred email address of any Banner ID (e.g. Employees, Students, Vendors, Alumni, etc.) each time their direct deposit bank account information is entered, updated, or deleted.

The system also supports sending Carbon copy (Cc) and Blind carbon copy (Bcc) email notifications to additional people and departments.

Receiving email notifications helps to make users aware of any potentially unauthorized changes and provides enhanced security against phishing incidents.

Three types of transactions can trigger an email notification; they are: the creation of a new record, the deletion of an existing record and the modification of the bank routing number or account number of an existing record. Changes to the Priority, Status and Account Type do not trigger an email notification. Because email notifications are initiated by changes in the database, all possible sources of these changes (e.g. administrative, Self-Service, batch processes, etc.) can result in an email notification being sent.

Additionally, email notifications are sent when email address changes occur. This is another way to help users to be aware of any potentially unauthorized changes to their information. When the

Email Address, Status or Preferred Indicator of an email address record is changed or deleted, an email notification is sent to the email address as it was before the update or deletion occurred. Email notifications are not sent when a new email address is created.

### *Security notifications*

To protect users' personal information and direct deposit email notifications sent from Banner 9 applications, institutions must update the Ellucian delivered Email Sender, BCC and CC seed data values recorded in the Banner database.

Failure to update these fields causes the business processes in Banner to queue up undeliverable email resulting in unnecessary load and degradation of the institution's SMTP servers. Banner provides a configuration based parameter enabled (by default) to check for email addresses that still contain seed data values. If the application finds seed data, a security notification displays to users in the Banner Access Management application and it logs a violation visible on the Violations tab of the Banner Security Maintenance (GSASECR) page to notify the security administrator to update the Ellucian email address seed data values. Institutions have the ability to turn this feature off, however the notification continues to appear in the Banner Access Management application until the administrator updates the email seed data values to prevent the degradation of their SMTP servers.

#### *Global application configuration*

The global application configuration entry, `EmailSecurityViolationFrequency`, is available on the Banner Applications Configurations (GUACONF) page for the GLOBAL application ID.

This configuration sets the security violation frequency for GXKEMJB email failures having seed data values in either the Email Sender, CC or BCC fields.

You can define the number of email security violations recorded per day in the Banner Security Violation Log (GURALOG) table for the GXKEMJB object by setting the value of the `EmailSecurityViolationFrequency` configuration value as shown below.

<b>Configuration value</b>	<b>Description</b>
0	Disables recording the GXKEMJB email violations in the GURALOG table.
Integer equal to or greater than 1	Enables recording the GXKEMJB email violations in the GURALOG table and sets the maximum number violations to record per day.  For example, if the value = 10, the application records a maximum of 10 violations per day.  Ellucian recommends setting the value to 1 (one record per day) to avoid creating too many violation records in the GURALOG table.

#### *Notification messages in Banner Access Management*

Based on the `EmailSecurityViolationFrequency` configuration value, a warning notification displays to security users when signing into the Banner Access Management application.

An `EmailSecurityViolationFrequency` configuration value set to an integer value equal to or greater than 1, displays a warning message notifying security users that the application has the email security violation check enabled and that they should update the email seed data values to valid institutional email addresses for secure communication. An

EmailSecurityViolationFrequency configuration value set to 0, displays a warning message notifying security users that the application does not have the email security violation check enabled, and recommends updating the email seed data values.

### Oracle Job Scheduler

The Oracle Job Scheduler, GXBEJOB\_EMAIL\_JOB, processes requests to send email notifications resulting from changes made to the Direct Deposit (GXRDIRD) and Email Address (GOREMAL) tables. The `gmail_scheduler_080804_01.sql` script delivers the Job Scheduler.

For GXRDIRD, email notifications are sent after insert/delete/update of GXRDIRD\_BANK\_ROUT\_NUM and GXRDIRD\_BANK\_ACCT\_NUM fields. For GOREMAL, email notifications are sent after every delete or update of GOREMAL\_EMAIL\_ADDRESS, GOREMAL\_STATUS\_IND, and GOREMAL\_PREFERRED\_IND fields.

The default interval at which the Oracle Job Scheduler processes requests for email notification is set to 30 seconds. For example, `repeat_interval => 'freq=SECONDLY; interval=30',.`

If it needs to be changed, the DBA has to update the `repeat_interval` parameter as mentioned below and apply it in the database under the General schema.

- If this needs to be changed to 60 seconds, `repeat_interval => 'freq=SECONDLY; interval=60',`
- If this needs to be changed to 20 minutes, `repeat_interval => 'freq=MINUTELY; interval=20',`
- If this needs to be changed for every 4 hours, `repeat_interval => 'FREQ=HOURLY; INTERVAL=4',`

### Errors from email notification

The Email Job Table (GXBEJOB) maintains any error text that may occur during email notification. When an error occurs, the error text gets created in the GXBEJOB\_ERROR\_TEXT column, and the status of the GXBEJOB record is set to E.

For example, if a change is made to a record in GXRDIRD and the person associated with that GXRDIRD record does not have an email address defined as "preferred", then the error `Recipient Address is not available` gets logged into this column for the job that failed.

When the error condition is corrected, the Oracle Job Scheduler re-processes this email job automatically.

The following SQL can be used to look at the error text for the jobs that may have failed for various reasons:

```
SELECT GXBEJOB_REFERENCE_ID,
       GXBEJOB_MODULE_CODE,
       GXBEJOB_ERROR_TEXT
FROM GXBEJOB
WHERE GXBEJOB_STATUS = 'E'
ORDER BY GXBEJOB_ACTIVITY_DATE
```

---

### *Email job removal*

As mentioned before, the GXBEJOB table maintains the jobs for email notifications.

Over a period of time, this table accumulates a large number of job records. In addition to processing the notification, the Job Scheduler also cleans up the successfully processed records that are 30 days old or older. It uses the GXBEJOB\_ACTIVITY\_DATE to calculate the number of days.

This can be customized in the `gmail_scheduler_080804_01.sql` script and applied in the database under the General schema.

If you need to change the time period, you have to change 30 to the number of days after which the job record should be removed.

For example, if you change the time period to 16, the Job Scheduler keeps the job record for 15 days after its successful completion and removes it on the 16th day.

### *Sender address configuration*

For email notifications, the sender address must be configured through Web Tailor in the Web Tailor Parameter section. If an email message does not have a valid sender address or contains the default seed data value of `admin@institution.edu`, it fails and logs the error text to the GXBEJOB table.

A user with the Web Tailor Administrator role can configure the Sender Address in Web Tailor Parameters. By default, Ellucian ships the following seed data for sender address, but institutions need to update that. They have to locate the DIRD\_SENDER\_EMAIL parameter and update the default sender address from `admin@institution.edu` to the desired sender address for GXRDIRD email notification. The same should be done for the EMAL\_SENDER\_EMAIL parameter for GOREMAL email notification.

### *Carbon copy (CC) and Blind Carbon copy (BCC) address configuration*

For Carbon copy (CC) and Blind Carbon Copy (BCC) email notifications, you must configure the recipient address through Web Tailor in the Web Tailor Parameter section.

A user with the Web Tailor Administrator role must configure the CC and BCC addresses in the Web Tailor Parameters. By default, Ellucian ships the following seed data for the parameters with a address value of `admin@institution.edu`. The institution must locate the parameters shown in the table below and update the default address with the desired address(es).

You can add multiple addresses separated by a comma or semicolon. The length of the parameter value must not exceed 250 characters. The valid format for the addresses is *local-part@domain*. For example, `johndoe@ellucian.com`.

For email messages containing the seed data value of `admin@institution.edu` in the CC and BCC addresses, the application resets those email fields to null values and sends the email with only the sender and recipient email addresses. This verification is necessary to avoid causing unnecessary load on the SMTP server for email addresses that are not valid. In addition, the application logs a security violation warning in the GURLOGN table with the CC / BCC seed data email address values.

**Table 1: Web Tailor Parameters**

Parameter	Description
DIRD_CC_EMAIL	Carbon Copy E-mail Address for GXRDIRD Notification. Please update to your desired e-mail address. If adding multiple email addresses, use comma or semicolon to separate e-mail addresses.
DIRD_BCC_EMAIL	Blind Carbon Copy E-mail Address for GXRDIRD Notification. Please update to your desired e-mail address. If adding multiple email addresses, use comma or semicolon to separate e-mail addresses.
EMAL_CC_EMAIL	Carbon Copy E-mail Address for GOREMAL Notification. Please update to your desired e-mail address. If adding multiple email addresses, use comma or semicolon to separate e-mail addresses.
EMAL_BCC_EMAIL	Blind Carbon Copy E-mail Address for GOREMAL Notification. Please update to your desired e-mail address. If adding multiple email addresses, use comma or semicolon to separate e-mail addresses.

### *Customization of email message and subject*

Institutions can customize the email message and the subject for both GXRDIRD and GOREMAL email notifications under Web Tailor Information Text. Ellucian ships seed data for email message and the subject.

The following four information text updates are shipped under the XeDirectDeposit procedure name. Each one of them can be customized.

Field	Description
DIRD_EMAIL_SUBJECT	This defines the subject line for GXRDIRD email notification.
DIRD_EMAIL_MESSAGE	This defines the email message for GXRDIRD email notification.
EMAL_EMAIL_SUBJECT	This defines the subject line for GOREMAL email notification.
EMAL_EMAIL_MESSAGE	This defines the email message for GOREMAL email notification.

The email message contains two data variables: <<RECIPIENT\_NAME>> and <<UPDATED\_DATE>>. They can be placed anywhere within the message. They are evaluated at run time and the actual values are printed in the email message.

### *Email notification turn on*

Email notification for GXRDIRD and GOREMAL is turned off by default. If you need to turn this on for your institution, the DBA has to run the following commands in the database under the General schema.

Table	Command
GXRDIRD	ALTER TRIGGER GT_GXRDIRD_EMAIL_TRG ENABLE;
GOREMAL	ALTER TRIGGER GT_GOREMAL_EMAIL_TRG ENABLE;

### **Set up events in the Event Queue Maintenance module**

An event is a Bannerr database change that potentially triggers another action in an external system. For example, a clerk in the Registrar's Office cancels a class using a Banner page. This triggers an event for each student registered for that class.

#### **About this task**

The same cancellation event could also be sent to Workflow, which might initiate a workflow that cancels the faculty member's teaching contract and removes any job records associated with that contract.

The Event Queue Maintenance module within Banner General supports the event queue processing required by Luminis®, Workflow, and potentially other external systems.

Use these steps to set up an event:

#### **Procedure**

1. Use the **Target System Code Validation (GTVEQTS)** page to define the external systems that require notification when an event occurs.
2. Use the **Event Queue Code Validation (GTVEQNM)** page to define the events that will be captured and sent to external systems.
3. Use the **Parameter Code Validation (GTVEQPM)** page to define the parameters that are associated with events.
4. Use the **Parameter Group Code Validation (GTVEQPG)** page to define the parameter groups that can be associated with events.
5. Use the **Parameter Group Rule (GOREQPG)** page to assign defined parameters to a groups.
6. Use the **Event Queue Name Definition (GOREQNM)** page to define specific events for the target systems. This definition includes associating a parameter group with each event.

#### **Results**

Refer to Integrating Banner or Plus With Partner Systems for more details on event processing for Luminis.

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## Customization of menus

Your institution can create new menus and customize the contents of the menus delivered with Banner. In addition, each user can create a customized, personal menu tied to the Oracle user ID and make minor changes to the appearance of the main menu.

**Note:** All menus must be placed on an existing menu structure that branches out from \*MAIN.

### *Creation and maintenance of menus for your institution*

Banner is delivered with a set of menus to provide access to Banner pages. You can use the Menu Maintenance (GUTGMNU) page to create new menus and customize the contents of menus for your institution. A menu can contain any combination of pages, jobs, other menus, and QuickFlows. *Create a new menu using the list of objects*

Use these steps to create a menu by choosing objects from a displayed list of objects.


#### About this task

**Note:** Menu objects must first be properly added to GUAOBS before they can be used on GUTGMNU.

#### Procedure


1. Access the **Menu Maintenance (GUTGMNU)** page.
2. Enter the new menu name (created on GUAOBS), press the tab key, and then click the **Go** button. Remember that a menu name must start with an asterisk (\*).
3. Use the pull-down list above the left pane to select the object type you want to display. The left pane lists the objects of the selected type that can be added to the menu.
4. **Optional:** To filter for specific objects:
  - a) Click in the left pane.
  - b) Select the Enter Query function. The object list disappears.
  - c) Enter the search criteria for the object description.

You can use the Oracle wildcards % and \_. Capitalization matters. Data is matched against the search criteria exactly as you enter them.
  - d) Select the Filter function. The left pane lists the matching objects.
5. To add all objects displayed in the left pane to the menu (if there are 20 objects or less), select

the **Insert All** button in the middle of the page .

6. To add selected objects to the menu:
  - a) In the left pane, select each object you want to add to the menu. When you select an object, the name is highlighted.
 

As you move the cursor over an object description, its seven-character name is displayed.

You can highlight a menu name or QuickFlow name and Key-Next-Block to list the items associated with that object.
  - b) **Optional:** Use the pull-down list above the left pane to select another object type. Select additional objects for the menu. (You can select objects from multiple object types and insert them together.)
  - c) Click in the right pane where you want to place the new menu items.
  - d) Select the **Insert** button in the middle of the page . The selected objects are added to the right pane below the place you clicked.
7. **Optional:** Customize object descriptions.
8. Save your changes.

**Note:** All menus must be placed on an existing menu structure that branches out from \*MAIN.

#### *Create a menu using object names*

Use these steps to create a menu if you know the object names you want to appear on the menu.

#### **Procedure**

1. Access the **Menu Maintenance (GUTGMNU)** page.
2. Enter the new menu name (created on GUAOBS), press the tab key, and then click the **Go** button. Remember that a menu name must start with an asterisk (\*).
3. Place the cursor in a blank **Name** field in the right pane.
4. Enter the object's seven-character name.
5. Press Enter. The object's type, description, and name appear in the right pane.
6. Repeat steps 3 through 5 for each object you want to add to the menu.
7. **Optional:** Customize the object descriptions.
8. Save your changes.

**Note:** All menus must be placed on an existing menu structure that branches out from \*MAIN.

#### *Maintain an existing menu (additions, deletions, and changed sequence)*

You can use the Menu Maintenance (GUTGMNU) page to maintain an existing menu.





#### **Procedure**

1. Access the **Menu Maintenance (GUTGMNU)** page.
2. Enter the menu name in the left-most field above the right pane (field to the left of the down arrow icon). You can click the down arrow icon to access the Object Search (GUIOBS) page to search for a menu name.
3. Click in the right pane. All existing menu items appear.

4. Click the selected menu item so it is no longer selected.
5. To add objects to the menu:
  - a) Use the pull-down list above the left pane to select the object type you want to display. The left pane lists the objects of the selected type.
  - b) **Optional:** To filter for specific objects, click in the left pane. Select the Enter Query function. The object list disappears. Enter the search criteria for the object description. (You can use the Oracle wildcards % and \_. Capitalization matters. Data is matched against the search criteria exactly as you enter them.) Select the Filter function. The left pane lists the matching objects.
  - c) In the left pane, select each object you want to add to the menu. When you select an object, the name is highlighted.

As you move the cursor over an object description, its seven-character name is displayed.

You can highlight a menu name or QuickFlow name and Key-Next-Block to list the items associated with that object.

- d) Repeat steps a through c for each object type you want to add to the menu. (You can select objects from multiple object types and insert them together.)
- e) Click in the right pane where you want to place the new menu items.
- f) Select the **Insert** button in the middle of the page  The selected objects are added to the right pane below the place you clicked.
- g) **Optional:** Customize the object descriptions.
6. To delete selected objects from the menu:
  - a) In the right pane, select each object you want to delete from the menu. When you select an object, the name is highlighted.
  - b)  Select the **Delete** button in the middle of the page  The selected objects are deleted.
7. 

To delete all objects from the menu, click the **Delete All** button in the middle of the page .

8. To change the order of objects on the menu:
  - a) Use the tasks in step 5 to add the object to its new location.
  - b) Use the tasks in step 6 to delete the object from the old location.
9. Save your changes.

**Note:** If you add an object to a menu, all objects on the menu are processed, not just the new ones. The transaction count on the status line includes all menu items.

#### *Delete a menu*

You can use the Menu Maintenance (GUTGMNU) page to delete a menu.

#### **Procedure**

1. Access the **Menu Maintenance (GUTGMNU)** page.

2. Enter the menu name in the left-most field above the right pane (field to the left of the down arrow icon). You can select the down arrow icon to access the **Object Search (GUIOBS)** page to search for a menu name.
3. Select the Delete Record function. A dialog box asks if you really want to delete the menu.

Alternatively, you can click the right pane. All existing menu items appear. Select the **Delete All**



button in the middle of the page. Save your changes. A dialog box asks if you want to delete the menu.

4. Select the **Yes** button.
5. Save your changes.

### *Creation and maintenance personal menus*

Individual users can create personal menus that include the pages, jobs, menus, and QuickFlows that are most important in their daily work. A personal menu is tied to the user's Oracle user ID and can be accessed from the main menu (under My Banner).

**Note:** Objects must be added to GUAOBS properly before they can be used on any of the menus.

You can use these pages to create and copy personal menus:

- Personal Menu Maintenance (GUAPMNU) page—Lets a user create and change a personal menu.
- Personal Menu Maintenance and Copy (GUTPMNU) page—Lets a user copy a personal menu to or from another user.

**Note:** All menus must be placed on an existing menu structure that branches out from \*MAIN.

### *Main menu appearance change*

Individual users can make the following changes to the main menu.

- Sizes of the left and right panes
- Show or hide the 7- or 8-character page mnemonics
- Order of items in the right pane

### **Data extract feature management**

Banner is delivered with the Data Extract feature enabled on most validation pages. With this feature, you can extract data from a Banner page to a spreadsheet. You can extract detail data from the current section with or without data from the key block.

Ellucian also supports the extract feature on a limited number of rule, application, and inquiry pages where the feature has been tested. The system administrator at your institution can enable the extract feature on any page that has been tested.

---

Extract results are unpredictable on pages that have not been tested with this feature. If you want to extract data on an untested page, you can consider enabling the extract feature on GUAOBS. Ellucian does not support this feature on untested pages.

WebUtil offers another way to save extracted data in Banner. Information about configuring WebUtil is contained in the *Banner Middle Tier Implementation Guide* found in the Banner Documentation library of the Ellucian Customer Center.

### *Enable the data extract feature for a page*

You can use the Object Maintenance (GUAOBS) page to enable the data extract feature for a page.

#### **About this task**

**Warning!** If you want to enable the extract feature on local pages, you must test the extract feature on them before you enable the feature on GUAOBS.

#### **Procedure**

1. Access the **Object Maintenance (GUAOBS)** page.
2. Select a value from the pull-down list in the **Data Extract Option** field.

Key and Data Block Enable the extract feature for both key and data blocks.  
Data Block Only Enable the extract feature for data blocks only.

### *Change the default directory location for extract files*

Ellucian delivers Banner with C:\temp as the default directory for extract files. The system administrator at your institution can use the General User Preferences Maintenance (GUAUPRF) page to change this default value to meet your institutional needs. Only those staff members with appropriate security can perform this task.

In addition, individual users can set their own default directory for extract files.

## **Creation and use of QuickFlows**

A QuickFlow is a technique that lets you access a set of pages in a specific sequence.

QuickFlow processing uses the following pages:

- QuickFlow Validation (GTVQUIK) page—Defines a QuickFlow code and description.
- QuickFlow Definition (GUAQUIK) page—Specifies the sequence of pages and assigns a four-character identifier for executing the flow of pages.
- QuickFlow (GUAQLW) page—Lets you enter the identifier and access the first page in the QuickFlow. When you exit the first page, the next page in the sequence is automatically accessed. This process continues until all pages in the QuickFlow have been accessed and exited. At this point, you can execute the QuickFlow again or exit to the location where you called the QuickFlow.

## Create a QuickFlow

Any page, except the following, can be added to a QuickFlow.

### About this task

- Main Menu (GUAGMNU) page
- Welcome to Banner (GUAINIT) page
- QuickFlow (GUAQFLW) page
- Security Maintenance (GSASECR) page
- Any query page (Q is the third character of the page name)

Use these steps to create a QuickFlow:

### Procedure

1. Determine the purpose of your QuickFlow, and identify all pages that must be accessed for the tasks you want to perform. For example:

Purpose:	Add jobs to Job Submission
Pages needed:	GJAJOBS
	GJAPDEF
	GJAPVAL
	GJAPDEF

2. Use the QuickFlow Validation (GTVQUIK) page to create a code and description for the QuickFlow. For example:

Code:	JOB
Description:	Job Submission

3. Access the **QuickFlow Definition (GUAQUIK)** page.
4. Enter the QuickFlow code (defined in step 2) in the **QuickFlow** field. If you want to search for a QuickFlow code, click the **Lookup** button to select the QuickFlow Codes option, which accesses the QuickFlow Validation (GTVCALL) list.
5. Go to the next section. All existing object names appear in the left pane.
6. Select the objects you want to add, and then use the arrow buttons to move the objects from the left pane to the right pane. Be sure to list them in the order they are to be accessed in the QuickFlow.

OR

Enter the seven-character name of each object you want in the QuickFlow. Be sure to list them in the order they are to be accessed in the QuickFlow. You can use the List function to access the Object Search (GUIOBS) page to search for an object.

7. When all the desired objects are entered in the right pane, save your changes.

---

## Use a QuickFlow

You can access the QuickFlow (GUAQFLW) page to use QuickFlow.

### Procedure

1. Access the **QuickFlow (GUAQFLW)** page.
2. Enter the QuickFlow code in the **QuickFlow** field.  
You can select the down arrow icon to access the **QuickFlow Query (GUQQUIK)** page to search for a QuickFlow code.
3. Select the **Start** button or select the **Go** button.  
**Result:** The first page in the QuickFlow appears.
4. Select the button or select the **Go** button.  
**Result:** The first page in the QuickFlow appears.
5. Enter data on the page.
6. Exit the page.  
**Result:** The next page in the QuickFlow appears.
7. Repeat steps 4 and 5 for all the pages in the QuickFlow. After you pass through all the pages in the QuickFlow, the **QuickFlow (GUAQFLW)** page reappears.

A page in a QuickFlow cannot be bypassed. If you do not have any data to enter on a page, exit the page. If the message `DO YOU WANT TO QUIT?` appears, answer Y. (The message is page-dependent.)

If you want to exit the QuickFlow before all the pages are accessed, select the Exit QuickFlow option on the File pull-down menu.

8. If you are finished, select the **Cancel** button.

OR

To execute the QuickFlow again, select the **Start** button.

## Banner configuration management

The Banner Applications Configurations (GUACONF) page facilitates the configuration of Banner applications using values stored in the Banner database rather than an external configuration file.

Banner Self-service applications have a migration process to move applicable configurations from the configuration file to the database. After the migration completes for an application, you can use the configuration page to set the values for the application configurations. Because certain application configurations require an application restart to enable updated values, they will remain in the configuration file and not migrate to the database.

---

## Menu navigation table

You can find configuration related pages in the following menu.

MENU/Page	Description
*GENWEB	General Web Management
GUAAPPL	Banner Applications
GUACONF	Banner Applications Configurations

## Application configuration Procedures

You can add application records on the Banner Applications (GUAAPPL) page and add or update application configurations using Banner Applications Configurations (GUACONF) page.

### *Establish the Application code*

Use the Banner Applications (GUAAPPL) page to create an application record if one does not already exist.

#### **Procedure**

1. Access **Banner Applications (GUAAPPL)** page.
2. Review the list of existing Application IDs on the Banner Applications (GUAAPPL) page to find the application you want to configure.

The Banner 9 Self-Service configuration migration process inserts the Application record, so you must review the list to determine if it already exists.

3. If the application code does not already exist, insert a new record.
  - a) Enter the application ID in the **Application ID** field. The application ID must match the application ID delivered with the configuration file of each application.  
The Application ID is the short name of the application. For example, the short name for Student Registration is StuRegSS. This ID is unique.

**Note:** You can apply a configuration value across all applications by specifying GLOBAL in the **Application ID** field. If an application has a configuration value for the same configuration key, the application level value takes precedence over the value associated with the GLOBAL application.

- b) Enter the application name in the **Application Name** field. This is the full name of the application.

The table below displays the configuration values that exist in the following configuration files for each application. You must use these values if you need to manually enter the record on the GUAAPPL page.

- `application.properties` in Grails 2.5.2.
- `application.groovy` in Grails 3.0.

**Table 2: Self-Service application ID and name values**

Applications	app.appld	app.name
Application Navigator	AppNav	applicationNavigator
Banner Event Publisher	BEP	BannerEventPublisher
Banner Extensibility	EXTZ	BannerExtensibility
Communication Management	BCM	CommunicationManagement
Employee Self-Service	Employee	EmployeeSelfService
Event Management Self-Service	To Be Determined	SelfServiceBannerGeneralEventManagement
Faculty Self-Service	FACSS	FacultySelfService
Finance Self-Service	FinanceSS	FinanceSelfService
General Self-Service	GENERAL_SS	BannerGeneralSsb
Registration Self-Service	StuRegSS	StudentRegistrationSsb
Student Self-Service	SSS	StudentSelfService

#### Related information

<https://grails-plugins.github.io/grails-spring-security-core/2.0.x/guide/single.html#configGroovyMap>  
<https://spring.io/blog/2010/08/11/simplified-spring-security-with-grails/>

## Set specific configuration values

Use the Banner Applications Configurations (GUACONF) page to update the values associated with the application configurations.

### Procedure

1. Access the **Banner Applications Configurations (GUACONF)** page.
2. Enter the application ID in the **Application ID** field and select **Go**.
3. Select the **Configurations** section and enter the configuration values.
4. Save the record.

### Configuration types

Use the appropriate configuration type for each application specific property.

The following table describes the available configuration types.

**Table 3: Configuration type values**

Configuration type	Description
Boolean	Valid values are true or false.
Integer	Number with no fractional part (no decimals)
String	Set of characters that can also contain spaces and numbers
Map	Collection of key-value pairs where each unique key maps to a single value
list	List of values
encryptedtext	Encrypted text
closure	A closure may reference variables declared in its surrounding scope.

### Common application configurations

The Banner Applications Configurations (GUACONF) page includes common application configurations. Refer to the specific Self-Service application handbooks for more information about other application specific configurations.

**Table 4: Common application configurations**

Description	Purpose	Type	Configuration values
banner.analytics.allowEllucianTracker	Allow Ellucian's tracking using Google analytics	Boolean	Default = true
banner.analytics.trackerId	Institution's Google analytics tracker ID	String	Default= blank
banner.theme.cacheTimeOut	For an application that is the theme server, defines time in seconds that the application can cache the CSS file.	Integer	Default value varies by application. If not configured, value defaults to 900 seconds.

Description	Purpose	Type	Configuration values
banner.theme.name	Name of the theme the application uses.	String	Default= blank
banner.theme.template	Name of the SCSS template file the application uses. The value for this property is the name of the theme template bundled as part of the Self-Service application (under WEB-INF/theme).	String	Default= blank
banner.theme.url	URL of the application hosting the theme server when using a remote server.	String	Format of the theme url is=  <code>http://BANNER9_HOST:PORT/&lt;APPLICATION_NAME&gt;/theme</code>
Banner8.SS.url	Banner 8 URL navigation from Banner 9 Self service	String	<code>http://&lt;host_name&gt;:&lt;port_number&gt;/&lt;banner8&gt;/</code>  SSO pattern:  <code>banner8.SS.url = 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg= http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/'</code>
banner8.SS.locale.url	Locale specific Banner 8 URL navigation from Banner 9 Self service.  <b>Note:</b> Use only if you have your environment configured for multi-language support for Banner 8 Self service	Map	[  <code>default : 'http://BANNER8_HOST:PORT/DEFAULT/', en : 'http://BANNER8_HOST:PORT/EN/', en_US : 'http://BANNER8_HOST:PORT/enUS/', en_AU : 'http://BANNER8_HOST:PORT/enAU/', en_GB : 'http://BANNER8_HOST:PORT/enGB/', en_IE : 'http://BANNER8_HOST:PORT/enIE/', en_IN : 'http://BANNER8_HOST:PORT/enIN/', fr : 'http://BANNER8_HOST:PORT/FR/', fr_CA : 'http://BANNER8_HOST:PORT/frCA/', pt : 'http:// BANNER8_HOST:PORT/PT/', es : 'http://BANNER8_HOST:PORT/ES/', ar : 'http://BANNER8_HOST:PORT/AR/'</code> ]

Description	Purpose	Type	Configuration values
			<pre>SSO pattern  [ default: 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager/c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/', en : 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager/c/SSB?pkg= http://BANNER8 SSB host&gt;:&lt;port&gt;/en/', en_US : 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager/c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/enUS/', en_AU : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/enAU/', en_GB : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/enGB/'', fr : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/fr/', fr_CA : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/frCA/', pt : 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager /c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/ pt/', es : 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager /c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/ es/', ar : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://BANNER8 SSB host&gt;:&lt;port&gt;/ar/' ]</pre>
mep.banner8.SS.url	Banner 8 URL navigation for MEP environment	Map	<pre>[ GVU: 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_GVU/', BANNER: 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_BANNER/' ]</pre>

Description	Purpose	Type	Configuration values
mep.banner8.SS. locale.url	Locale specific Banner 8 URL navigation for MEP environment	Map	<pre>[ GVU: [ "default" : 'http://BANNER8_HOST:PORT/ DEFAULT/ ', "ar": 'http://BANNER8_HOST:PORT/AR/ ', "fr": 'http://BANNER8_HOST:PORT/FR/', "fr_CA": 'http://BANNER8_HOST:PORT/frCA/' ], BANNER : [ "default" : 'http://BANNER8_HOST:PORT/ DEFAULT/ ', "ar": 'http://BANNER8_HOST:PORT/AR/ ', "fr": 'http://BANNER8_HOST:PORT/FR/', "fr_CA": 'http://BANNER8_HOST:PORT/frCA/' ] ]  SSO pattern  [ GVU: [ "default" : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_GVU/', "ar": 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_GVU/ar/', "fr": 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt; /SMPL_GVU/fr/' ], BANNER: [ "default" : 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_BANNER/ ', "ar": 'http://&lt;SSO Manager host&gt;:&lt;port&gt; /ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_BANNER/ar/', "fr": 'http://&lt;SSO Manager host&gt;:&lt;port&gt;/ ssomanager/c/SSB?pkg=http://&lt;BANNER8 SSB host&gt;:&lt;port&gt;/SMPL_BANNER/fr/' ] ]</pre>

Description	Purpose	Type	Configuration values
defaultWebSessionTimeout	Transaction timeout configuration (in milliseconds)	Integer	Default value varies by application
footerFadeAwayTime	Banner 9 Self-service application footer fade away time in milliseconds  If not configured, the footer fade-away time defaults to two seconds	Integer	Default value varies by application
grails.plugin.springsecurity.logout.afterLogoutUrl	Banner Logout URL	String	'https://<CAS host>:<port> /cas/logout?service=http://myportal/main_page.html'
loginEndpoint	This entry is required to ensure that the <b>Sign In</b> link takes you to corresponding login.  That is, for CAS, any other authentication system or Default (Banner).	String	Example for General Events application. 'http://BANNER9_HOST:PORT/APP_NAME/ssb/events/postSignLoadDetails'
productName	Name of the product. The name in the GURNHIR table and name in the configuration should match.	String	See <i>Self-Service application ID and name values</i> .
banner.applicationName	Name of the application. It is best practice that the name in the GURNHIR table and name mentioned in this configuration match	String	See <i>Self-Service application ID and name values</i> .
ssbPassword.reset.enabled	Enables the password reset function when using the Banner login	Boolean	True - allow pidm users to reset their password False – pidm users cannot rest their password

#### *External file configurations*

Some configurations to the Banner Applications Configurations (GUACONF) page must remain in the external configuration file (`configuration.groovy`) because the application reads the value only upon restart of the application.

Description	Purpose	Type	Configuration values
Banner.transactionTimeout	Transaction timeout configuration (in seconds) present in <code>Banner_configuration.groovy</code>	Integer	Default is 30 seconds.

Description	Purpose	Type	Configuration values
grails.plugin.springsecurity.homePageUrl	Home Page URL configuration for CAS / SAML Single-Sign On.	String	Home Page URL configuration for CAS / SAML Single-Sign On.
grails.plugin.xframeoptions.urlPattern grails.plugin.xframeoptions.deny	Use this setting if the application needs to work inside Application Navigator and the secured application pages will be accessible as part of the single-sign on solution.	String	grails.plugin.xframeoptions.urlPattern = '/login/auth'  grails.plugin.xframeoptions.deny = true
grails.resources.adhoc.includes  grails.resources.adhoc.excludes	Prevents access to the WEB-INF folder	String	grails.resources.adhoc.includes = ['/images/**', '/css/**', '/js/**', '/plugins/**']  grails.resources.adhoc.excludes = ['/WEB-INF/**']
jamx { exported { log4j = "PlatformSandboxApp-log4j" } }	JMX Bean Names The names used to register Mbeans must be unique for all applications deployed into the JVM. This configuration should be updated for each instance of each application to ensure uniqueness.	NA	NA
ssbEnabled	Set 'ssbEnabled' to true for instances that expose Self Service Banner endpoints.  If this is set to false, or if this configuration item is missing, the instance will only support administrative users and not self-service users.  If this is enabled, it is important to also ensure the corresponding configuration items for the SSB datasource are configured.  Default value is false	String	true or false  Default: Depends on the application

Description	Purpose	Type	Configuration values
ssbOracleUsersProxied	<p>Set 'ssbOracleUsersProxied = true' to ensure that database connections are proxied when the user has an oracle account. This allows FGAC (Fine Grained Access Control) even for SSB pages.</p> <p>Set this to false to instead use database connections that are established for SSB users who do not have Oracle database accounts.</p> <p>This setting applies only to SSB pages.</p>	String	true or false
webAppExtensibility { locations { resources = "i18n folder path" extensions = "extensions folder path" } adminRoles = "ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M"	<p>Self-service extensibility</p> <p>The "extensions" configurations specifies the directory that will contain the JSON files containing modifications to the application pages. The "resources" configuration specifies the directory that will contain property files for any multilingual text values required for the changes.</p> <p>Security is delivered as WEBTAILORADMIN role as the default role to access the Extension Editor. This role can be changed by an institution if it is required.</p>	NA	NA
Logging is configured separately for each environment ('development', 'test', and 'production'). By default, all 'root' logging is 'off'. Logging levels for root, or specific packages/artifacts, should be configured through JMX.	Logging configuration	NA	NA
Various	CAS Configuration	NA	NA

## Configure page role

Configure the roles associated with Banner 9 Self-service application pages using the Banner Applications Configurations (GUACONF) page.

### Procedure

1. Access the **Banner Applications Configurations (GUACONF)** page.
2. Enter the Application ID in the **Application ID** field and click **Go**.
3. Select the **Application Pages** section to view the list of all pages for the application.

**Result:** The page displays the following information:

- Page ID
- Page URL
- Page Description
- Status
- Display sequence

The migration from the configuration file process inserts the display sequence. This value properly orders the pages in the intercept map URL that spring security uses. Do not update the Display sequence. If you create a custom self-service page and want to configure the page roles using GUACONF, enter max+1 in the display sequence field, where max is the existing maximum value for the existing display sequence.

4. Select the page for which you want to configure the roles associated with the page and navigate to the **Roles** section.

From the **Roles** section, you can perform the following functions:

- Delete existing roles.
- Add new roles: The roles in this section have a direct correlation to Web Tailor roles or Banner admin roles, but these roles have a specific format.

### *Roles delivered with each application*

Ellucian delivers a set of roles with each Banner Self-Service application. These roles have an association to the application pages and provide role-based permissions to each page.

### Application Navigator roles

Role	Role name in GUACONF	
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY	
Custom AppNav role	ROLE_SELFSERVICE- ROLE_BAN_DEFAULT_M	
DYNAMIC	ROLE_DETERMINED_DYNAMICALY	A special Spring Security role that is used to grant access if the logged in user has any roles (other than those ending with '_Q' and '_CONNECT') that pertain to the FormContext associated to the URI

Role	Role name in GUACONF
GUAGMNU permission for User	ROLE_GUAGMNU_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M

#### Banner Event Publisher roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
EMPLOYEE	ROLE_SELFSERVICE-EMPLOYEE_BAN_DEFAULT_M
HR ADMIN RVR	ROLE_SELFSERVICE-HRADMINRVR_BAN_DEFAULT_M
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M
	ROLE_DETERMINED_DYNAMICALLY

#### Banner Extensibility roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
User with permission for GPBADMN	ROLE_GPBADMN_BAN_DEFAULT_PAGEBUILDER_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
NO ACCESS	ROLE_DENY_ALL
ALL SELF SERVICE ROLES	ROLE_SELFSERVICE-ALLROLES_BAN_DEFAULT_M
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M
STUDENT	ROLE_SELFSERVICE-STUDENT_BAN_DEFAULT_M
REGISTRAR	ROLE_SELFSERVICE-REGISTRAR_BAN_DEFAULT_M
FACULTY	ROLE_SELFSERVICE-FACULTY_BAN_DEFAULT_M
	ROLE_DETERMINED_DYNAMICALLY

#### Communication Management roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M
	ROLE_CMQUERY_BAN_DEFAULT_CMQUERY_M

Role	Role name in GUACONF
	ROLE_CMQUERY_BAN_DEFAULT_M
COMMUNICATION ADMIN	ROLE_SELFSERVICE-COMMUNICATIONADMIN_BAN_DEFAULT_M
COMMUNICATION CONTENT ADMIN	ROLE_SELFSERVICE-COMMUNICATIONCONTENTADMIN_BAN_DEFAULT_M
COMMUNICATION USER	ROLE_SELFSERVICE-COMMUNICATIONUSER_BAN_DEFAULT_M

#### Employee Self-Service roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
EMPLOYEE	ROLE_SELFSERVICE-EMPLOYEE_BAN_DEFAULT_M
HR ADMIN RVR	ROLE_SELFSERVICE-HRADMINRVR_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M
	ROLE_DETERMINED_DYNAMICALLY

#### Event Management Self-Service roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
STUDENT	ROLE_SELFSERVICE-STUDENT_BAN_DEFAULT_M
	ROLE_SELFSERVICE-ALLROLES_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
FACULTY	ROLE_SELFSERVICE-FACULTY_BAN_DEFAULT_M
ALUMNI	ROLE_SELFSERVICE-ALUMNI_BAN_DEFAULT_M
FULL ACCESS	IS_AUTHENTICATED_FULLY
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M

#### Faculty Self-Service roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
FACULTY	ROLE_SELFSERVICE-FACULTY_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M

Role	Role name in GUACONF
STUDENT ACADEMIC REVIEW ADMIN	ROLE_SELFSERVICE- STUDENTACADEMICREVIEWADMIN_BAN_DEFAULT_M
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M

#### Finance Self-Service roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M
FINANCE	ROLE_SELFSERVICE-FINANCE_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
	ROLE_DETERMINED_DYNAMICALLY

#### General Self-Service roles

Role	Role name in GUACONF
User with permission for GPBADMN	ROLE_GPBADMN_BAN_DEFAULT_PAGEBUILDER_M
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
ACTION ITEM ADMIN	ROLE_SELFSERVICE-ACTIONITEMADMIN_BAN_DEFAULT_M
ACTION ITEM REVIEWER	ROLE_SELFSERVICE-ACTIONITEMREVIEWER_BAN_DEFAULT_M
ALL SELF SERVICE ROLES	ROLE_SELFSERVICE-ALLROLES_BAN_DEFAULT_M
	ROLE_DETERMINED_DYNAMICALLY
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M
FACULTY	ROLE_SELFSERVICE-FACULTY_BAN_DEFAULT_M
STUDENT	ROLE_SELFSERVICE-STUDENT_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
ALUMNI	ROLE_SELFSERVICE-ALUMNI_BAN_DEFAULT_M
EMPLOYEE	ROLE_SELFSERVICE-EMPLOYEE_BAN_DEFAULT_M

#### Registration Self-Service roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY

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Role	Role name in GUACONF
STUDENT	ROLE_SELFSERVICE-STUDENT_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
REGISTRAR	ROLE_SELFSERVICE-REGISTRAR_BAN_DEFAULT_M
FACULTY	ROLE_SELFSERVICE-FACULTY_BAN_DEFAULT_M
	ROLE_DETERMINED_DYNAMICALLY
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M

### Student Self-Service roles

Role	Role name in GUACONF
Anonymous	IS_AUTHENTICATED_ANONYMOUSLY
	ROLE_DETERMINED_DYNAMICALLY
FACULTY	ROLE_SELFSERVICE-FACULTY_BAN_DEFAULT_M
STUDENT	ROLE_SELFSERVICE-STUDENT_BAN_DEFAULT_M
SELFSERVICE	ROLE_SELFSERVICE_BAN_DEFAULT_M
CLASS LIST ADMINISTRATOR	ROLE_SELFSERVICE-CLASSLISTADMINISTRATOR_BAN_DEFAULT_M
WEBTAILOR	ROLE_SELFSERVICE-WTAILORADMIN_BAN_DEFAULT_M

### *Add custom roles*

Add custom roles to Web Tailor.

### Procedure

1. Use a direct insert to add a new row in the TWTVROLE table with table column values for TWTVROLE\_CODE and TWTVROLE\_DESC.  
Specify additional table column values as needed.

#### **Result:**

The role is now available on the Banner 8 Web Tailor pages. For, example the role (TWTVROLE\_DESC) appears on the Update User Role page available to assign the role to users.

- 
2. Use the **Banner Applications Configurations (GUACONF)** page to configure a Banner 9 Self-service page to use the new custom role.
    - a) In the **Roles** section, select **Insert** and enter the page ID in the **Page ID** field.
    - b) In the **Role** field, enter the new *CUSTOMROLENAME* from the *TWTROLE\_CODE* column. You must use the following format with no spaces:  
`ROLE_CUSTOMROLENAME_BAN_DEFAULT_M.`

**Note:** Pages with no roles defined in the configuration file or on the GUACONF page have no restrictions applied and are accessible by anyone. You must define at least one role to enforce restrictions.

## Multi-Entity Processing (MEP)

Infrastructure tables owned by BANSECR or GENERAL should not be MEPed.

The following tables that support Database Configurations should not be MEPed.

- Banner Application Management (GUBAPPL).
- Main Configuration (GUROCFG)
- User Configuration (GURCTLEP)
- Banner Self-Service Application Page (GURAPPR)
- Banner Self-Service Page Roles

## Name Display Rules (GUANDSP) page

Beginning with release 8.8.5, there are functions and an administrative page that support the requirements for various Banner XE Self-Service applications to configure how a person's name displays on those pages.

The functionality delivered with this release:

- Will initially be used by Banner Student XE self-service and the General-Event Management XE applications only
- Does not change any name searching, formatting or masking capabilities in Banner.
- Will be adopted by the various XE self-service applications in a phased approach as new releases provide the capability to use it

As more XE applications adopt the ability to reference the rules built in the new Name Display Rules page, those applications will provide additional instructions about how to enter the correct data on the page.

---

## Single section

This section allows you to define a set of rules with up to 99 steps per usage to return a single format for a person's name.

### *Inactivate a delivered or existing single Usage rule*

You can use the Name Display Rules (GUANDSP) page to inactivate a delivered or existing single Usage rule.

#### **Procedure**

1. Access the **Name Display Rules (GUANDSP)** page.
2. In the Single section, filter for or scroll to the Usage rule to be inactivated.
3. Deselect the **Active** check box.
4. Save the record.

### *Update a delivered or existing single Usage rule*

You can use the Name Display Rules (GUANDSP) page to update a delivered or existing single Usage rule.

#### **Procedure**

1. Access the **Name Display Rules (GUANDSP)** page.
2. In the Single section, filter for or scroll to the Usage rule to be modified.
3. Update the desired data field(s).
4. Save the record.

### *Create a new single Usage rule*

You can use the Name Display Rules (GUANDSP) page to create a new single Usage rule.

#### **Procedure**

1. Access the **Name Display Rules (GUANDSP)** page.
2. In the Single section, insert a new record.
3. **Required:** Enter a new formatting rule name in the **Usage** field.
4. **Required:** Enter a numeric value in the **Priority** field.

#### **Result:**

The number will determine the order in which the Usage rule is evaluated relative to the other Usage rules.

5. **Required:** Enter \*\*\*\*, !!!! or a valid value in the **Name Type** field.
- \*\*\*\* indicates that only the current name record in the SPRIDEN table (where the SPRIDEN\_CHANGE\_IND is null) will be evaluated.
  - !!!! indicates that an error message should be returned.
  - A valid value in the Name Type field indicates that only SPRIDEN records with that value in the SPRIDEN\_NTYP\_CODE will be evaluated.
6. **Required:** Enter a numeric value in the **Maximum Length** field.
- Result:**
- The value specifies the overall length of the formatted name that is returned by the Usage rule.
7. Click the **Active** check box if you want the new Usage rule to be available for the name formatting function and procedure.
8. **Optional:** In the **Sequence** fields associated with the **Name Prefix, First Name, Middle Name, Surname Prefix, Last Name, Name Suffix, Legal Name** and **Preferred First Name** fields, enter a numeric value to specify the order in which the name part should be displayed. See the following two tables for examples:

Name Sequence field	Name Sequence value
Preferred First Name	1
First Name	2
Middle Name	3
Last Name	4

**Note:** If the name record does not contain a Preferred First Name, then the name format returned by this rule would start with First Name.

Name Sequence field	Name Sequence value
Preferred First Name	1
Middle Name	2
Last Name	3

**Note:** Conditional logic exists such that if the name record does not contain a Preferred First Name, then the format returned by this rule would automatically default to start with the First Name SPRIDEN record.

9. **Optional:** In the **Length** fields associated with the **Name Prefix, First Name, Middle Name, Surname Prefix, Last Name, Name Suffix, Legal Name** and **Preferred First Name** fields, enter a numeric value to specify the number of characters from the name part that should be displayed.
- Result:**
- If no value is entered, the entire length of the name part will be displayed.

10. If ! ! ! ! was entered in the **Name Type** field, enter an error message that should be displayed for this Usage rule. You may use <PIDM>, <USAGE> or <ID> for substitution parameters in your message.
11. In the **Sequence** fields associated with the **Literal 1**, **Literal 2**, **Literal 3**, **Literal 4**, **Literal 5** and **Literal 6** fields, enter a numeric value to specify the order in which punctuation instead of a space should be inserted between name parts specified for the Usage rule.
12. In the **Value** fields associated with the **Literal 1**, **Literal 2**, **Literal 3**, **Literal 4**, **Literal 5** and **Literal 6** fields, enter a value enclosed by [ and ] to specify punctuation that should display instead of a space between name parts defined for the Usage rule. Insert > before [ if the value should display only if the preceding name part is not null. Insert < before [ if the value should display only if the following name part is not null.
  - a. Example: your usage rule includes a middle initial, and you want to insert a period (.) after it, but only if there is a value in the middle name field. If you have not already defined another Literal for your Usage rule, the value in the **Sequence** field for **Literal 1** would be one number higher than the **Sequence** for the **Middle Name**, and in the **Value** field for **Literal 1** would be >[.].
  - b. Example: your usage rule includes the value from **Name Suffix**, if it exists, and you want to insert a comma after the last name. If you have not already defined another Literal for your Usage rule, the value in the **Sequence** field for **Literal 1** would be one number higher than the **Sequence** for the **Last Name**, and the **Value** field for **Literal 1** would be <[, ] and the sequence value from Name Suffix would be one number higher than the Sequence for the Literal 1.
13. **Optional:** Enter a description of the Usage rule in the **Comment** field.
14. Save the record.

## Multiple section

This section allows you to define a rule that enables an array of names to be returned instead of just one.

### *Create a new multiple Usage rule*

You can use the Name Display Rules (GUANDSP) page to create a new multiple Usage rule.

#### Procedure

1. Access the **Name Display Rules (GUANDSP)** page.
2. Select the Multiple section.
3. Insert a new record.
4. **Required:** Enter a value in the **Multiple Usage Name** field.
5. **Required:** Enter a numeric value in the **Sequence** field.

#### **Result:**

The number will determine the order in which the Usage rule is evaluated relative to the other Usage rules.

6. Click the **Active** box if you want the new Usage rule to be available for the name formatting function and procedure.
7. **Required:** Enter the name of a usage rule previously defined on the Single tab.
8. **Required:** Enter a numeric value in the **Maximum Length** field.  
**Result:**  
The value specifies the overall length of the formatted name that is returned by the Usage rule.
9. Save the record.

## Hierarchy section

This section allows you to define a set of hierarchy rules that should be followed to get a USAGE rule to be used on a certain set of pages as defined by Product, Application, Page, and Section.

### *Create a Hierarchy rule to determine Usage rule*

You can use the Name Display Rules (GUANDSP) page to create a Hierarchy rule to determine a Usage rule.

#### Procedure

1. Access the **Name Display Rules (GUANDSP)** page.
2. Select the Hierarchy section.
3. **Required:** In the **Product** field, enter the name of the product (for example, GENERAL, STUDENT etc.) for which the Usage rule is being created.
4. **Optional:** In the **Application** field, enter the name of the application or module (for example, Event Self-Service, Advising, Faculty Grading etc.) for which the Usage rule is being created.
5. **Optional:** In the **Page** field, enter the name of the page (for example, Event Details, Advising List, Final Grades, Midterm Grades etc.) for which the Usage rule is being created.
6. **Optional:** In the **Section** field, enter the section of the page (for example, Body, HEADER, My Events, Class Roster etc.) for which the Usage rule is being created.
7. **Required:** In the **Usage** field, enter the Usage Name from a rule defined on the Single tab.
8. **Required:** In the **Maximum Length** field, enter a numeric value.  
**Result:**  
The value specifies the overall length of the formatted name that is returned by the Usage rule.
9. Save the record.

---

## Test Rules section

This section allows you to test the rules as you are creating them.

### *Test a single Usage rule*

You can test a single Usage rule and view the results of the entered Usage rule name in the Formatted Name Results window.

#### **Procedure**

1. Access the Name Display Rules (GUANDSP) page.
2. Select the Test Rules section.
3. In the **Usage** field, enter a Usage rule name defined on the Single tab.
4. Do not select the **Multiple** check box.
5. Enter the ID of the name to be tested.
6. Click the **Test** button.
7. View the results of the entered Usage rule name in the Formatted Name Results window.

### *Test a multiple Usage rule*

You can test a multiple Usage rule and view the results of the entered Usage rule name in the Formatted Name Results window.

#### **Procedure**

1. Access the Name Display Rules (GUANDSP) page.
2. Select the Test Rules section.
3. In the **Usage** field, enter a Multiple Usage Name rule defined on the Multiple tab.
4. Select the **Multiple** check box.
5. Enter the ID of the name to be tested.
6. Click the **Test** button.
7. View the results of the entered Usage rule name in the Formatted Name Results window.

**Note:** A Multiple Usage Name rule of TEST ALL with the **Multiple** check box selected will display all defined name formats.

---

## Flexible Workweek (GUAFWWK) page

You can use this page to define a Flexible Workweek definition to be used with time sheet presentation and data capture. The ability to define these values by campus is also available.

### Define workweek

You can use the Flexible Workweek (GUAFWWK) page to define your local workweek used within the institution.

#### Procedure

1. Access the **Flexible Workweek (GUAFWWK)** page.
2. Enter the reference for the workweek in the **Workweek Reference** field.  
You can enter a value between 1 and 9999.
3. Enter a description for the workweek in the **Description** field.
4. Select the first weekend day in the **First Weekend Day** field.
5. Select the first weekend day in the **Second Weekend Day** field.
6. Select the **Institution Default** check box to set the default local workweek for the institution.

**Note:** You can define only one default workweek for your institution.

7. Select the campus code associated with the workweek in the **Campus Code** field.
8. Save the record.

## Event Management

The Banner™ Event Management module helps you manage an event and the functions, tasks, and participants associated with the event.

You can perform these kinds of activities:

- Schedule dates and date ranges, times, buildings, and rooms.
- Organize administrative tasks associated with functions.
- Determine financial requirements, including fee and rate structures, budgets, costs, anticipated income, and actual income.
- Arrange for speakers, entertainment, ticketing, invitations, and mailings.
- Track anticipated attendance and actual attendance.

Keeping track of this information not only helps you manage the current event, but provides information that can be used to plan future events.

## Validation pages

Event Management pages use the following validation pages.

Validation page		Used By	
GTVDICD	District Division Code Validation page	SLAEVNT	Event page
		STVCAMP	Campus Code Validation page
GTVEMPH	Emphasis Code Validation page	SLAEVNT	Event page
GTVEXPN	Expense Code Validation page	SLAEVNT	Event page
GTVFEES	Fee Status Code Validation page	GEAATID	Event Registration page
		GEAATTD	Attendance page
GTVFSTA	Function Status Code Validation page	SLAEVNT	Event page
GTVFTYP	Fee Type Code Validation page	SLAEVNT	Event page
GTVFUNC	Function Code Validation page	SLAEVNT	Event page
		SSAMATX	Building/Room Schedule page
GTVLETR	Letter Code Validation page	SLAEVNT	Event page
GTVMAIL	Mail Code Validation page	SLAEVNT	Event page
GTVMENU	Menu Code Validation page	GEAATID	Event Registration page
		GEAATTD	Attendance page
GTVPTYP	Participant Type Code Validation page	GEAPART	Function Participant page
GTVPURP	Purpose Code Validation page	SLAEVNT	Event page
GTVRATE	Fee Rate Code Validation page	SLAEVNT	Event page
GTVREVN	Revenue Code Validation page	SLAEVNT	Event page
GTVRSVP	RSVP Code Validation page	GEAATID	Event Registration page
		GEAATTD	Attendance page

Validation page		Used By	
GTVRTNG	Rating Code Validation page	GEAPART	Function Participant page
GTVSUBJ	Subject Index Validation page	GEAFCOM	Function Comment page
GTVSYSI	System Indicator Validation page	SLAEVNT	Event page
GTVTARG	Target Audience Code Validation page	SLAEVNT	Event page
GTVTASK	Task Code Validation page	GEATASK	Function Task page
GTVTSTA	Task Status Code Validation page	GEATASK	Function Task page
GVTTYP	Task Type Code Validation page	GEATASK	Function Task page
		GTVTASK	Task Code Validation page
GTVZIPC	ZIP/Postal Code Validation page	SLABLDG	Building Definition page
		STVSITE	Site Code Validation page
STVBLDG	Building Code Validation page	SLABLDG	Building Definition page
STVCAMP	Campus Code Validation page	GTVPARS	Scheduling Partition Validation page
		SLABLDG	Building Definition page
		SLAEVNT	Event page
STVCNTY	County Code Validation page	SLABLDG	Building Definition page
		GTVZIPC	ZIP/Postal Code Validation page
STVCOLL	College Code Validation page	GTVEMPH	Emphasis Code Validation page
		SLABLDG	Building Definition page
		SLAEVNT	Event page
		SLARDEF	Room Definition page

Validation page		Used By	
STVDEPT	Department Code Validation page	GTVEMPH	Emphasis Code Validation page
		SLABLDG	Building Definition page
		SLAEVNT	Event page
		SLARDEF	Room Definition page
STVETYP	Event/Function Type Code Validation page	SLAEVNT	Event page
		GTVFUNC	Function Code Validation page
STVNATN	Nation Code Validation page	STVSITE	Site Code Validation page
		GTVZIPC	ZIP/Postal Code Validation page
STVPRCD	Phone Rate Code Validation page	SLABLDG	Building Definition page
		SLARDEF	Room Definition page
STVRDEF	Building/Room Attribute Code Validation page	SLABLDG	Building Definition page
		SLARDEF	Room Definition page
STVRMST	Room Status Code Validation page	SLARDEF	Room Definition page
STVRRCD	Room Rate Code Validation page	SLABLDG	Building Definition page
		SLARDEF	Room Definition page
STVSITE	Site Code Validation page	SLABLDG	Building Definition page
		SLAEVNT	Event page
STVSTAT	State/Province Code Validation page	SLABLDG	Building Definition page
		STVSITE	Site Code Validation page
		GTVZIPC	ZIP/Postal Code Validation page
STVTERM	Term Code Validation page	SLARDEF	Room Definition page

## Menu navigation table

Pages in the Event Management module can be accessed from the following menus.

- Event/Function Processing Menu (\*GENEVPROC)
- Event/Function Inquiry Menu (\*GENEVQRY)

- Event/Function Control Menu (\*GENEVCONT)

Pages in the Event Management module can be accessed from the following menus:

- Event/Function Processing Menu (\*GENEVPROC)
- Event/Function Inquiry Menu (\*GENEVQRY)
- Event/Function Control Menu (\*GENEVCONT)

<b>Menu</b>	<b>Description</b>
SLAEVNT	Event page Defines the various events that your institution offers or sponsors.
GEATASK	Function Task page Defines the tasks associated with a function.
GEAPART	Function Participant page Defines the participants associated with a function.
GEAFCOM	Function Comment page Allows you to enter freeform comments for a function and associate keywords or subject indexes with the comments.
GEAATID	Event Registration page Creates and maintains attendance information by ID.
GEAATTD	Attendance page Creates and maintains attendance information by function.
SLABLDG	Building Definition page Describes the buildings at your institution.
SLARDEF	Room Definition page Describes the rooms within a building.
GEIATTD	Function Attendance Inquiry page Displays information about invitees and their guests.
GEIFUNC	Event Function Inquiry page Displays information about all the functions associated with an event.
GEIIDFN	Individual Function Inquiry page Displays information about all events and their functions that an ID has attended or in which the ID has participated.

<b>Menu</b>	<b>Description</b>
GEISUBJ	Function Subject Index Query page Displays all subject index codes associated with comments for a function.
SLABQRY	Building Query page Selects a subset of the buildings at your institution based on a set of criteria.
SSAMATX	Building Room Schedule page Displays information for all scheduled buildings and rooms at your institution.
*GENEVVAL1	Validation Pages (STV) Provides access to the pages that build, maintain, and display the Student System validation tables used by the Event Management module.
*GENEVVAL2	Validation Pages (GTVEMPH - GTVPURP) Provides access to the pages that build, maintain, and display the General System validation tables used by the Event Management module (GTVEMPH through GTVPURP).
*GENEVVAL3	Validation Pages (GTVRATE - GTVZIPC) Provides access to the pages that build, maintain, and display the General System validation tables used by the Event Management module (GTVRATE through GTVZIPC).
STVBLDG	Building Code Validation page Defines codes for the buildings and facilities associated with events and functions.
STVCAMP	Campus Code Validation page Defines codes for the campuses associated with buildings and events.
STVCNTY	County Code Validation page Defines codes for the counties associated with buildings.
STVCOLL	College Code Validation page Defines codes for the schools and colleges associated with buildings and events.
STVDEPT	Department Code Validation page Defines codes for the departments and other organizational subdivisions associated with buildings, rooms, and events.

<b>Menu</b>	<b>Description</b>
STVETYP	Event/Function Type Code Validation page Defines type codes associated with events and functions.
STVPRCD	Phone Rate Code Validation page Defines codes for the different kinds of telephone service associated with rooms and buildings and the billing frequency for each service.  The Banner Student System also uses codes defined here in Housing and Location Management processing. If the Banner Student System is not installed, these values are for information only.
STVRDEF	Building/Room Attribute Code Validation page Defines codes for the attributes or features associated with buildings and rooms.
STVRMST	Room Status Code Validation page Defines status codes associated with rooms.
STVRRCD	Room Rate Code Validation page Defines codes for the different kinds of rates associated with rooms and buildings and the billing frequency for each rate.  The Banner Student System also uses codes defined here in Housing and Location Management processing. If the Banner Student System is not installed, these values are for information only.
STVSITE	Site Code Validation page Defines codes for sites and addresses associated with buildings and events.
GTVEMPH	Emphasis Code Validation page Defines codes that identify the emphasis of functions.
GTVEXPXN	Expense Code Validation page Defines codes for expenses associated with functions.
GTVFEES	Fee Status Code Validation page Defines codes for the payment status of fees associated with functions.
GTVFSTA	Function Status Code Validation page Defines status codes associated with functions.

<b>Menu</b>	<b>Description</b>
GTVFTYP	Fee Type Code Validation page Defines codes for the types of fees associated with functions.
GTVFUNC	Function Code Validation page Defines codes for the types of functions.
GTVLETR	Letter Code Validation page Defines codes for the letters associated with functions.
GTVMAIL	Mail Code Validation page Defines codes for mailings associated with functions.
GTVMENU	Menu Code Validation page Defines codes for the food and beverage items associated with functions.
GTVNTYP	Name Type Validation page Defines codes for the name types associated with IDs.
GTVPARS	Partition Code Validation page Defines codes for categories or groupings of rooms.
GTVPTYP	Participant Type Code Validation page Defines codes for the types of participants associated with functions.
GTVPURP	Purpose Code Validation page Defines codes that describe the purposes of functions.
GTVRATE	Fee Rate Code Validation page Defines codes for the types of rates associated with functions.
GTVREVN	Revenue Code Validation page Defines codes for revenues associated with functions.
GTVRSVP	RSVP Code Validation page Defines codes for the responses invitees can give to function invitations.
GTVRTNG	Rating Code Validation page Defines codes for ratings that can be assigned to function participants.

Menu	Description
GTVSCHS	Scheduling Partition Validation page  Defines Schedule25 status codes, which are used in the interface between Banner schedule processing and the third party scheduling products Schedule 25/Model25 to control whether a section is to be scheduled and listed.
GTVSUBJ	Subject Index Validation page  Defines codes for indexes (keywords) that describe the subject matter of function comments.
GTVTARG	Target Audience Code Validation page  Defines codes for groups of people who can be invited to a function.
GTVTASK	Task Code Validation page  Defines codes for the tasks required to plan or carry out functions.
GTVTSTA	Task Status Code Validation page  Defines status codes for tasks associated with functions.
GTVTTYP	Task Type Code Validation page  Defines type codes for tasks associated with functions.
GTVZIPC	ZIP/Postal Code Validation page  Defines codes for ZIP codes and postal codes associated with buildings.

Event Management also uses the following inquiry and query pages that are not called from a menu:

- The Event Available Room Query (SLIAEVN) page displays a list of rooms available in a date and time range.
- The Building Category Query (SLQBCAT) page displays a list of categories in a building. A category is a physical area of a building (for example, specific wings and floors). The only way to access SLQBCAT is from the **Category** field on specific pages.
- The Room Query (SLQROOM) page displays summary information about the rooms in your institution's buildings for an indicated term. The only way to access SLQROOM is from the **Room** field on specific pages.
- The Event Query (SLQEVNT) page displays summary information about the events at your institution. The only way to access SLQEVNT is from the **Event** field on specific pages.

## Event Management procedures

The Event Management module helps you manage an event and the functions, tasks, and participants associated with the event. You can schedule functions, organize administrative tasks, determine financial requirements, and track attendance.

Keeping track of this information not only allows you to manage the current event, but provides information that can be used to plan future events.

With the Event Management module, you can manage:

- Buildings and rooms
- Events
- Functions
- Tasks
- Participants

### Definitions

The following definitions are useful for understanding the functions of the Event Management module.

Term	Definition
Event	Any occasion that your institution offers or sponsors. Examples include a meeting, conference, and graduation ceremony.
Function	An activity associated with an event and scheduled for a specific date, time, and place. An event can have several functions. Examples include reception, dinner, and lecture.
Task	A specific activity required to plan or carry out a function.
Participant	An ID who assists with a function and may or may not attend.

### Manage buildings and rooms

Data must be set up for every building and room that is a potential site for an event. Event Management uses the same pages used by the Banner Student System to schedule classes and housing.

#### About this task

If your institution uses Banner Student, buildings and rooms may already be set up. If not, you need to set up buildings and rooms.

#### Procedure

1. Use the **Building Code Validation (STVBLDG)** page to set up building codes for each building at your institution.

2. Use the **Building Definition (SLABLDG)** page to enter data for each building where functions can be scheduled.
3. Use the **Room Definition (SLARDEF)** page to enter data for each room in a building. Values default from SLABLDG but can be overwritten.

**Note:** A room can be inactivated for a period of time by defining a **Start Date** and **End Date** in the Room Inactivation section of SLARDEF. For example, a room can be inactivated for scheduled maintenance.

## Manage events

The Event Management module helps you manage an event.

### Procedure

1. Use the Event/Function Type Code Validation (STVETYP) page to set up codes for each type of event sponsored or offered by your institution (such as alumni gathering, social gathering, and conference).
2. Use the **Event (SLAEVNT)** page to enter data for the event. The system assigns a five-character ID beginning with the letter A.
3. **Optional:** To create and schedule functions, select Schedule from the Options menu. The Meeting Times window appears. Schedule the functions.
4. **Optional:** To add comments about the event, select Comments from the Options menu. The Event Comments window appears. Enter free-page comments.

**Note:** You can use the SLAEVNT page to schedule functions.

## Manage functions

The Event Management module helps you manage a function associated with the event.

### Procedure

1. Use the **Event/Function Type Code Validation (STVETYP)** page to set up codes for each type of function sponsored or offered by your institution (such as meal, break, and sporting function).
2. Use the **Function Code Validation (GTVFUNC)** page to set up codes for each function sponsored or offered by your institution (such as breakfast, football game, and basketball game).
3. Make sure that the event has been created with the **Event (SLAEVNT)** page.
4. **Optional:** To create and schedule functions using SLAEVNT, select Schedule from the Options menu. The Meeting Times window appears. Enter the schedule.
5. Use the **Event (SLAEVNT)** page to enter details for each function.

**Note:** You can use the SLAEVNT page to track function details such as revenue, expenses, fee structure, target audience codes, mailings, and meal selections.

6. **Optional:** To schedule functions using the SLAEVNT page, select Meeting Time from the Options menu. The Meeting Time window appears. Enter the schedule.

**Note:** You can use the SLAEVNT page to schedule a function.

## Results

You can also enter information on the following optional pages to manage additional function details:

- Attendance (GEAATTD) page—Lets you record attendance information for a specific function. You can track information for each ID invited to the function and the ID's guests.
- Event Registration (GEAATID) page—Lets you record attendance information for an ID who is invited to multiple functions within an event. You can also track information for the ID's guests.

The options available to select from to create a new guest depends upon the event type selected.

**Note:** You must have the necessary user permissions to access and create a new guest ID. An error message displays if you do not have the required permissions.

Event Type	Option LIST	Product Name
Student	General Person (GEIIDEN) Add New ID (SPAIDEN)	STUDENT
Alumni	General Person (GEIIDEN) Add New ID (APAIDEN) Cross Reference IDs (APAXREF)	ALUMNI
Finance	General Person (GEIIDEN) Add New ID (FOAIDEN)	FINANCE
Human Resources	General Person (GEIIDEN) Add New ID (PPAIDEN)	HUMANRE

- Function Comment (GEAFCOM) page—Lets you enter, display, and edit freeform comments about a function. You can assign subject indexes (key words) to a comment to help you search for the comment at a later time.
- Function Affiliation (AEAAFIL) page—If Banner Alumni/Development is installed, this page lets you affiliate a function with campaigns, designations, and prospect management projects.

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## Manage tasks

The Event Management module helps you manage a task associated with the event.

### Procedure

1. **Optional:** Use the **Task Type Code Validation (GTVTTYP)** page to define each type of task (such as administrative, maintenance, and security) that can be associated with a function.
2. Use the **Task Code Validation (GTVTASK)** page to set up codes for the tasks (such as check room availability, reserve space, and clean up) that can be associated with functions.
3. Use the **Function Task (GEATASK)** page to identify the specific tasks associated with a function. Tasks are automatically displayed in chronological order, based on the **From** date.
4. **Optional:** To create a message, select Detail from the Options menu. Task details appear. Enter the **Recipient** ID and the **Message**. You can select the down arrow icon to access the User Identification Control (GUAIDEN) page to search for an ID.

**Note:** The message is sent to the recipient on the message date. The recipient can use the General Message (GUAMESG) page to read the message. This page identifies the source of the message as GEATASK and shows the task's function code, but does not link the message to a specific task. To make the message more useful, you should refer to the task in the text of the message.

5. **Optional:** To assign a task to a person, select Detail from the Options menu. Task details appear. Enter the ID of the assigned person in the **ID** field in the ID Assigned to Task section. To assign more persons to the task, go to the next record and enter another ID. You can use the ID/name search feature to search for a name or ID.

**Note:** Each person assigned to a task must have a Banner ID. These IDs are set up with the ID maintenance page of the appropriate Banner system.

## Manage participants

The Event Management module helps you manage the participants associated with the event.

### Procedure

1. Use the **Participant Type Code Validation (GTVPTYP)** page to define each type of participant (such as speaker or caterer) that can be associated with a function.
2. Use the **Function Participant (GEAPART)** page to identify the participants associated with a function.

**Note:** Each participant must have a Banner ID. These IDs are set up with the ID maintenance page of the appropriate Banner system.

## General Web Management

The General Web Management module supports the integrated processing between Banner™ and your Web applications (Student Self-Service, Faculty/Advisor Self-Service, Employee Self-Service, Advancement Self-Service, Finance Self-Service, and Executive Self-Service).

Some of the functions you can perform in the General Web Management module are:

- Associate address type codes with user roles and access privileges.
- Display addresses added or changed within Banner or through the Web.
- Define PINs and other user parameters for third-party access products.
- Define controls for Banner interfaces with third-party products.
- Identify the kinds of information that are included in your student, employee, and alumni directories.
- Define the profile information that appears on the Web directory for an ID.
- Record one or more e-mail addresses for any Banner ID.
- Set up and track surveys.

Refer to the *Banner Middle Tier Implementation Guide* in the Banner Documentation library of the Ellucian Customer Center for more information.

## Validation pages

General Web Management pages use the following validation pages.

Validation page	Used By
GTVDIRO	GOADPRF
Directory Item Validation page	Web User Directory Profile page
GTVEMAL	GOAEMAL
E-mail Address Type Validation page	E-mail Address page
GTVSYSI	GORTCTL
System Indicator Validation page	Third Party Electronic Control Rules page
STVASRC	GOAADDR
Address Source Validation page	Address Review and Verification page

<b>Validation page</b>	<b>Used By</b>
STVATYP Address Type Code Validation page	GOAADDR Address Review and Verification page GOAADRL Address Role Privileges page GOADIRO Directory Options Rule page
STVCNTY County Code Validation page	GOAADDR Address Review and Verification page
STVNATN Nation Code Validation page	GOAADDR Address Review and Verification page
STVSTAT State/Province Code Validation page	GOAADDR Address Review and Verification page
STVTELE Telephone Type Validation page	GOADIRO Directory Options Rule page

## Menu navigation table

Pages in the General Web Management module can be accessed from the following menu.

<b>Menu</b>	<b>Description</b>
GOATPAC	Third Party Access page Updates PIN information and provides mechanism for resetting a PIN.
GOATPAD	Third Party Access Audit page Establishes PINs and PIN information for accessing third party products.
GOAQSTN	PIN Questions page Maintains the list of institution-defined security questions.
GOAEMAL	E-mail Address page Records one or more e-mail addresses for any Banner ID.

<b>Menu</b>	<b>Description</b>
GOAADRL	Address Role Privileges page Associates address type codes from the Address Type Code Validation (STVATYP) page with user roles and access privileges.
GOADDR	Address Review and Verification page Displays addresses added or changed within Banner or through the Web.
GOADIRO	Directory Options Rule page Identifies the kinds of information that are included in your student, employee, and advancement Web directories.
GOADPRF	Web User Directory Profile page Defines the profile information that appears on the Web directory for an ID.
GOISRKY	Survey Response Query page Displays responses to surveys, by person.
GUASRVY	Survey Definition page Defines a survey.
GUISRVS	Survey Summary Query page Displays responses to surveys, by survey.
GOAFNXR	Third Party Procedures and Parameters (GOAFNXR) page Allows you to view functions and transactions used by third-party products.
GORTCTL	Third Party Electronic Control Rules page Defines controls for Banner interfaces with third-party products.
GUAPPRF	Enterprise PIN Preferences page Defines institutional preferences for handling PINs.
GTVDIRO	Directory Item Validation page Defines codes for the types of information included in directory profiles.
GTVEMAL	E-mail Address Type Validation page Defines e-mail address type codes (for example, business, personal, and school).

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Menu	Description
GUAAPPL	Banner Applications page  Defines Application IDs for use by Banner Self-Service 9x application pages.
GUACONF	Banner Applications Configurations page  Creates, modifies, and deletes configurations for use by Banner Self-Service 9x application pages.

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## User PINs management

The General Web Management Module is used to manage PINs (passwords) for Banner Self-Service products.

PIN is an abbreviation for personal identification number, a term that is usually used to refer to a numeric password. Although passwords can now be alphanumeric, they are still referred to as PINs.

Beginning with Release 8.0, PINs are stored in the database in encrypted page. A cryptographic hash is used to transform the PIN before it is stored, so that the unencrypted page of the PIN can never be retrieved from the database.

The cryptographic transformation is a one-way process, so that even if someone were able to retrieve the encrypted PIN from the database and learned the details of the encryption process, they still would not be able to decode the original, unencrypted page of the password.

**Note:** One-way encryption means that even the security administrator cannot retrieve the PIN. If a user forgets a PIN, you cannot look up the PIN for the user. The only recourse in that situation is to reset the user's PIN.

For additional security, the PIN is "salted" before it is encrypted. Salt, in this context, refers to a randomly generated string that is added to the PIN before encryption. This adds another layer of complexity to the encryption.

When a user enters a PIN to gain access to the system, the user's entered PIN is transformed using the same cryptographic function. The transformed string entered by the user is then compared to the hashed PIN stored in the database. If the values match, the user is allowed to proceed.

### Strong passwords

If a password can be easily guessed by another person, it does not provide much protection. Security experts recommend using "strong passwords," ones which are long and complex enough that it would be nearly impossible for someone to guess them.

Banner provides support for strong password standards for Self-Service PINs. Because there are varying standards for strong passwords, Banner offers a flexible approach based on institutional preferences. Your institution can enforce its own strong password standards for Banner PINs. The institution's rules are set up on the GUAPPRF page and are stored on the GUBPPRF table.

- You can specify a minimum and maximum permissible length for your users' PINs.

- You can require that PINs include letters, digits, or both letters and digits.
- You can restrict a user's re-use of PINs. Specifically, you can set a number of days during which a user's previous PIN cannot be reused.

## PIN reset

For occasions when a user forgets a PIN, the user can request a PIN reset by answering a series of security questions with answers that the user previously provided.

Your institution can decide how many questions a user must answer for a PIN reset. You can also decide whether users can generate their own security questions, or whether they must use standard questions established by the institution.

The user's answers to security questions are stored in encrypted page, just as the PIN is.

PINs can be reset on the GOATPAD page by typing in the new PIN and then retyping the new PIN in the Confirm PIN field.

PINs can also be reset by clicking the **Reset** button on GOATPAD or GOATPAC. The PIN will be reset based on the settings on GUAPPRF. If the reset format is set to *Random*, you will not be able to determine what the PIN is.

**Warning!** U.S. based institutions should not use GUAPPRF's Birthdate option for PIN resets. According to the U.S. Family Policy Compliance Office (FPCO), using a student's birthdate when assigning PINs is a violation of the Family Educational Rights and Policy Act (FERPA).

To extract a clear text PIN, you would need to run letter generation and create a letter using the \*PINRESET variable to reset the PIN again and display the PIN before encrypting it.

## Web Management procedures

Web Management procedures include creating a set of security questions, verifying a user's answers to security questions, resetting a user's PIN, and using letter generation to notify a user of a new PIN.

### Create a set of security questions

Security questions are used as part of the Self-Service PIN reset process. You can allow users to create their own security questions, or you can specify standard security questions that all users at your institution must use—or you can use a combination of institution-defined questions and user-defined questions.

#### About this task

To create a set of standard security questions:

#### Procedure

1. Navigate to the **PIN Questions (GOAQSTN)** page.

2. For each question, create a new record with the text of the question.
3. Check the **Display** check box for each question that you want to be visible to Self-Service end users.

## Verify a user's answers to security questions

A security administrator can use the GOATPAD page to verify a user's identity by checking the user's answers to security questions. The answers should match the user's previously stored answers to the questions.

### About this task

Because the user's stored answers are encrypted, you cannot view them directly. Instead, the user's new answers are encrypted using the same hashing process and the two encrypted values are compared.

To verify a user's answers to security questions:

### Procedure

1. Navigate to the **Third Party Access Audit (GOATPAD)** page.
2. In the key block, enter or select the user's ID.
3. Navigate to the **Verify Answers** section. The user's security questions are displayed.
4. For each question
  - a) Ask the user the question.
  - b) Type the user's answer into the Verify Answer field.
5. Click **Verify**. For each new answer that matches the user's stored answer, the **Verified** check box will be checked.

## Reset a user's PIN

You can reset a PIN by assigning a new PIN in GOATPAD.

### Procedure

1. Navigate to the **Third Party Access Audit (GOATPAD)** page.
2. In the key block, enter or select the user's ID.
3. Change the PIN using either of these methods:
  - Type a new PIN in the **PIN** and **Confirm New PIN** fields.
  - Click the reset button to the right of the **PIN** field.

**Note:** If you use the reset button, the value of the new PIN depends on the institution's PIN reset value preferences (as established on the GUAPPRF page).

4. Save the record.

---

## Use Letter Generation to notify a user of a new PIN

User PINs are encrypted using a one-way process and cannot be retrieved from the database. If the institution's PIN reset value (selected on the GUAPPRF page) is `Random`, the only way to see the new PIN value in clear text (unencrypted) is to obtain it from the API before hashing.

### About this task

You can do this using the Banner Letter Generation process.

To reset PINs and notify users through Letter Generation:

### Procedure

1. Select the single user or group of users who will have their PINs reset.
2. Create a letter which contains the variable `*PINRESET`.

The `*PINRESET` variable is delivered with Release 8.0. It selects `GB_THIRD_PARTY_ACCESS.F_PROC_PIN(GOBT PAC_PIDM)` from `GENERAL.GOBT PAC`. This variable calls a function which resets the PIN and delivers the clear text PIN to the `.doc` file when `GLRLETR` is run

3. Run `GLBDATA` for your Population selection to populate it, or manually add people to the Population Selection through `GLAEXTR`.
4. Run `GLBLSEL` for your letter that contains the `*PINRESET` variable.
5. Run `GLRLETR` for your letter which contains the `*PINRESET` variable. The reset variable will reset the PINs for the population selection and will insert the value of each new PIN in the `.doc` file.
6. Forward the notification letters to the affected users.

**Note:** PINs can be generated for users that do not yet have a PIN by running the `GURTPAC` process. In addition, PINs will be generated when a record is created for that user in any of the tables selected in the Table PIN Creation Controls section on `GUAPPRF`.

## Maintain Self-Service user roles

User roles in Self-Service determine what menus are displayed after logging on and what each person has access to. Users can see and access only those menu items that their roles authorize them to see. You can use the Maintain Self-Service User Roles (`GUAUSRL`) page to assign roles to a person.

### Procedure

1. Access the **Maintain Self-Service User Roles (`GUAUSRL`)** page.

If your institution does not have Web Tailor installed and you try to open the page, you receive the message `The page requires the Self-Service configuration objects that are part of the Web Tailor module to be installed. Please contact your System Administrator if you need to configure Banner Self-Service and see this message.`

2. From the key block, select the user ID for which you want to assign roles.
3. Click **Go**.  
You can view system assigned roles in the System Assigned Roles section. This section is read-only.
4. From the **Add Roles** section, insert the role you want to assign to the selected user ID.
5. Click **Save**.

**Note:** The GUAUSRL page is not enabled for SDE and Data Masking.

## Manage Self-Service rules

You can define and customize the Self-Service rules using the Banner Applications Configurations (GUACONF) page.

### Procedure

1. Access the **Banner Applications Configurations (GUACONF)** page.
2. Enter `GLOBAL` in the **Application ID** field and click **Go**.
3. Navigate to the **Self-Service Rules** section.

**Note:** If your institution does not have Web Tailor installed, this section will be disabled.

4. In the **Maximum Number of Login Attempts** field, enter the maximum number of incorrect logins allowed before the user's Web account is disabled.
5. In the **Time Format Mask** field, enter the time format mask you want to use.
6. In the **PIN Expiration in days** field, enter the number of days that elapse before the PIN expires.
7. Select the **Display Usage Page** check box to display the Acceptable Usage page when the user first logs into Banner Self-Service.
8. In the **CGI-BIN Directory** field, enter the path of the Web server (CGI-BIN) directory.
9. In the **CGI-BIN Admin Directory Suffix** field, enter the suffix of the administrative path for the Oracle DAD.
10. In the **Web Timeout in minutes** field, enter the number of minutes without activity before the current session is disabled.
11. In the **Date Display Format Mask** field, Enter the date format mask you would like to use.
12. In the **Date Input Format Mask** field, choose the date input format mask you want to use from the drop-down menu.
13. In the **Start Page** field, select the page that will display immediately after a successful login for the Self-Service applications running in non-integrated mode.
14. Select the **Start Page is a Dynamic Menu** check box to indicate if the Start Page is a dynamic menu.
15. Select the **Display Descriptive Names** check box to display the information entered in the Description field in the Web Tailor drop-down lists.

16. Select the **Enable Web Page Caching** check box to indicate whether Web caching is enabled for the entire system.
17. Select the **Use HTTP Redirection After Login** check box to indicate how you want to determine the page to which users are sent when they are redirected.  
 The **Document Type Definition** field contains high level information about the Document Type Definition (DTD) that web page was coded to and is delivered with the value `HTML PUBLIC`. The **Document Type Definition FPI** field contains the Formal Public Identifier (FPI) portion of the DTD and is delivered with the value `-//W3C// DTD HTML 4.01 Transitional// EN`. The **Document Type Definition URL** field contains the URL portion of the DTD. Together, these three fields make up the `!DOCTYPE` tag used by Self-Service applications. You can either retain the delivered values or change them. If you do not change the delivered values, the `!DOCTYPE` tag for each Web page will look like `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">`.  
 For more information on these fields, see *Banner General Online Help Pages*.
18. In the **Language ISO 639-1** field, enter the value assigned to the LANG attribute in the HTML tag on all Self-Service web pages.  
 The default value is en.
19. Look for the role for which you want to set timeout and specify the timeout value in seconds in the **Timeout** field.
20. Click **Save**.

**Note:** The Self-Service Rules section is not enabled for SDE and Data Masking.

## Manage Self-Service parameters

You can customize the Self-Service rules using the Banner Applications Configurations (GUACONF) page.

### Procedure

1. Access the **Banner Applications Configurations (GUACONF)** page.
2. Enter `GLOBAL` in the **Application ID** field and click **Go**.
3. Navigate to the **Self-Service Parameters** section.

**Note:** If your institution does not have Web Tailor installed, this section will be disabled.

4. In the **Parameter Name** field, enter the name of the parameter you want to customize.
5. In the **Parameter Value** field, enter the parameter value.

The **Comments** field displays the available comment in Information Text under Web Tailor for the related parameter name. If a new parameter is defined, then a relevant comment needs to be added under Information Text to see it on the Self-Service Parameters section.

**Note:** The Self-Service Parameters section is not enabled for SDE and Data Masking.

## Business Rule Builder

To help you manage your Banner™ data for Multi-Institution Functionality (MIF) and Banner Integration Components, General includes pages you can use to build business rules.

The rules you create can be used to populate columns in Banner tables with values from other columns. Your rules can also create student and exchange visitor records automatically.

### Validation pages

Business Rule Builder pages use the following validation pages.

Validation page	Used By
GTVSQRU	GORSVSQ
Business Rule Code Validation page	SEVIS Business Rules page GORRSQL Business Rules page GOIRSQL Business Rule Inquiry page
GTVSQPR	GORSVSQ
Business Rule Process Code Validation page	SEVIS Business Rules page GORRSQL Business Rules page GOIRSQL Business Rule Inquiry page
GTVSQPA	GORRSQL
Business Rule Parameter Code Validation page	Business Rules page

### Menu navigation table

Pages in the Business Rule Builder module can be accessed from the following menu.

Menu	Description
GTVSQRU	Business Rule Code Validation page  Maintains the rule codes that will be used in your dynamic SQL statements.

Menu	Description
GTVSQPR	Business Rule Process Code Validation page  Maintains the process codes that are valid for dynamic filter processing. The delivered value is SEVIS.
GTVSQPA	Business Rule Parameter Code Validation page  Maintains the parameters or variables you will use to build your process rules on the Business Rules (GORRSQL) page. You will use the codes you define on this page in the dynamic SQL statements on GORRSQL.
GORSQPA	Business Rule Process Parameters page  Associates a process code with the parameter codes it will use on GORRSQL. The valid parameter codes are defined on the Business Rule Parameter Code Validation (GTVSQPA) page.
GORRSQL	Business Rules page  Allows you to build SQL statements that will perform certain functions when they are executed from the SEVIS Batch Extract Process (GORSEVE).
GOIRSQL	Business Rule Inquiry page  Allows you to inquire for existing Business rules. A filter can be performed with a process code or rule code or with no filter criteria (to return the set of all business rules).

## Business Rule Builder procedures

Business Rule Builder procedures include establishing the Rule Builder, building business actions, and building auto-population rules.

### Establish the Rule Builder

The general process is as follows.

#### Procedure

1. Set up **Process Codes using the Business Rule Process Code Validation (GTVSQPR)** page. The code SEVIS has been delivered.
2. Save your changes.

3. Establish substitution parameters on the **Business Rule Parameter Code Validation (GTVSQPA)** page. The codes TERM and PIDM have been delivered.
  - a) `TERM` allows you to ask the user for a value for the term, which will be used as a parameter in your rule.
  - b) `PIDM` allows you to ask the user to enter a specific PIDM, which will be processed in your rule.

**Note:** The PIDM and TERM bind variables can only be used in GORRSQL for SEVIS, these 2 bind variables are not recognized in Supplemental Data Engine (SDE).

4. Save your changes.
5. On the **Business Rule Process Parameters (GORSQPA)** page, associate process codes defined on GTVSQPR with substitution parameters defined on GTVSQPA. The number of substitution parameters a process code can have is restricted by the coding associated with the process. As delivered, the SEVIS Information (GOASEVS) page will only prompt users to enter TERM or PIDM.

**Note:** The PIDM and TERM bind variables can only be used in GORRSQL for SEVIS, these 2 bind variables are not recognized in Supplemental Data Engine (SDE).

**Note:** The package that processes parameters, GOKSVSQ, is only set up to handle TERM and PIDM at present. If you want to add other parameters, you must modify GOKSVSQ.

6. Save your changes.
7. Set up codes and descriptions for all the Business Rules you plan to use on the **Business Rule Code Validation (GTVSQRU)** page.
8. Save your changes.
9. On the **SEVIS Business Rules (GORSVSQ)** page, associate your process code/rule code combinations with an auto-population field or business action. If you select `Business Action` from the **Process Type** pull-down menu, you can only enter information in the **SEVIS Business Action** field (from GTVSVBA). If you select `Auto-populate` from the pull-down menu, you can only enter information in the **SEVIS Auto-populate Code** field (from GTVSVAP).
10. Save your changes.
11. You will define the Business Rules themselves on the **Business Rules (GORRSQL)** page by linking a Process Code (defined in Step 1) with a Rule Code (defined in Steps 4 and 7). Then you must create the dynamic SQL statements that will be executed when the SEVIS Batch Extract Process (GORSEVE) is executed, or when `Business Action` or `Auto-populate` is selected from the Options pull-down menu on GOASEVS. Be sure to save your changes.

**Note:** Be careful to enter your statements on GORRSQL in the correct order. GORSEVE and GOASEVS (when you select **Create Student SEVIS Transaction** or **Create Exchange Visitor SEVIS Transaction** from the Options menu) will execute each rule until they receive the Boolean value `True` for Business Actions or a single valid value for auto-population. It does not process any rules after that.

---

## Results

You can build two types of Business Rules without changing Banner programming logic: rules that initiate business actions and rules that auto-populate Banner columns from other Banner columns. If you want to make other kinds of rules, you must change the code.

### Related concepts

[Supplemental Data Engine](#)

## Build business actions

A rule that initiates Business Actions will return a true/false condition.

### Procedure

1. On the **SEVIS Business Action Code Validation (GTVSVBA)** page, create a code and description for the package/procedure that will perform the tasks for your business action. Ellucian has delivered `CREATE_STUDENT` and `CREATE_EV` to be used with your SEVIS reporting.
2. Save your changes.
3. On the **SEVIS Business Rules (GORSVSQ)** page, associate an existing Rule Code (from GTVSQRU) with a Process Code (from GTVSQPR).
4. Select `Business Rule` from the **Process Type** pull-down menu on GORSVSQ.
5. Enter the name of the Business Action you created on GTVSVBA in the **SEVIS Business Action** field.
6. Provide additional information about how it will be used, as necessary. For example, you can specify an effective date and end date for your rule with the **Start Date** and **End Date** fields.
7. Save your changes.

### Results

Your Business Action can be triggered in two ways:

- When you execute GORSEVE with `Y` as Parameter 05 - Process Business Action. You must enter a term code as Parameter 07.
- When you select `Business Action` from the Options pull-down menu from GOASEVS. You will be prompted to enter a term code.

The package GOKSVSQ executes the specific process associated with the Business Rule, sending the person's PIDM and Term as parameters.

**Note:** The package that processes parameters, GOKSVSQ, is only set up to handle `Term` and `PIDM` at present. If you want to add other parameters, you must modify GOKSVSQ.

In either case, all Business Actions with a process code of `SEVIS` are executed. If this results in the creation of any student or exchange visitor SEVIS records, any auto-population rules where the process code is `SEVIS` will be executed, too.

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**Warning!** If you create a Business Action and it does not apply to anyone in the population selection, Banner will not provide you with an error message. This is also the case if there are no active Business Actions at all. As far as the Banner logic is concerned, it has processed all valid, active Business Actions for all the applicable people.

## Build auto-population rules

A rule that initiates the auto-population of columns with other Banner data will return a single value. For auto-population, you have to perform the following as described in the Establish the Rule Builder section of this document.

### Procedure

1. Create a process code on the **Business Rule Process Code Validation (GTVSQPR)** page. SEVIS has been delivered.

Then you must perform a few additional steps:

2. On the **SEVIS Auto-populate Code Validation (GTVSVAP)** page, create a code and description for your auto-population. The code is the column name that you want to populate from another source. The column names from the GOBSEVS table have been delivered.
3. Save your changes.
4. On the SEVIS Business Rules (GORSVSQ) page, associate an existing Rule Code (from GTVSQRU) with a Process Code (from GTVSQPR).
5. Select `Auto-populate` from the **Process Type** pull-down menu on GORSVSQ.
6. Enter the name of the auto-population code you created on GTVSVAP in the **SEVIS Auto-populate Code** field.
7. Provide additional information about how it will be used, as necessary. For example, you can specify an effective date and end date for your rule with the **Start Date** and **End Date** fields.
8. Save your changes.

### Results

Your Auto-population can be triggered in two ways:

- When you execute GORSEVE with Y as Parameter 06 - Auto-population. You must enter a term code as Parameter 07.
- When you select Auto-populate from the Options pull-down menu from GOASEVS. You will be prompted to enter a term code.

**Note:** You cannot access Auto-populate from the Options pull-down menu if you are in the Key block.

The value returned in the auto-populate rule will update the field associated with the rule on GORSVSQ.

The package GOKSVSQ executes the specific process associated with the Auto-population, sending the person's PIDM and Term as parameters.

**Note:** The package that processes parameters, GOKSVSQ, is only set up to handle `Term` and `PIDM` at present. If you want to add other parameters, you must modify GOKSVSQ.

When you use the Auto-population feature, the value returned in the Auto-populate rule will update the field associated with it on GORSVSQ.

## Basic Person

Basic Person identification pages (pages that follow the naming convention `%IDEN`, such as `APAIDEN`, `SPAIDEN`, and `PPAIDEN`) are used throughout Banner™ to capture biographic/demographic information for all persons/non-persons associated with the institution.

Persons/non-persons may belong to any or all of the installed applications (Student, Finance, and so on.). All persons/non-persons are first entered into the database using an identification page. The information maintained in this page is specific to the person/non-person and does not relate to the person's/non-person's involvement at the institution. All other modules/applications are dependent on the information captured and maintained in this page. Any changes or additions to a person's/non-person's biographic/demographic information must be made in this page.

To maintain consistency in Banner, the identification pages all reference a Banner library called the Common Pages Object Library (GOQCLIB). This library is a page object, just like other pages, but it is used to store common page elements that are used by many other pages.

The common elements that support Basic Person are stored in GOQCLIB. Familiarizing yourself with these elements will help you understand Basic Person processing, and troubleshoot errors that may occur during your work with Basic Person functionality.

## Common Pages Object Library (GOQCLIB)

This library contains the sections that display in the `%IDEN` pages and other pages in Banner.

The following table lists the pages which display the sections that exist in the library. The purpose of the sections that exist in the library is for creating basic information about a person or non-person. The data that is collected through the pages includes Identification number, Name information, Address, Telephone, Biographical information such as age and birth date, E-mail, and Emergency Contact information.

page	ID	Alt. ID	Add. ID	Address	Telephone	E-mail	Bio	Emergency contact
APAIDEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
APANAME		Yes						
FOAIDEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FTMVEND				Yes				
FTMFMGR				Yes				
FTMCUST				Yes				

page	ID	Alt. ID	Addl. ID	Address	Telephone	E-mail	Bio	Emergency contact
FTMAGCY				Yes				
GOAEMAL						Yes		
PPAIDEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PPATELE					Yes			
PEA1PAY							Yes	
PEAHIRE							Yes	
SAAQUIK				Yes			Yes	
SPAEMRG								Yes
SPAIDEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SPAPERS							Yes	
SPATELE					Yes			
SRAQUIK				Yes			Yes	

## Section-level security

On the APAIDEN, FOAIDEN, PPAIDEN and SPAIDEN pages, section-level security can be used to restrict users from seeing or changing data in specific sections.

If you don't see all of the sections used by a specific page, as listed in the table above, it could be because section-level security is in place, preventing you from seeing some of the sections.

## Key block

Use the Key block to enter the ID of the person or non-person.

If the ID already exists, the person/non-person's name information will display in the name field in the key block. If the ID does not exist, the user can move to the current Identification window to create the new ID and related name information. The user has the option of generating an ID or entering a new ID when creating a new person/non-person.

Field	Description
Confidential (Confidential Message)	<p>Displays when the <b>Confidential</b> check box is checked on the General Person (SPAPERS) page. Confidentiality may be requested by the student or determined by institution policy.</p> <p>Column: Not a base table item</p> <p>The confidential warning message is displayed for a user when the GUAUPRF Alert Option Display <b>Additional Confidential Warning</b> check box is checked.</p>

Field	Description
Deceased (Deceased Message)	<p>Displays when the <b>Deceased</b> check box is checked on the General Person (SPAPERS) page. You may process data for a person who is deceased.</p> <p>Column: Not a base table item</p> <p>The deceased warning message is displayed for a user when the GUAUPRF <b>Alert Option Display Additional Deceased Warning</b> check box is selected.</p>
ID	<p>ID and name of the person or non-person. Choices differ by page. For example, choices on SPAIDEN are: the Person Search (SOAIDEN) page, the Non-Person Search (SOACOMP) page, or the Alternate ID Search (GUIALTI) page. Use the Options Menu to access the pages, use List for SOAIDEN or Count Query Hits for SOACOMP, or use Duplicate Record from for GUIALTI.</p> <p>Column: Not base table items (ID and name)</p>

## Current Identification window

The Current Identification window is used to insert or update name information.

If the record being added is a person, the first and last names are required. All other fields in the Person section are not required but can be entered for a person. If the record being added is a company or other non-person entity, the non-person name should be added in the non-person section. The fields in the person section cannot be entered for a non-person. The name that displays on this window is a person/non-person's current name and the one that will display on pages through the Banner system. This record can be updated but cannot be deleted. When the name is changed, the old name will become an alternate record. The user ID of the Banner user who originally created the ID will always display in the in the Original creation user field on the current ID window, regardless of whether subsequent name or ID changes have been made.

Field	Description
ID	<p>This field defines the identification number used to access person online.</p> <p>The <b>ID</b> field is used to create or update a current identification number for a person associated with a record. To change information, the user can type over the current information.</p> <p>Column: SPRIDEN_ID</p> <p>Length: 9</p>

<b>Field</b>	<b>Description</b>
Name Type	<p>Use this field to enter a type for the name in the key block. For example, name types could be preferred name, legal name, maiden name, formal name, and so on.</p> <p>Column: SPRIDEN_NTYP_CODE</p> <p>Length: 4</p> <p>List: Name Type (GTVNTYP)</p>
Last Name Prefix	<p>The prefix that appears before the person's last name.</p> <p>Column: SPRIDEN_SURNAME_PREFIX</p> <p>Length: 60</p> <p>Depending on your institution's settings, this field might be hidden.</p>
Last Name	<p>This field defines the last name of person.</p> <p>Column: SPRIDEN_LAST_NAME</p> <p>Length: 60</p>
First Name	<p>This field identifies the first name of person.</p> <p>Column: SPRIDEN_FIRST_NAME</p> <p>Length: 60</p>
Middle Initial	<p>This field identifies the middle name of person.</p> <p>Column: SPRIDEN_MI</p> <p>Length: 60</p>
Prefix	<p>This field maintains the prefix (Mr., Mrs., and so on.) used before person name.</p> <p>Column: SPBPERS_NAME_PREFIX</p> <p>Length: 20</p>
Suffix	<p>This field maintains the suffix (Jr., Sr., and so on.) used after person name.</p> <p>Column: SPBPERS_NAME_SUFFIX</p> <p>Length: 20</p>
Preferred First Name	<p>This field maintains the preferred first name associated with person.</p> <p>Column: SPBPERS_PREF_FIRST_NAME</p> <p>Length: 60</p>

Field	Description
Full Legal Name	This field maintains legal name associated with person. Column: SPBPERS_LEGAL_NAME Length: 500
Non-Person Name	The <b>Non-Person Name</b> field is used to create or change the current name of a non-person associated with the identification number. To change information, the user can type over the current information. Full name of non-person must be entered. Column: SPRIDEN_LAST_NAME Length: 60
Last Update User	The ID for the user that most recently updated the record. Column: SPRIDEN_USER Length: 30
Last Update Activity Date	This field defines the most current date record is created or changed. Column: SPRIDEN_ACTIVITY_DATE Length: 7
Last Update Origin	The name of the Banner object that was used most recently to update the row in the SPRIDEN table. Column: SPRIDEN_ORIGIN Length: 30
Original Creation User	This field contains the ID of the Banner user who created the new identification record. When a new identification record is created, the user's ID is stored in this field. When the name or ID is changed for a particular Identification record, the ID of the original user, not the user who made the change will continue to display on the current ID window. The ID of the user who made the name or ID change will be reflected on the Alternate ID window on the record that gets inserted when the change is made on the Current ID window. Column: SPRIDEN_CREATE_USER Length: 30

Field	Description
Original Creation Date	<p>This field contains the date on which Banner user created the new identification record. When a new identification record is created, the date is stored in this field. When the name or ID is changed for a particular Identification record, the date of the original record creation, not date of the change will continue to display in this field on the Current ID window. The date the change was made will be reflected on the Alternate ID window on the record that gets inserted when the change is made on the Current ID window.</p> <p>Column: SPRIDEN_CREATE_DATE</p> <p>Length: 7</p>

### Alternate ID window

The purpose of the Alternate ID window is to record a persons/non-persons alternate names. Alternate names can be inserted on this window without changing the person's current name.

Field	Description
Name Type	<p>Use the <b>Name Type</b> field to enter a type for the name in the key. For example, name types could be preferred name, legal name, maiden name, formal name, and so on.</p> <p>Column: SPRIDEN_NTYP_CODE</p> <p>Length: 4</p> <p>List: Name Type (GTVNTYP)</p>
Change Type	<p>This field is used to display the type of change which occurred. The letter <b>I</b> indicates an identification number change, while the letter <b>N</b> indicates a name change.</p> <p>Column: SPRIDEN_CHANGE_IND</p>
ID	<p>The person/non-person's alternate ID. This could represent a previous ID, if the person ID changed, or it could represent an alternate ID associate with the person/non-person.</p> <p>Column: SPRIDEN_ID</p> <p>Length: 8</p>
Last Name Prefix	<p>The prefix that appears before the person's last name.</p> <p>Column: SPRIDEN_SURNAME_PREFIX</p> <p>Length: 60</p> <p>Depending on your institution's settings, this field might be hidden.</p>

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<b>Field</b>	<b>Description</b>
Last Name	This field defines the last name of person. Column: SPRIDEN_LAST_NAME Length: 60
First Name	This field identifies the first name of person. Column: SPRIDEN_FIRST_NAME Length: 60
Middle Name	This field identifies the middle name of person. Column: SPRIDEN_MI Length: 60
Origin	The name of the Banner object that was used most recently to update the row in the SPRIDEN table. Column: SPRIDEN_ORIGIN
User	The ID for the user that most recently updated the record. Column: SPRIDEN_USER
Activity Date	This field defines the most current date record is created or changed. Column: SPRIDEN_ACTIVITY_DATE
Create User	This field contains the ID of the Banner user who created the alternate identification record. When a new alternate record is created, the user's ID is stored in this field. When the name or ID is changed for a particular identification record on the Current ID window, the ID of the user who is making the change will be reflected in the create user on the Alternate ID window. See "The Original Creation User" topic, below.
Create Date	This field contains the date on which the alternate identification record was created. When a new alternate record is created, the date is stored in this field. When the name or ID is changed for a particular identification record on the Current ID window, the date on which the change took place will be reflected in the create date on the Alternate ID window.

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### *The original creation user of an identification record*

Each identification record includes a field for the **Original Creation User** (SPRIDEN\_CREATE\_USER). The purpose of this field is to retain a record of the Banner user who "created the PIDM."

Each identification record's unique PIDM is assigned when the record is initially created, and the **Original Creation User** is the Banner user who entered the data that originally created the ID record.

There is also a **Last Update User** field (SPRIDEN\_USER) to record the Banner user who made the most recent change to an identification record.

If you consider only a person's current identification record, the relationship between these two fields is easy to grasp: the **Original Creation User** field always stays the same, while the **Last Update User** field may change several times as the record is updated over a period of time. But a person may also have alternate identification records which also have **Original Creation User** fields. If the alternate record was created directly on the Alternate ID section, then the **Original Creation User** of the record is the person who entered the data to create the new record.

But alternate records can also be created automatically by the system when the primary, current identification record is changed. In these cases, the **Original Creation User** on the alternate record will reflect the Banner user who made the change in the primary record. And this new alternate record will contain the person's original name, which is now considered to be an alternate name associated with the person's PIDM.

To understand how this works, consider what happens in a typical example when a student's name is changed. First, Banner user AADAMS creates an identification record for a new student, Stacy Kanner.

Row ID	PIDM	Name	Original Creation User	Last Update User	Change Indicator
1	5678	Stacy Kanner	AADAMS	AADAMS	

Later, Banner user BBARRY learns that the name was misspelled; it should be Staci Kanner. BBARRY enters the corrected name. The system saves the correction in the primary record (Row 1) but also copies the record to create a new record (Row 2), which retains the old spelling of the name as an alternate name for the student.

Row ID	PIDM	Name	Original Creation User	Last Update User	Change Indicator
1	5678	Staci Kanner	AADAMS	BBARRY	
2	5678	Stacy Kanner	BBARRY	BBARRY	N

The **Change Indicator** value of N in Row 2 indicates that this row is not a current record. Row 1 has a null **Change Indicator**, showing that Row 1 is the current identification record for this person.

BBARRY is correctly shown as the **Original Creation User** of Row 2, because BBARRY's spelling correction caused the name *Stacy Kramer* to become an alternate name for this student. A new alternate record gets inserted into the SPRIDEN table to capture this as an alternate name for Staci and it will reflect BBARRY as the user who created it.

## Address window

Addresses (for both persons and non-persons) are maintained on this window. A person (or non-person) can have different types of addresses (for example, a mailing address, parent's address, and so on.); however, only one address may be designated as active for each address type.

**Note:** A limited number of entities can have more than one active address per address type:

- Vendors (entered on FTMVEND)
- Financial Managers (entered on FTMFMRG)
- Agencies (entered on FTMAGCY)
- Customers (entered on FTMCUST)

Telephone numbers can also be maintained on this window. When you enter a telephone number, it automatically becomes the primary telephone number for the selected address type and sequence number. You can designate as many telephone numbers as active as you want, but if you make an address inactive by checking the **Inactivate** check box, then the telephone number for that address will also be designated as inactive. If you want to keep the telephone number active, do one of the following:

- On the Telephone window, clear the **Inactivate** check box for the telephone number.
- On the Address window, choose **To** and **From Dates** to specify the active dates for the address, instead of selecting the **Inactivate** check box for the address.
- On the Telephone window, do not associate an address type with the telephone number. If an address type is already specified, then delete it.

**Note:** For telephone numbers entered on the Address window of Banner Self-Service, the address type and sequence number specified on the window are always automatically associated with the telephone number in Banner.

Field	Description
From Date	Specifies the effective start date of the address associated with a person.  Column: SPRADDR_FROM_DATE  Length: 7
To Date	Specifies the date until which the address is effective. If this field is left blank, then the address is always effective.  Column: SPRADDR_TO_DATE  Length: 7

Field	Description
Address Type	<p>The <b>Address Type</b> field is used to enter code for address type (for example permanent residence, mailing). Click on the <b>Type</b> button to display an Options list from which you can select either a list of valid address codes (STVATYP) or an address summary page. The user can use LIST to display the Address Type Validation (STVATYP) page, from which address type search/selection may be conducted.</p> <p>Column: SPRADDR_ATYP_CODE</p> <p>Length: 2</p>
Sequence Number	<p>The <b>Sequence Number</b> field is used to assign an internal sequence number to each address. There is a separate sequencing by address type for each person/non-person.</p> <p>Column: SPRADDR_SEQNO</p> <p>Length:2</p>
House Number	<p>A code used in some countries to uniquely identify a house.</p> <p>Column: SPRADDR_HOUSE_NUMBER</p> <p>Length: 10</p> <p>Depending on your institution's settings, this field might be hidden.</p>
Street Line 1	<p>The first line of the address associated with person/non-person.</p> <p>Do not put a "#" (pound sign) in the address. This will cause problems with commands in the page GUALETR.</p> <p>Column: SPRADDR_STREET_LINE1</p> <p>Length: 75</p>
Street Line 2	<p>The second line of the address associated with person/non-person.</p> <p>Column: SPRADDR_STREET_LINE2</p> <p>Length: 75</p>
Street Line 3	<p>The third line of the address associated with person/non-person.</p> <p>Column: SPRADDR_STREET_LINE3</p> <p>Length: 75</p>
Street Line 4	<p>The fourth line of the address associated with person/non-person.</p> <p>Column: SPRADDR_STREET_LINE4</p> <p>Length: 75</p> <p>Depending on your institution's settings, this field might be hidden.</p>

Field	Description
City	<p>The <b>City</b> field is used to identify the city associated with the person/non-person's address.</p> <p>Column: SPRADDR_STREET_LINE2</p> <p>Length: 50</p>
State or Province	<p>The <b>State or Province</b> field is used to identify the state or province associated with the person/non-person's address. Click the button or use LIST to display the State/Province Validation (STVSTAT) page from which search/selection may be conducted by entering state abbreviation in the field.</p> <p>Column: SPRADDR_STAT_CODE</p> <p>Length: 3</p>
ZIP or Postal Code	<p>The <b>ZIP or Postal Code</b> field is used to enter the ZIP or postal code associated with person/non-person's address. Click the <b>ZIP/PC</b> button or use LIST to display a list of valid codes from the ZIP/Postal Code Validation (GTVZIPC) page. If an existing ZIP/postal code is entered before the city and state are entered on the address window, the city and state will default from GTVZIPC.</p> <p>Column: SPRADDR_ZIP</p> <p>Length: 30</p>
County	<p>The <b>County Code</b> field is used to enter the code assigned to the county associated with person/non-person's address. Click the <b>County</b> button or use LIST to display valid codes from the County Code Validation (STVCNTY) page from which search/selection may be conducted by entering county name.</p> <p>Column: SPRADDR_CNTY_CODE</p> <p>Length: 5</p>
Nation	<p>The <b>Nation Code</b> field is used to identify the nation/country associated with person/non-person's address. Click the Nation/<b>Country</b> button or use LIST to display valid codes from the Nation Code Validation (STVNATN) page which search/selection may be conducted by entering name of nation/country in the field.</p> <p>Column: SPRADDR_NATN_CODE</p> <p>Length: 5</p>

Field	Description
Telephone Type	<p>The <b>Telephone Type</b> field is used to enter code for phone type (for example permanent residence, mailing). Click on the <b>Type</b> button or use LIST to display the Phone Type Validation (STVTELE) page from which phone type codes can be selected.</p> <p>Column: SPRTELE_TELE_CODE</p> <p>Length: 4</p>
Telephone	<p>Specifies the telephone number of the person/non-person in the key block.</p> <p>Click on the <b>Telephone</b> button to display the Telephone window, where you can create an unlimited number of telephone numbers associated with a person. The telephone number can be associated with an address type and sequence number. The primary indicator must be Y to display with the address information.</p> <p>Telephone consists of four fields: <b>Country Code, Area Code, Phone Number, Extension</b></p> <p>Column: SPRTELE_CTRY_CODE_PHONE</p> <p>Length: 4</p> <p>Column: SPRTELE_PHONE_AREA</p> <p>Length: 6</p> <p>Column: SPRTELE_PHONE_NUMBER</p> <p>Length: 12</p> <p>Column: SPRTELE_PHONE_EXT</p> <p>Length: 10</p> <p>Depending on your institution's settings, <b>Country Code</b> (SPRTELE_CTRY_CODE_PHONE) might be hidden.</p>
Inactivate Address	<p>Check box that indicates if the address information is active (current) or inactive.</p> <p>If you check this box for an address, then the telephone numbers associated with it will automatically become inactive.</p> <p>Column: SPRADDR_STATUS_IND</p> <p>Length: 1</p>

Field	Description
Source	<p>The <b>Source</b> field is used to identify how the address information was created or updated. Click the <b>Source</b> button or use LIST to display valid codes from the Address Source Code Validation (STVASRC) page.</p> <p>Column: SPRADDR_ASRC_CODE</p> <p>Length: 4</p>
Delivery Point	<p>This field is used to designate the delivery point for mail as established by the Postal Service.</p> <p>Column: SPRADDR_DELIVERY_POINT</p> <p>Length: 2</p>
Correction Digit	<p>The <b>Correction Digit</b> field is defined by the Postal Service and is used to determine the digits used for delivery related to the ZIP code.</p> <p>Column: SPRADDR_CORRECTION_DIGIT</p> <p>Length: 1</p>
Carrier Route	<p>The addresses to which a carrier delivers mail. In common usage, carrier route includes city routes, rural routes, highway contract routes, post office box sections, and general delivery units.</p> <p>Column: SPRADDR_CARRIER_ROUTE</p> <p>Length: 4</p>
Last Update User	<p>The ID for the user that most recently updated the record.</p> <p>Column: SPRADDR_USER</p> <p>Length: 30</p>
Last Update Activity Date	<p>This field defines the most current date record is created or changed.</p> <p>Column: SPRADDR_ACTIVITY_DATE</p> <p>Length: 7</p>
Preferred Address	<p>The preferred address displays on APAIDEN only. It is a calculated value which depends on the preferred address type that is set on APACONS for the person. The preferred address check box on the Address window will be 'checked' on the current active address having the same address type as the preferred address type designated on APACONS.</p>

Field	Description
Preferred Region	<p>The preferred region displays in APAIDEN only. The Preferred Region Address Type is the address type that identifies the address to which you want to send information that has a geographical orientation. For instance, if an advancement individual wants to receive, at a business address, notifications of alumni events that are being held near that business, you would enter the address type for that business address as the Preferred Region Address Type.</p> <p>The Preferred Region Address Type is optional; it defaults based on the Preferred Address Type defined on APACONS. Although it isn't used by any processes or reports, it can be incorporated into correspondence by using Banner Letter Generation.</p>
Combined Mailing	<p>The Combined Mailing Address Type is used in conjunction with the Combined Mailing Name in creating labels. This address type determines which address is used when one piece of mail is to be sent jointly to two IDs. The combined mailing information Address type is set on APANAME.</p>
Employment Details	<p>This indicator is checked if the address displaying is associated with an employment record on APAEHIS. The button navigates to APAEHIS to display the related employment history record.</p> <p>This field only displays on APAIDEN.</p>

## Telephone window

Telephone numbers (for a person or non-person) are maintained on this window. When entering a telephone number, you must always choose a **Telephone Type**. You can then enter a number in the **Telephone** fields.

Telephone numbers can be associated with an address by entering the address type and sequence number. The telephone number will display on the Address window if the primary indicator is checked.

Selecting the **Inactivate** check box makes a telephone number inactive. You can have as many active telephone numbers as you want. When a telephone number is associated with an address, then it will become inactive if the address is designated as inactive.

Field	Description
Telephone Type	<p>Telephone type code.</p> <p>Column: SPRTELE_TELE_CODE</p> <p>Length: 3</p>

Field	Description
Telephone Number	<p>The telephone country code, area code, number, and extension.</p> <p>Telephone consists of four fields: <b>Country Code, Area Code, Phone Number, Extension</b></p> <p>Column: SPRTELE_CTRY_CODE_PHONE Length: 4</p> <p>Column: SPRTELE_PHONE_AREA Length: 6</p> <p>Column: SPRTELE_PHONE_NUMBER Length: 12</p> <p>Column: SPRTELE_PHONE_EXT Length: 10</p> <p>Depending on your institution's settings, <b>Country Code</b> (SPRTELE_CTRY_CODE_PHONE) might be hidden.</p>
International Access	<p>Free-format international access code for telephone number including country and city code and telephone number.</p> <p>In earlier Banner releases, this field was the only place where you could enter telephone numbers that did not match US formats. It is recommended that you now use the <b>Telephone Number</b> fields, which have been expanded to allow numbers of varying lengths and formats, instead of this field.</p> <p>Column: SPRTELE_INTL_ACCESS Length: 16</p>
Primary	<p>Primary indicator to denote primary telephone numbers based on telephone types.</p> <p>Column: SPRTELE_PRIMARY_IND Length: 1</p>
Unlisted	<p>Unlisted telephone number indicator.</p> <p>Column: SPRTELE_UNLIST_IND Length: 1</p>
Inactivate	<p>Indicates whether the status of the telephone number is active or inactive. Check the box to inactivate the telephone number.</p> <p>Column: SPRTELE_STATUS_IND Length: 1</p>

<b>Field</b>	<b>Description</b>
Comment	<p>Comment relating to telephone number.</p> <p>Column: SPRTELE_COMMENT</p> <p>Length: 60</p>
Address Type	<p>Optional address type code associated with telephone number.</p> <p>The telephone number will display on the address window on the address that has the same address type and sequence number as entered on the telephone window, if the primary check box is checked.</p> <p>Column: SPRTELE_ATYP_CODE</p> <p>Length: 2</p>
Sequence	<p>Optional address sequence associated with telephone number.</p> <p>The telephone number will display on the address window on the address that has the same address type and sequence number as entered on the telephone window, if the primary check box is checked.</p> <p>Column: SPRTELE_ADDR_SEQNO</p> <p>Length: 2</p>
Activity Date	<p>This field defines the most current date record is created or changed.</p> <p>Column: SPRTELE_ACTIVITY_DATE</p> <p>Length: 7</p>
User	<p>The ID for the user that most recently updated the record.</p> <p>Column: SPRTELE_USER_ID</p> <p>Length: 30</p>

### Biographical window

A person's biographical information is maintained on the Biographical window.

<b>Field</b>	<b>Description</b>
Legal Sex	<p>The person's legal sex. Select Male or Female, or Not Available if the gender is unknown.</p> <p>Column: SPBPERS_SEX</p> <p>Length: 1</p>

Field	Description
Gender Designation	<p>The person's gender designation.</p> <p>Column: SPBPERS_GNDR_CODE</p> <p>Length: 4</p>
Personal Pronoun	<p>The person's personal pronoun designation.</p> <p>Column: SPBPERS_PPRN_CODE</p> <p>Length: 4</p>
Birth Date	<p>The person's birth date. You may not enter a future birth date, i.e., one which is greater than the system date.</p> <p>Column: SPBPERS_BIRTH_DATE</p> <p>Length: 7</p>
Age	<p>The person's age. Calculated by the system based on the date of birth. The age is not stored in the database, but is calculated each time the page is called.</p>
SSN/SIN/TIN	<p>The person's Social Security Number, Social Insurance Number (Canada), or Tax Identification Number (non-person) as applicable. Institutions in other countries can use this field to store another identifier, such as a TFN (Tax page Number) for Australia.</p> <p>SSN/SIN/TIN is used by some reports and processes, instead of the ID, such as tax documents (W-20, T2202A, and so on.). Tape loads can match against either ID or SSN/SIN/TIN.</p> <p>Column: SPBPERS_SSN</p> <p>Length: 15</p>
Confidential	<p>Confidential indicator. To indicate that information about this person should remain confidential, select the check box. If the box is checked, then the message Confidential displays on any pages with the ID in the key information.</p> <p>The <b>Confidential</b> indicator does not control any other system processing.</p> <p>Column: SPBPERS_CONFID_IND</p> <p>Length: 1</p>

Field	Description
Deceased	<p>Select if the person is deceased. Online processing is not prevented for deceased IDs; however, the message <i>Deceased</i> displays on any pages with the ID in the key information. You may request and run a transcript for a student who is deceased. However, the Grade Mailer Report (SHRGRDE) and associated processing are prohibited for a deceased person.</p> <p>Column: SPBPERS_DEAD_IND</p> <p>Length: 1</p>
Deceased Date	<p>Date of death if deceased. If you enter the deceased date, then the system automatically checks the <b>Deceased</b> check box.</p> <p>Column: SPBPERS_DEAD_DATE</p> <p>Length: 7</p>
Citizenship	<p>The person's citizenship.</p> <p>Column: SPBPERS_CITZ_CODE</p> <p>Length: 1</p> <p>List: Citizen Type Validation list</p>
Marital Status	<p>The person's marital status.</p> <p>Column: SPBPERS_MRTL_CODE</p> <p>Length: 1</p> <p>List: Marital Status Validation List</p>
Religion	<p>The person's religion.</p> <p>Column: SPBPERS_RELG_CODE</p> <p>Length: 2</p> <p>List: Religion Code Validation list</p>
Legacy	<p>The person's relationship to alumni of the institution.</p> <p>Column: SPBPERS_LGCY_CODE</p> <p>Length: 1</p> <p>List: Legacy Code Validation list</p>

<b>Field</b>	<b>Description</b>
Ethnicity	<p>The person's ethnic background. This is critical for IPEDs and additional reports.</p> <p>Column: SPBPERS_ETHN_CODE</p> <p>Length: 1</p> <p>List: Ethnic Code Validation list</p>
New Ethnicity	<p>This field identifies the ethnic code defined by the U.S. government. The valid values are 1 - Not Hispanic or Latino, 2 - Hispanic or Latino, or null.</p> <p>Column: SPBPERS_ETHN_CDE</p> <p>Length: 1</p>
Ethnicity and Race Confirmed	<p>This field identifies the race and ethnicity has been confirmed. Valid values are Y, N and null.</p> <p>Column: SPBPERS_CONFIRMED_RE_CDE</p> <p>Length: 1</p>
Confirmed Date	<p>This field identifies when the race and ethnicity has been confirmed.</p> <p>Column: SPBPERS_CONFIRMED_RE_DATE</p> <p>Length: 7</p>
Veteran File Number	<p>The person's Veteran file number.</p> <p>Column: SPBPERS_VETC_FILE_NUMBER</p> <p>Length: 10</p>
Veteran Category	<p>If the ID is associated with one of the categories in the pulldown list, they may be eligible for Veteran-related programs, if applicable. This field is also used in Banner Human Resources VETS-100 reporting. The valid values available from the pull-down list are:</p> <ul style="list-style-type: none"> <li>• Not a Veteran</li> <li>• Active Wartime or Campaign Badge Veteran</li> <li>• Not a Protected Veteran</li> <li>• Protected Veteran</li> </ul> <p>Column: SPBPERS_VERA_IND</p> <p>Length: 1</p>

Field	Description
Date of Discharge	This is the date the person was separated from active duty. Enter in DD-MON-YYYY format.  Column: SPBPERS_ACTIVE_DUTY_SEPR_DATE  Length: 7
Armed Forces Service Medal Indicator	Identifies armed forces veterans who are medal recipients.  Column: SPBPERS_MEDAL_IND  Length: 1
Disabled Veteran	Indicator to identify an individual as a disabled veteran.  Column: SPBPERS_SDVET_IND  Length: 1
Last Update User	This is the ID of the user who created or updated the record.  Column: SPBPERS_USER_ID  Length: 30
Last Update Activity Date	This is the date the record was created or updated.  Column: SPBPERS_ACTIVITY_DATE  Length: 7

### *Race section*

Use the Race section to record the race of the person. Multiple races can be added for a person.

The U.S. 2000 Census was collected using new race and ethnicity categories, and the EEOC has mandated that Affirmation Action reports for 2005 use this census data for comparison purposes. Not all U.S. government departments have adopted this requirement. Ellucian anticipates that the National Center for Education Statistics (NCES) will eventually release new IPEDS reporting parameters that require institutions to provide information based on the new OMB categories. Thus, institutions should begin the process of collecting the information based on the new categories.

Field	Description
Race	This field identifies the person's institution race code as defined on GORRACE.  Column: GORPRAC_RACE_CDE  Length: 3  <b>Note:</b> After entering the Race, the Race Description auto-populates.

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<b>Field</b>	<b>Description</b>
User	User who inserted or last updated the data. Column: GORPRAC_USER_ID Length: 30
Activity Date	This field defines the most current date a record is added or changed. Column: GORPRAC_ACTIVITY_DATE Length: 7

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### E-mail window

The E-mail window allows you to set up one or more e-mail addresses or URLs for any Banner ID.

A person/non-person can have multiple addresses of the same e-mail address type (for example, personal and professional). Only one however, can be designated as the preferred address. This window will also allow you to specify if an e-mail address should appear on the web.

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<b>Field</b>	<b>Description</b>
E-mail Type	The type of e-mail address. Column: GOREMAL_EMAL_CODE Length: 4
E-mail Address	The E-mail address. Column: GOREMAL_EMAIL_ADDRESS Length: 128
Preferred	This column indicates if the e-mail address is the preferred contact address. Column: GOREMAL_PREFERRED_IND Length: 1
Inactivate	The status of the e-mail address: (A)ctive, or (I)nactive. Column: GOREMAL_STATUS_IND Length: 1
Display on Web	Indicates whether a e-mail address should appear on the Web. Column: GOREMAL_DISP_WEB_IND Length: 1

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Field	Description
URL	This field is display-only on the E-mail window. If the check box is checked, it indicates that the e-mail type entered is a URL.  Column: GTVEMAL_URL_IND  Length: 1
Comment	This is a free-format comment regarding the e-mail information.  Column: GOREMAL_COMMENT  Length: 60
Activity Date	The date on which the row was added or modified.  Column: GOREMAL_ACTIVITY_DATE  Length: 7
User	The user ID when the row was added or modified.  Column: GOREMAL_USER_ID  Length: 30

## Emergency Contact window

The Emergency Contact window is used to capture emergency contact information for persons. The information you can enter here includes: contact name, relationship to the person with the emergency, and address and phone information for the person to be contacted.

Field	Description
Priority	Priority indicator associated with emergency address of person record.  Column: SPREMRG_PRIORITY  Length: 1
Relationship	This field identifies the relationship between emergency contact person and the person record.  Column: SPREMRG_RELT_CODE
Last Name Prefix	The prefix that appears before the last name of the person associated with emergency address information.  Column: SPREMRG_SURNAME_PREFIX  Length: 60  Depending on your institution's settings, this field might be hidden.

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<b>Field</b>	<b>Description</b>
Last Name	Last name of person associated with emergency address information. Column: SPREMRG_LAST_NAME Length: 60
First Name	First name of person associated with emergency address information. Column: SPREMRG_FIRST_NAME Length: 60
Middle Name	Middle initial of person associated with emergency address information. Column: SPREMRG_MI Length: 60
House Number	A code used in some countries to uniquely identify a house. Column: SPREMRG_HOUSE_NUMBER Length: 10 Depending on your institution's settings, this field might be hidden.
Street Line 1	Line one of emergency address. Column: SPREMRG_STREET_LINE1 Length: 75
Street Line 2	Line two of emergency address. Column: SPREMRG_STREET_LINE2 Length: 75
Street Line 3	Line three of emergency address. Column: SPREMRG_STREET_LINE3 Length: 75
Street Line 4	Line four of emergency address. Column: SPREMRG_STREET_LINE4 Length: 75 Depending on your institution's settings, this field might be hidden.

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Field	Description
City	City associated with emergency address. Column: SPREMRG_CITY Length: 50
State or Province	State or Province associated with emergency address. Column: SPREMRG_STAT_CODE Length: 3
Zip or Postal Code	Zip code associated with emergency address. Column: SPREMRG_ZIP Length: 30
Nation	Nation/country associated with emergency address. Column: SPREMRG_NATN_CODE Length: 5
Telephone	Phone number associated with emergency address. Telephone consists of four fields: <b>Country Code, Area Code, Phone Number, Extension</b> Column: SPREMRG_CTRY_CODE_PHONE Length: 4 Column: SPREMRG_PHONE_AREA Length: 6 Column: SPREMRG_PHONE_NUMBER Length: 12 Column: SPREMRG_PHONE_EXT Length: 10 Depending on your institution's settings, <b>Country Code</b> (SPRTELE_CTRY_CODE_PHONE) might be hidden.
Last Update User	User who inserted or last update the data. Column: SPREMRG_USER_ID Length: 30

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Field	Description
Last Update Activity Date	Most current date that the record was created or changed. Column: SPREMRG_ACTIVITY_DATE Length: 7

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### Additional ID window

This window is used to enter extra IDs for a person. Each additional ID must be assigned an ID type. You can set up additional ID types using the Additional Identification Type Validation (GTVADID) page. Use the Additional Identification section to access this window.

Field	Description
ID Type	Type of additional ID. Column: GORADID_ADID_CODE List of Values/Search: Additional Identification Type Validation (GTVADID)
Description	Description of additional ID. Column: GORADID_DESC
Additional Identification	Enter the Additional ID in this field. Column: GORADID_ADDITIONAL_ID
Activity Date	Date on which the record was last updated. Display only. Column: GORADID_ACTIVITY_DATE
User	ID of the user who last updated the record. Display only. Column: GORADID_USER_ID

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### Basic person procedures

Basic person is a generic term that refers to people (persons) and companies (non-persons).

Basic person information includes:

- Name/ID
- Address
- Telephone
- E-mail
- Biographical information

- Emergency contact information

The basic person identification pages (pages whose seven-character names end with `IDEN`, such as `SPAIDEN` or `PPAIDEN`) are used throughout the Banner applications to capture information for all persons (and non-persons) associated with the institution. All persons/non-persons are first entered into the database using one of these pages. Information maintained on these pages is specific to the person/non-person, and does not relate to their involvement at the institution. All other modules and applications depend on the information captured and maintained on these pages. Any changes to a person's/non-person's biographic or demographic information must be made on one of them.

## Common Matching and basic person

Common Matching is a feature in Banner that helps your institution avoid duplicate PIDMs, or storing the same information for a person under several different IDs. The Common Matching process checks for existing identification records before a new one is added to the database.

You can access the Common Matching Entry (`GOAMTCH`) page from an identification page to enter information for a new ID, and then execute the matching process before a new PIDM is created in Banner. Common Matching also provides a mechanism to add new records to the Banner database and update existing ones.

### *Access GOAMTCH from an identification page*

You can access `GOAMTCH` from an identification page.

#### Procedure

1. Go to an identification page such as `SPAIDEN` or `APAIDEN`.
2. Enter `GENERATED` in the **ID** field.

Or, you can instead do either of the following:

- Select the **Generate ID** button.
- Enter an ID in the **ID** field that does not exist in Banner.

3. The `GOAMTCH` page appears.

**Note:** If a person record is created using the `GOAMTCH` page, then the **Origin** field (on `SPAIDEN` and `SPRIDEN`) is set to `GOAMTCH`. If the person record is created using `SRRSRIN` or `SRIPREL`, then the **Origin** field is set to `SRKPREL`.

#### Results

You can search on last names, first names, and non-person names by text to see if similar names exist. Use the Search feature from the **Last Name** and **First Name** fields to view similar names on the Person Search (`SOAIDEN`) page. Use the Search feature from the Non-Person Name Information Name field to view similar names on the Non-Person Search (`SOACOMP`) page.

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**Note:** The current identification information on the main window is accessed by the Current Identification section, if you want to return to the main window from a secondary window.

## Use of ID and Name extended search

The Extended Search feature provides advanced filtering capabilities to help you maintain identification information for persons and non-persons.

**Note:** Users must be granted access to the SSN\_SEARCH special security object to see and use the SSN field on the Extended Search window. The SSN field on this window is not affected by field-level rules for masking, hiding, or concealing. Use SSN\_SEARCH, not masking rules, to control access to this field.

### *Use the Extended Search window*

This procedure explains how to use the Extended Search window.

#### **Procedure**

1. In a key block **ID** field, enter a partial ID and a wildcard ( % and \_ ), or enter a partial name in the **Name** field. Wildcards can also be used in the **Name** field, but are not required for searching. For example, if an entire last name is entered, with no first name or wildcards, the Extended Search window will open and the search results will include all persons/non-persons that have that last name.

**Note:** The underscore ( \_ ) wildcard cannot be used to search in the **Name** fields.

2. The ID and Name Extended Search window appears. The person/non-person count displays the number of persons/non-persons returned by the search.
3. Click the **Search Results** pull-down list to see the ID and name of the person/non-persons returned from the filter.

**Note:** A person/non-person may be listed multiple times in the results list if the person has alternate names or IDs. However, each person/non-person is only included in the count once.

### *Review additional information about the persons in the search result set*

You can review additional information about the persons in the search result set.

#### **Procedure**

1. Click the **Person Search Detail** icon.
2. The Person Search page opens. The page that appears will vary by Banner product. For example, if the searching is being performed on a Student page such as SPAIDEN, the SOAIDEN page will open. An ID can be selected on this page. If the ID is selected, you will be returned to the original page and this ID will display in the key block. If no ID is selected, when

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you exit this page, you will return to the key block of the original page. The Extended Search window will not redisplay automatically.

### *Review additional information about the non-persons in the search result set*

You can review additional information about the non-persons in the search result set.

#### **Procedure**

1. Click the **Non-Person Search Detail** icon.
2. The Non-Person Search page opens. The page that is called will vary by Banner product. For example, if the searching is being performed on a Student page such as SPAIDEN, the SOACOMP page will open. An ID can be selected on this page. If the ID is selected, you will be returned to the original page and this ID will display in the key block. If no ID is selected, when you exit this page, you will return to the key block of the original page. The Extended Search window will not redisplay automatically.

### *Reduce the search to person or non-person*

You can reduce the search to person or non-person.

#### **Procedure**

1. Click the option button for the person or non-person.
2. The results will be updated to included only persons or non-persons, depending on your selection.
3. To reset the results to include persons and non-persons, select the **Both** option button.

### *Reduce the search based on additional criteria*

You can also reduce the search based on additional criteria.

#### **Procedure**

1. Add additional search criteria in any combination of the fields: **City, State or Province, ZIP or Postal Code, Name Type, SSN/SIN/TIN, Birth Date, Gender**.
2. Click the **Reduce Search** button.

### *Clear the data from a previous search, or to enter a new filter*

You can clear the data from a previous search, or to enter a new filter.

#### **Procedure**

Click the **Clear Search** button.

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### *Close the Extended Search window*

You can use the Clear page function to close the Extended Search window.

#### **Procedure**

Click the **x** in the upper right hand corner of the window, or use keystrokes to perform a Clear page function.

### *Determine who entered the current name/ID of a non-person and the page on which the data was entered*

You can determine who entered the current name/ID of a non-person and the page on which the data was entered.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter the ID of the non-person you are identifying.
3. Verify that the non-person's name has been entered on the main window on the Current Identification window.
4. Review the data in the ID and Name Source section.

### *Determine who entered the alternate name/ID of a non-person and the page on which the data was entered*

You can determine who entered the alternate name/ID of a non-person and the page on which the data was entered.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter the ID of the non-person you are identifying.
3. Verify that the non-person's name has been entered on the main window on the Current Identification window.
4. Go to the Alternate Identification window.
5. Review the data in the **Origin**, **User**, **Activity Date**, **Create User**, and **Create Date** fields.

### *Search for names that include accented characters*

Extended ID/name search supports searching for names that include accented characters and other special characters. This feature applies to extended Latin characters that are considered altered pages of baseline Latin characters, as, for example, À and Ã are considered altered pages of A.

Names that include extended characters are returned in search results when you search for names with the related baseline character. For example, if you search for the last name Adams, the search would return records containing Adams and Ádams.

If your search criteria include extended characters, names with related baseline characters are also returned. For example, if you search for the last name Ádams, typing the extended character Á, the search would return records containing Adams and Ádams.

The table below lists the capital versions of the characters that are treated as extended characters for this feature. Extended search is not case-sensitive in Banner, so the lower-case version of each of these extended characters corresponds to a baseline character in just the same way.

<b>Extended Character</b>	<b>Description</b>	<b>CHR(x)</b>	<b>Baseline Character</b>
À	LATIN CAPITAL LETTER A WITH GRAVE	50048	A
Á	LATIN CAPITAL LETTER A WITH ACUTE	50049	A
Â	LATIN CAPITAL LETTER A WITH CIRCUMFLEX	50050	A
Ã	LATIN CAPITAL LETTER A WITH TILDE	50051	A
Ä	LATIN CAPITAL LETTER A WITH DIAERESIS	50052	A
Å	LATIN CAPITAL LETTER A WITH RING ABOVE	50053	A
Æ	LATIN CAPITAL LETTER AE	50054	A
Ç	LATIN CAPITAL LETTER C WITH CEDILLA	50055	C
È	LATIN CAPITAL LETTER E WITH GRAVE	50056	E
É	LATIN CAPITAL LETTER E WITH ACUTE	50057	E
Ê	LATIN CAPITAL LETTER E WITH CIRCUMFLEX	50058	E
Ë	LATIN CAPITAL LETTER E WITH DIAERESIS	50059	E
Ì	LATIN CAPITAL LETTER I WITH GRAVE	50060	I
Í	LATIN CAPITAL LETTER I WITH ACUTE	50061	I
Î	LATIN CAPITAL LETTER I WITH CIRCUMFLEX	50062	I
Ï	LATIN CAPITAL LETTER I WITH DIAERESIS	50063	I
Ñ	LATIN CAPITAL LETTER N WITH TILDE	50065	N
Ò	LATIN CAPITAL LETTER O WITH GRAVE	50066	O
Ó	LATIN CAPITAL LETTER O WITH ACUTE	50067	O
Ô	LATIN CAPITAL LETTER O WITH CIRCUMFLEX	50068	O

Extended Character	Description	CHR(x)	Baseline Character
Õ	LATIN CAPITAL LETTER O WITH TILDE	50069	O
Ö	LATIN CAPITAL LETTER O WITH DIAERESIS	50070	O
Ø	LATIN CAPITAL LETTER O WITH STROKE	50072	O
Ù	LATIN CAPITAL LETTER U WITH GRAVE	50073	U
Ú	LATIN CAPITAL LETTER U WITH ACUTE	50074	U
Û	LATIN CAPITAL LETTER U WITH CIRCUMFLEX	50075	U
Ü	LATIN CAPITAL LETTER U WITH DIAERESIS	50076	U
Ý	LATIN CAPITAL LETTER Y WITH ACUTE	50077	Y

### Search by SSN in an ID field

You might be able to enter a Social Security Number (SSN) in an ID field when filtering for a person record. When you search by ID, the system first checks for an ID record that matches the number you entered.

If no matching ID is found, the system then checks for a matching SSN.

SSN searching is available only if all of the following conditions are met:

- The SSN Search feature is enabled for the institution. The feature is controlled by the **Enable SSN Lookup** check box on the Installation Controls (GUAINST) page.
- Your own Banner security setup includes permission to use the SSN search feature. A security administrator can give you permission by adding the SSN\_SEARCH security object to the list of Banner objects for which you have access.
- The ID field has extended ID/name search capability build into the field.

### *Find a person record by Social Security Number (SSN)*

You can find a person record by Social Security Number (SSN).

#### Procedure

1. Type the SSN in an ID field that has extended search capability.
2. Press **Enter**.

When the matching record is found, the person's name is displayed in the **Name** field, and the person's ID (not the SSN you entered) is displayed in the **ID** field.

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## Search by Telephone, Email, and Additional ID

There are several search pages in Banner system, but most of them relied upon having a name, ID, or SSN.

Banner General 8.4 has been enhanced to enable searching by using an e-mail address, telephone number, or the additional ID. This new functionality is available on the new page, General Search (GUISRCH).

- You can enter only one search criteria at a time - additional ID, e-mail, or phone (but may be limited by masking).
- Searches are always case insensitive.
- If the telephone is used for searching then any null phone entry (country, area code, phone) will be assumed to be %.
- There may be uses of the **Additional Id** that should not be available for searching (i.e., blind grading) and therefore a new option, **GUISRCH Bypass**, has been added to GTVADID. If this indicator is set, then those records will not be included in the search results.
- The search results are limited to 1000 unless a GTVSDAX entry (SEARCH\_MAX/GUISRCH) is changed to allow more/less.
- The result line will indicate the matching type and the code and value.
- Double clicking the ID field will place the ID in the global.key\_idno so that when you go to the next page (i.e., SPAIDEN) that id will be in context.

Common matching has also been modified to enable the primary search to be done on the e-mail or telephone instead of the name or SSN. This matching process does not require the entry of a name or SSN in to process the match request. However, this requires the e-mail address or telephone because that is now the primary search field.

In order to enable common matching to use the e-mail address as the primary search, you must first create a GTVSDAX entry with GROUP=CM\_SOURCE\_CODE and CODE=EMAIL\_PRIM and then set the EXTERNAL CODE=<common matching source code used for primary e-mail searching>. You can use the **Sequence** field to specify multiple source codes used for primary e-mail matching.

In order to enable common matching to use the telephone number as the primary search, you must first create a GTVSDAX entry with GROUP=CM\_SOURCE\_CODE and CODE=PHONE\_PRIM and then set the EXTERNAL CODE=<common matching source code used for primary telephone searching>. You can use the **Sequence** field to specify multiple source codes used for primary telephone matching.

## Entry of basic person information

This process includes entering current identification data for a person, entering alternate identification data for a person, viewing alternate identification data for a person, entering current

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identification data for a non-person, updating an organization's and a person's name or ID, and deleting an organization's and person's alternate name or ID.

### *Enter current identification data for a person*

You can use the identification pages such as SPAIDEN or APAIDEN to enter current identification data for a person.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter the ID.

**Note:** If Common Matching is enabled for you, you will be directed to the Common Matching Entry (GOAMTCH) page, where you can enter information for the new ID and check for matches. Save the record. The ID and associated name are displayed in the key block.

3. Go to the Current Identification window.

**Note:** If the person currently has a record in Banner, the system copies the identification information and automatically places it into the fields in the current identification section. Complete the remaining fields, following the directions below.

4. Enter the person's **Name Type**.
5. Enter the person's **SSN/TIN/SIN**. This field is available on FOAIDEN and PPAIDEN.
6. Enter the person's **First Name, Last Name**, and any other applicable parts of the name.
7. Enter the person's **Marital Status**. This field is available on APAIDEN and FOAIDEN.
8. Save.

### *Enter alternate identification data for a person*

You can use the identification pages such as SPAIDEN or APAIDEN to enter alternate identification data for a person.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Verify the **ID** and the **First Name, Last Name**, and **Middle Initial** information on the Current Identification window.

**Note:** If the ID is generated, you must save the record before accessing the Alternate Identification section.

**Note:** If Common Matching is enabled for you, you will be directed to the Common Matching Entry (GOAMTCH) page where you can enter information for the new ID and check for matches. Save the record. The ID and associated name are displayed in the key block.

3. Go to the Alternate Identification window.

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4. Enter the **Change of Name** or **ID**.

**Note:** The Duplicate Record function will copy the ID or name information into the appropriate fields on the Alternate Identification window depending on what type of change you enter.

5. Enter the person's alternate **ID**.

OR

Enter the person's alternate **Last Name**.

6. Enter the person's alternate **First Name**.
7. Enter the person's alternate **Middle Name**.
8. Save your changes.

### *View alternate identification data for a person*

You can use the identification pages such as SPAIDEN or APAIDEN to view alternate identification data for a person.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Verify the **ID** and the **First Name**, **Last Name**, and **Middle Name** information on the Current Identification window.
3. Go to the Alternate Identification window.

### *Enter current identification data for a non-person*

You can use the identification pages such as SPAIDEN or APAIDEN to enter current identification data for a non-person.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter an **ID**.

**Note:** If Common Matching is enabled for you, you will be directed to the Common Matching Entry (GOAMTCH) page where you can enter information for the new ID and check for matches. Save the record. The ID and associated name are displayed in the key block.

3. Go to the Current Identification window.
4. Enter the name of the non-person in the **Non-Person Information** field.
5. Save.

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### *Update an organization's and a person's name or ID*

You can use the identification pages such as SPAIDEN or APAIDEN to update an organization's and a person's name or ID.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Go to the Current Identification window.
3. Enter the new data over the existing data.
4. Save.
5. Go to the Alternate Identification window to see the changes.

**Note:** For updated IDs, the ID appears in the **Change** field. For updated names, the name appears in the **Change** field.

6. Go to the next record to view alternate names or IDs.

### *Delete an organization's and person's alternate name or ID*

You can use the identification pages such as SPAIDEN or APAIDEN to delete an organization's and person's alternate name or ID.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Move to the next records until the desired name or ID appears.
3. Select Remove Record.
4. Save. The record is no longer displayed, and it no longer exists on either the **Person Search (SOAIDEN)** page or the **Non-Person Search (SOACOMP)** page.

### **Maintenance of address and telephone information**

This process includes entering address information for a person, entering address information for a non-person, entering a primary telephone number with a new address, adding a primary telephone number to an existing address, entering a telephone number without an address, and make an address inactive.

### *Enter address information for a person*

You can use the identification pages such as SPAIDEN or APAIDEN to enter address information for a person.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.

2. Enter the **ID**.
3. Verify that the person's **First Name** and **Last Name** have been entered on the main window in the Current Identification section.
4. Go to the Address window.

**Note:** If the person currently has a record in Banner, the system displays the address information on the Address window. You can insert new information by selecting Insert Record. Complete the remaining fields, following the directions below.

5. Enter the **Type** code for a new address.

Or, you can select an address to be modified from the group of addresses previously entered for the person.

6. Enter the street address portion of the address in the **Address** fields.
7. Enter the **City** (required), **State or Province**, and **ZIP or Postal Code** portion of the address.

Or, you can search to select a **City**, **ZIP or Postal Code**, and **State or Province** from the ZIP or Postal Code Validation (GTVZIPC) page.

**Note:** If the city and state are both blank and a ZIP or postal code is entered, the city and state will default into those fields from GTVZIPC.

8. Enter the **Nation** code portion of the address.

**Note:** You must enter either the **State /Province** code or the **Nation** code.

9. **Optional:** Enter all available delivery information.
10. **Optional:** Enter the **Phone** number associated with the **Address**.
11. Save.

**Note:** A person must have at least one complete address.

### *Enter address information for a non-person*

You can use the identification pages such as SPAIDEN or APAIDEN to enter address information for a non-person.

#### **Procedure**

1. Access an Identification page (%IDEN).
2. Enter the ID of the non-person you are identifying.
3. Verify the non-person's **Name** field entry have been entered on the Current Identification window.
4. Go to the Address window.
5. Enter the **Type** code for a new address.

Or, you can select an address to be modified from the group of addresses previously entered for the person.

6. Enter the street address portion of the address in the **Address** fields.
7. Enter the **City** (required), **State or Province**, and **ZIP or Postal Code** portion of the address.  
  
Or, you can search to select a **City, ZIP or Postal Code**, and **State or Province** from the ZIP or Postal Code Validation (GTVZIPC) page.  
  
**Note:** If the city and state are both blank and a ZIP or postal code is entered, the city and state will default into those fields from GTVZIPC.
8. Enter the **Nation** code portion of the address.  
  
**Note:** You must enter either the **State/Province** code or the **Nation** code.
9. If you do not want to create bar codes for the address, go to step 13.  
  
Or, if you want to create bar codes for the addresses, go to step 10.
10. Select the **ZIP/Postal Code** field, and go to the Delivery Information window.
11. Enter all available delivery information.
12. Return to the Address window.
13. **Optional:** Enter the Telephone number associated with the address.
14. Save.

### *Enter a primary telephone number with a new address*

You can use the identification pages such as SPAIDEN or APAIDEN to enter a primary telephone number with a new address.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter the ID.
3. Go to the Address window.
4. Enter the **Type** code for the new address.
5. Enter the street address portion of the address in the **Address** fields.
6. Enter the **City** (required), **State or Province**, and **ZIP or Postal Code** portion of the address.  
  
Or, you can search to select a **City, ZIP or Postal Code**, and **State or Province** from the ZIP or Postal Code Validation (GTVZIPC) page.  
  
**Note:** If the city and state are both blank and a ZIP or postal code is entered, the city and state will default into those fields from GTVZIPC.
7. Enter the **Nation Code** portion of the address.  
  
**Note:** You must enter either the State/Province code or the Nation code.
8. Enter the country code (if applicable), area code, basic number, and the extension in the **Telephone** fields.

- 
9. Enter the **Telephone Type**.

**Note:** Telephone types are associated with address types on the Address Type Code Validation (STVATYP) page. The telephone type associated with the address type defaults, but can be overwritten.

10. Save.

**Note:** Telephone numbers entered on the Address window are automatically associated with an address.

### *Addition of a primary telephone number to an existing address*

You can associate a primary telephone number with an address by using either the Address window or the Telephone window. Keep in mind that when you associate a telephone number with an address, the telephone number will become inactive if you designate the address inactive at some point

#### *Use the Address window*

You can associate a primary telephone number with an address by using the Address window.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter an ID in the **ID** field.
3. Go to the Address window.
4. Enter an address and address type, or filter for an existing one that you want to use.
5. Choose the **Telephone Type**.

**Note:** Telephone types are associated with address types on the Address Type Code Validation (STVATYP) page. The telephone type associated with the address type defaults, but can be overwritten.

6. Enter the telephone number in the **Telephone** field.
7. Save.

#### *Use the Telephone window*

You can associate a primary telephone number with an address by using the Telephone window.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter an ID in the **ID** field.
3. Go to the Telephone window.
4. Choose a **Telephone Type**.

**Note:** Telephone types are associated with address types on the Address Type Code Validation (STVATYP) page. The telephone type associated with the address type defaults, but can be overwritten.

- 
5. Enter the telephone number in the **Telephone** fields.
  6. Choose an **Address Type** and **Sequence Number**. You can filter to find the address type and sequence number that identifies the address you want to use.
  7. Save.

### *Enter a telephone number without an address*

You can use the identification pages such as SPAIDEN or APAIDEN to enter a telephone number without an address.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter an ID in the **ID** field.
3. Go to the Telephone window.
4. Choose a **Telephone Type**.
5. Enter the telephone number in the **Telephone** fields.
6. Save.

### *Make an address inactive*

You can use the identification pages such as SPAIDEN or APAIDEN to make an address inactive.

#### **Procedure**

1. Go to an identification page such as SPAIDEN or APAIDEN.
2. Enter an ID in the **ID** field.
3. Go to the Address window.
4. Choose the address you want to inactivate.
5. Select the **Inactivate** check box.

---

## 6. Save.

**Note:** When you inactivate an address, then the telephone number for that address will also be designated as inactive. If you want to keep the telephone number active, do one of the following:

- On the Telephone window, clear the **Inactivate** check box for the telephone number.
- On the Address window, choose **To** and **From Dates** to specify the active dates for the address, instead of checking the **Inactivate** check box for the address.
- On the Telephone window, do not associate an address type with the telephone number. If an address type is already specified, then delete it.

**Note:** For telephone numbers entered on the Address window of Banner Self-Service, the address type and sequence number specified on the window are always automatically associated with the telephone number in Banner.

## Supplemental Data Engine

Supplemental Data Engine (SDE) is a simple way to add data fields to Banner™ pages. SDE allows you to store data that is not part of the existing Banner data model.

No customization of Banner pages or tables is needed to capture and use additional data with SDE. The new data is displayed in a pop-up window, the Supplemental Data Window, and is stored in a supplemental data table. Because no customization is needed, supplemental data is generally not impacted by Banner upgrades.

### The structure of SDE

Each supplemental data record created through SDE is tied to a specific Banner table. The Banner table's unique key enables a specific record on the source table to be linked to a specific record on the Supplemental Data table.

Through SDE you can create additional fields associated with a specific Banner table but stored in a separate table, the Supplemental Data Table.

Although it is natural to think of supplemental data in terms of extra fields on Banner pages, SDE is tied to pages only indirectly.

If the same table is used by two or more pages, supplemental data associated with the table will automatically be viewable on all of those pages.

When you are setting up SDE for a page with multiple data blocks, each associated with a different table, each data section's SDE must be set up separately by setting up the table that supplies the data for each section.

---

## Limitations of SDE

SDE has the following limitations.

### Not all tables, blocks, and pages work with SDE

Supplemental data is not guaranteed to work in every instance. There may be some pages and blocks where SDE cannot be used.

Supplemental data can only be associated with tables; therefore, any page that relies on a view to display data cannot use SDE. For example, the AOAIIDEN page displays data from a view and, as a result, SDE cannot be displayed on that page.

SDE is not intended to work on temporary tables or on tables or pages that treat data as temporary, such as the TSAMASS and TFAMASS pages.

The security tables owned by BANSECR cannot be used with supplemental data. Because SDE's architecture is incompatible with the security requirements of the BANSECR-owned security pages, these pages will not be SDE-enabled in future releases.

Because of technical limitations, there are certain Banner pages where SDE does not work at all or does not function correctly. At the time of Release 8.0, SDE could not be used in the pages listed below.

#### Banner General pages

- GOAFBPI, GOAFBPR, GOAFPUD, GOAFPUD, GOAINTL, GOAQSTN
- GOIFBPR, GORFEOB, GORVPDI, GSADSEC, GSASECR, GSAVPDI
- GTVADID, GTVLFST, GTVPARS, GTVSVCA

#### Banner Student pages

- SAAETBL, SAARRFT, SAAWADF, SAAWATR, SAQOLIB, SCARRES, SFAEPRT, SHAGCOM, SHAGRUL, SHARPAR, SHARQTS
- SHARTYP, SHATATC, SOACTRL, SOAMAUD, SOIHCUR, SORCACT, SORCSTS, SORLCDF, SRAPREL, SSARRES, SSASCHW
- STVCACT, STVCSTS, STVELMT, STVGCMT, STVLMOD, STVMECL, STVWPYO, STVWSCF, STVWSSO

## Multi-Entity Processing

The combination of SDE with Virtual Private Database (VPD) is currently not supported. If you use VPD to implement Multi-Entity Processing (MEP), you should be aware the SDE does not work automatically with VPD.

If you want to apply VPD rules to the SDE table, this must be planned for and set up as part of your VPD implementation.

---

## Masking

Masking is not currently supported with SDE. Supplemental data fields cannot be masked, concealed, or hidden.

## Menu Navigation Table

The Supplemental Data Engine (\*GENSDE) menu can be accessed from the System Functions/ Administration menu (\*GENSYS).

Menu	Description
GTVSDTB	Tables with Existing Supplemental Data Attributes page Lists Banner tables that are enabled for SDE.
GOASDMD	Supplemental Data Attributes Definition page Defines the attributes for supplemental data fields that will be displayed on the Supplemental Data window.
GOADISC	Supplemental Data Discriminators page Identifies discriminator codes for SDE, and defines the discriminator methods that will dynamically handle supplemental data.

In addition to these pages, SDE uses the Supplemental Data Window, which does not appear on any menu.

## Supplemental Data Engine Processes

The Supplemental Data Engine processes include using the supplemental data window, setting up supplemental data attributes, and creating delete triggers for Supplemental Data.




### Use of the Supplemental Data window

Supplemental data columns, after they have been set up for your institution, are displayed in the Supplemental Data window.

If you have the appropriate permissions, you can add or edit data on this window. Your permissions in the Supplemental Data window match your permissions in the page displayed in the main Banner window.

### *Interpretation of the SDE More Information icon*

The More Information icon on the section header bar lets you know when there is supplemental data to be seen.

	<p>A grayed-out More Information icon indicates that there is no Supplemental Data window for the database table in the current section.</p>
	<p>An active More Information icon indicates that there is a Supplemental Data window for the current section, but it does not contain any data. You can click the More Information icon to open the Supplemental Data window and enter data.</p>
	<p>An active More Information icon with horizontal lines indicates that supplemental data exists for the current record. You can click the More Information icon to open the Supplemental Data window and view or edit the data.</p>

### *Supplemental Data entry*

The Supplemental Data window is accessed by clicking the More Information icon in the section header bar. The window will display one or more fields where you can enter data related to the data in the current main Banner window.

Any fields you see in the Supplemental Data window have been specifically set up for your institution. Look for hint text that provides guidance on what to enter in the supplemental data fields.

If you see an existing set of numbered fields (for example, labeled **Comment 1** and **Comment 2**), you can open the next available field in the series by clicking one of the fields and then clicking the **Copy** button in the Supplemental Data window.

If a supplemental data field is marked with an asterisk (\*), that means it is a required field. You must enter a value for it before you close the Supplemental Data window.

When you are done viewing or editing supplemental data, you can close the Supplemental Data window.

You can move the Supplemental Data window as needed, by dragging the window by its title bar.

Supplemental data is saved automatically when you save the record in the main Banner window, or you can save while in the Supplemental Data Window.

### **Administrative setup for SDE**

Users can set up SDE.

Things to remember before you start your SDE setup:

- The page(s) where you want the data to be viewed/edited

- 
- The name(s) of the underlying table(s)
  - Whether you want the SDE fields to add to or replace baseline fields in views that use the data
  - Do you want to add a single SDE field or multiple fields? If multiple, how do you want to differentiate them?
  - What labels should end users see on the SDE window? What hint text will help your users enter data correctly?
  - Where else in the system do you want the SDE data to be visible? What views might you need to create to use the data? Do you want the SDE data to be available in Self-Service?

## Set up a Supplemental Data attribute

This is an overview of the setup process.

### Procedure

1. Enable the underlying table for SDE processing. Before you can create supplemental data for a Banner table, the table must be added in the GTVSDTB page.
2. Create discriminators, if necessary. If you want to add multiple, related supplemental data fields under a single SDE attribute, you must use a discriminator to differentiate the fields. You can use an existing discriminator, if a suitable one has been previously created. If not, you can set up a new discriminator in the Supplemental Data Discriminators (GOADISC) page.

There are different kinds of discriminators that give you different options. If you are creating a single SDE field, no discriminator is necessary, and you can skip this step.

3. Set up the attribute on the **Supplemental Data Attribute Definition (GOASDMD)** page. You must specify the field's data type and how it will appear to users.
4. Generate DDL and create a view if necessary. If you plan to use this SDE attribute in Banner Self-Service or in some other context that requires a view, you can generate DDL code for the view in GOASDMD.
5. Modify Self-Service if necessary. To make full use of supplemental data in Self-Service, custom modifications must be made in Banner Self-Service packages. This step should be undertaken by a programmer experienced with SQL.

## GOASDMD security

With Banner General provides security around the generation and application of views related to the Supplemental Data Engine (SDE) on the Supplemental Data Attributes Definition (GOASDMD) page.

Users can only generate and apply views if they are granted the new Banner security object `BAN_GOASDMD_DDL` and have a maintenance access (i.e., `BAN_DEFAULT_M`) to GOASDMD. A user with filter only access (i.e., `BAN_DEFAULT_Q`) will not be able to generate or apply views even if they are granted `BAN_GOASDMD_DDL`.

---

Typically, the GOASDMD page should only be granted to a small set of power users with a technical background. You can use the following SQL to find out the users that currently have access to GOASDMD:

```
SELECT guvuacc_user,  
g$_security.g$_get_username_name(guvuacc_user) "Name",  
guvuacc_role, guvuacc_type, guvuacc_class,  
guvuacc_group, guvuacc_rank  
FROM bansec.guvuacc  
WHERE guvuacc_object = 'GOASDMD'  
ORDER BY guvuacc_user, guvuacc_rank;
```

After you have identified the users and verified that they should have the ability to generate and apply the new SDE view, you should grant BAN\_GOASDMD\_DDL to this group. Because it should be a small number of users, granting this to them directly is recommended instead of through a CLASS or SECURITY GROUP.

**Note:** The granting of access to this object is done by your local Banner Security Administration using the Security Maintenance (GSASECR) page.

## Create delete triggers for Supplemental Data

The delete trigger script contains code that can be applied to the database table so that if a base record is removed, the associated supplemental data will also be removed.

### Procedure

1. Go to the **GOASDMD** page.
2. Select the **Generate DDL** section.
3. Select the **Delete Trigger Script** check box.
4. Click the **Generate DDL** button.

**Note:** The delete trigger script cannot be applied through the GOASDMD page. It must be manually copied and applied to the database by a DBA.

- The DBA clicks **Edit** with the cursor positioned in the **Generated DDL** field for the trigger script. A screen similar to the following will appear.



```

CREATE OR REPLACE TRIGGER ST_SPRIDEN_SDE_DELETE
AFTER DELETE
ON SPRIDEN
REFERENCING NEW AS NEW OLD AS OLD
FOR EACH ROW
BEGIN
IF deleting THEN
DELETE FROM gorsdav
WHERE gorsdav_table_name='SPRIDEN'
AND gorsdav_pk_parenttab=:OLD.SPRIDEN_CHANGE_IND||CHR(1)||:OLD.
SPRIDEN_FIRST_NAME||CHR(1)||:OLD.SPRIDEN_ID||CHR(1)||:OLD.
SPRIDEN_LAST_NAME||CHR(1)||:OLD.SPRIDEN_MI||CHR(1)||:OLD.
SPRIDEN_NTYP_CODE||CHR(1)||TO_CHAR(:OLD.SPRIDEN_PIDM);
END IF;
END;

```

The screenshot shows a window titled "Editor" with a scrollable text area containing the above SQL code. At the bottom of the window are three buttons: "OK", "Cancel", and "Search".

- The DBA copies this source to their local source library.
- Compile it and apply the trigger to the database as the correct owner.

## Results

The owner of the trigger should be the same as the owner of the table to which the trigger is being applied. If you try to apply a trigger by clicking the **apply ddl** button in the lower right hand corner of GOASDMD, a pop-up message will be displayed indicating that the trigger must be applied by a DBA.

The delete trigger will be named *applicationT\_<table>\_SDE\_DELETE* (i.e., GT\_GTVZIPC\_SDE\_DELETE). The delete trigger code will be generated as a standalone trigger and will not be merged with any other trigger.

## Supplemental Data Engine (SDE) data validation

The Supplemental Data Engine (SDE) enables the addition of user defined columns to the database and pages without requiring user maintained modifications to the system.

The ability to store, edit, view, report, and validate upon user defined data was an important addition to Banner.

You can specify value validation on the modified GOASDMD page, if desired, with several different methods:

- Simple low-high value checking

- 
- Validation against an existing code validation table
  - Validation using the same rules as used for GJAPCTL value validation
  - Validation using a SDE specific code validation table (values maintained on the new GTVSDLV page)
  - Validation using user defined SQL entered on GORRSQL

In cases where a code validation table is being used, an optional LOV button can be specified to appear on the SDE window for ease in the entering of the data.

In addition to the validation checking upon the entry of SDE data, a new script (`gchecksde.sql`) is being delivered to enable the validation of SDE data that already exists.

Due to the flexibility of the SDE validation rules, additional special security objects have been added to enable as much (or little) access to the setup. By default, access is denied to the validation rule setup.

### *Data setup on GOASDMD*

The LOV page (similar to List on GJAPDEF) indicates an existing LOV page which would pass back a specific value just as it does on GJAPCTL. If it is equal to GTQSDLV, then the SDE LOV table will be used.

**Note:** GTQSDLV is used to prevent direct navigation to the page (i.e., Q in the 3rd position).

The value entered here will dynamically execute the page indicated if the drop-down is selected upon data input and then pass back the selected value. There is no edit check (other than ensuring that it is a valid page name) on this field because it is really not known until execution time whether or not it is valid validation page.

If the value entered is GTQSDLV, then the **Table OVRD** and **Attr OVRD** fields can be entered if required. The GTQSDLV page is a generic validation page that uses the **Table Name** (from the key block) and the **Attribute Name** as a key. However, there may be cases where a generic validation is required (or even a validation set up associated with another table/attribute) and in those cases you could use a **Table OVRD** value of DEFAULT and an **Attr OVRD** reflecting the generic field validation.

**Note:** You can only use table/attribute overrides for columns that have a Data Type of VARCHAR2. If you need edits on NUMBER or DATE (other than the Low/High range), then you will have to use the GORRSQL process/rule.

If you are using GTQSDLV, then you can also override the standard Code and Description labels for the column titles on the LOV.

You can use the **Table OVRD** field to override the table name if you are using the GTQSDLV in the LOV page. The value of DEFAULT can be used to define generic validations. The **Attr OVRD** field can be used to override the attribute name if using the GTQSDLV in the LOV page.

**LOV Title Code** can be used as an override for Code for the title of the Value field on GTQSDLV. **LOV Title Desc** can be used as an override for Description for the title of the **Description** field on GTQSDLV.

**Low/High Ranges** (similar to Low/High on GJAPDEF) can be used for a range check. To do this:

- 
- The values entered must match the Data Type, including length / precision (if applicable).
  - If the field is a data type of DATE, then the value “t” may be used to represent today.

**Note:** You can enter any single, non-numeric character into the **Date** field and Banner will automatically convert it to today’s date. For example, if you enter *a* or *g* and go to the next field, Banner will enter today’s date as the default.

- You do not have to enter both fields, but if you do then the low value must be less than or equal to the high value.

**Validation GJAPDEF** (similar to the validation field on the GJAPDEF page) can be used for validation in the same way that GJAPCTL validates values. These routines are all hard coded and will work the exact way that they work on GJAPCTL. If a value of LOV\_VALIDATION is used, then the validation will validate the value against the xxx\_CODE column in the table with the same name as the LOV page.

**Note:** The validation will always fail, if the LOV table does not have an xxx\_CODE column defined.

If this validation is not adequate (i.e., the page and table names are different), then you can always use the GORRSQL Process/Rule).

**Note:** There is no validation until execution time.

You can use LOV page and Validation GJAPDEF independently of each other. In other words, you can use a LOV page to enable drop-down values to be entered, but then bypass actual validation of values (i.e., GTVZIPC). The reverse is also true; you can have validation, but no LOV for data value selection.

**GORRSQL Process/Rule** can be used for free page dynamic validation of values. The Process and Rule codes from GORRSQL indicate these rules.

- Several bind variables are available and will be substituted in the dynamic call if found.
  - *SDE\_VALUE* represents the value passed in from the SDE field
  - *SDE\_FORM\_OR\_PROCESS* represents the page name that the validation is being performed from
  - *SDE\_TABLE* represents the root table with which the SDE value is associated with
  - *SDE\_ATTRIBUTE* represents the attribute name that is being validated
  - *SDE\_PK* represents the primary key of the record with which the SDE value is associated with

**Note:** Within GORRSQL, *where* is a reserved word. Do not use this reserved word in a comment within the rule.

- To be considered a valid rule on GORRSQL, it must be active, validated, and the execution date must be between the start/end dates, and at least one of the 5 SDE\_xxx bind variables must be used.
- The result returned must be equal Y if the validation is successful. Otherwise, it is assumed that the return value is an error message.

- A user must have the special security object of SDE\_SQL\_VALIDATION set up on GSASECR to be able to update these fields on GOASDMD. See the Security Setup Requirements section for additional information.
- A user must have the special security object of 'SDE\_SQL\_TESTING' set up on GSSECR to be able to actually execute this procedure as part of the 'Test Data' process. No special security is needed to execute the procedure during normal LOV validation at SDE value data entry.

*Business Rule Builder* for information related to the building of business rules.

The following example shows how the statements can be coded in several different formats.

#### *Example*

The following example shows how the statements can be coded in several different formats.

### **GORRSQL setup using a SELECT with a list of values**

```
-- Using a SELECT statement with a predefined list of values.
NOTE: all SDE values are passed as character strings
-- Because the SELECT 'Y' only occurs if a match is found
and we want to display an error message as well, we will
-- use a DECODE with an outer SELECT COUNT(*) to either pass
back a 'Y' if the edit passed or an error message using
-- G$_NLS.Get if it did not
SELECT decode(count(*),0,G$_NLS.Get('x','x','*ERROR* Code
%01% not found in list of valid values',:SDE_VALUE) ,'Y')
FROM ( SELECT 'Y' FOUND_IT
FROM DUAL
WHERE :sde_value IN ('1','2'))
```

### **GORRSQL setup using a FUNCTION**

```
-- Use of a function that returns a 'Y' if a code exists in
the table, otherwise it returns an 'N'.
-- Because we want an error message returned, we use a DECODE
and the G$_NLS.Get to build an error message
SELECT decode(f_code_exists('GTVZIPC', :SDE_VALUE ),
'Y','Y',
G$_NLS.Get('x','x','*ERROR* Code %01% not found
in 'GTVZIPC',:SDE_VALUE))
FROM dual
```

### **GORRSQL setup using a SELECT against a table**

```
-- Using a SELECT statement with a check against a table.
NOTE: all SDE values are passed as character strings
-- Because the SELECT 'Y' only occurs if a match is found
and we also want to display an error message, we
-- will use a DECODE with an outer SELECT COUNT(*) to either
pass back a 'Y' if the edit passed or an error message
-- using G$_NLS.Get if it did not.
SELECT decode(count(*),0,G$_NLS.Get('x','x','*ERROR* Code
%01% not found in the GTVZIPC table',:SDE_VALUE) ,'Y')
FROM ( SELECT 'Y' FOUND_IT
FROM GTVZIPC
```

```
WHERE gtvzipc_code = :sde_value)
```

### GORRSQL setup using DATE checking

```
-- Using a SELECT statement to check for a valid fiscal year
-- in a specific chart of accounts.
-- NOTE: all SDE values are passed as character strings
-- Because the SELECT 'Y' only occurs if a match is found
-- and we want to display an error message as well, we will
-- use a DECODE with an outer SELECT COUNT(*) to either pass
-- back a 'Y' if the edit passed or an error message
-- using G$_NLS.Get if it did not
SELECT decode(count(*),0,G$_NLS.Get('x','x','*ERROR* Date
%01% not valid for COAS "W".',:SDE_VALUE) ,'Y')
FROM (SELECT *
FROM FTVFSYR
WHERE ftvfsyr_start_date <= to_date(:sde_value)
AND ftvfsyr_end_date >= to_date(:sde_value)
AND ftvfsyr_coas_code = 'W')
```

### GORRSQL Setup using multiple SELECTs and conditions for 'extra' error checking

In certain cases, you may have to create multiple rules. Each test will be validated in order until one fails and then the checking will stop.

#### Rule #1

```
-- Using a SELECT statement with a check against a table.
NOTE: all SDE values are passed as character strings
-- Because the SELECT 'Y' only occurs if a match is found
-- and we want to display an error message as well, we will
-- use a DECODE with an outer SELECT COUNT(*) to either pass
-- back a 'Y' if the edit passed or an error message using
-- G$_NLS.Get if it did not
SELECT decode(count(*),0,G$_NLS.Get('x','x','*ERROR* Code
%01% not found in the GTVZIPC table',:SDE_VALUE) ,'Y')
FROM ( SELECT 'Y' FOUND_IT
FROM GTVZIPC
WHERE gtvzipc_code = :sde_value)
```

#### Rule #2

```
NOTE: all SDE values are passed as character strings
-- Because the SELECT 'Y' only occurs if a match is found
-- and we want to display an error message as well, we
-- will use a DECODE with an outer SELECT COUNT(*) to either
-- pass back a 'Y' if the edit passed or an error message
-- using G$_NLS.Get if it did not
SELECT decode(count(*),0,G$_NLS.Get('x','x','*ERROR* Code
%01% found in the GTVZIPC table but the STATE was
NULL',:SDE_VALUE) ,'Y')
FROM ( SELECT 'Y' FOUND_IT
FROM GTVZIPC
WHERE gtvzipc_code = :sde_value
AND gtvzipc_stat_code is not NULL)
```

## *Test of the data validation rules*

The **Test Data** option displays a pop-up where the user can test out the validation routines that have been saved without having to actually go to a page and enter SDE data.

To ensure security for testing, a user must have special security objects enabled. See Security Setup Requirements section below for additional information. If security is not granted, and a LOV or SQL process exists, the user will be denied access and an error will be generated when attempting to validate. No special security objects are required for standard SDE data validation from an application data entry page or batch process.

## *Confirmation of data validation rules for existing data*

A new standalone validation routine (`gchksde.sql`) will verify existing SDE data that was entered before the rules were put into place. The process should be run, preferably, after the orphan purge (GUSMDID) process.

The `gchksde` accepts a table name (wild cards available), a maximum number of records to validate, and a maximum number of errors to locate. It will then display any SDE Data values that do not pass the validation processing which will then have to be corrected manually.

```
Processing SDE validation for GORSDAV entries for table %
...Output format is <table>:<attribute> <SDE Primary key>
[<SDE value> <error message>
GORCMSC:SDE_ATT_24 key=103345 [test2] *ERROR* Invalid date
value or format. Entry format is MDY.
GTVCURR:NEWTTEST key=ACT / 20030101000000 / 20991231000000
[111] *Error* Invalid Number. Expected format: D9999
GTVZIPC:TEST_DATE key=00LES / Test for SDE Validation [01-
JAN-10] *ERROR* Date 01-JAN-2010 not valid for COAS "W".
GTVZIPC:TEST_NUM_4_5 key=00LES / Test for SDE Validation
[125] *ERROR* Code 125 not found in the GTVZIPC table
GURSRVQ:NEWONE key=CMS TEST2 / 1 [cms test2] *Error* Value
too long, maximum length is 3
GURSRVQ:SDE_ATT_163 key=SDE TEST / 1
[12345678901234567892123] *Error* Value too long, maximum
length is 2
Processed 2533 entries and found 74 errors (with a maximum of
9999 rows)
```

## *Security setup requirements*

Typically, page level security is used to control which users are able to update an LOV page. However, with the generic LOV page used for SDE validation, it is not possible that FGAC could always be used and can be complicated for this purpose.

The solution was the use of special security objects in the page of `SDE_LOV_<table name>` (assumes all table names are less than 23 characters in length).

Because of the nature of the values that can be seen during a testing process of the LOV's or GORRSQL validations, the user must have the special security access for any of the following:

- \* SDE\_SQL\_TESTING - Allows the 'Test Data' process to test any GJAPDEF or GORRSQL
 

**Note:** If a user has SDE\_SQL\_VALIDATION to allow maintenance of the GORRSQL fields then they can also test.
- \* SDE\_LOV\_<table> - Allows the user to modify data on GTVSDLV for the specified table
  - The table may be DEFAULT to modify the generic tables if applicable
  - The table may be ALL to indicate they can update any table on GTVSDLV. For example, SDE\_LOV\_ALL, SDE\_LOV\_SPRIDEN, SDE\_LOV\_DEFAULT

**Note:** Because the users y can modify the LOVs, they can also test them.
- \* SDE\_TEST\_<table> - Allows the user to test LOVs for the specified table with the 'Test Data' button
  - The table may be DEFAULT to test the generic tables if applicable
  - The table may be ALL to indicate they can test any table on GTVSDLV. For example, SDE\_TEST\_ALL, SDE\_TEST\_SPRIDEN, SDE\_TEST\_DEFAULT

**Note:** In order to allow everyone to update and test all fields of GOASDMD, you should create SDE\_SQL\_VALIDATION and SDE\_LOV\_ALL and assign them to the BAN\_GENERAL\_C class. Needless to say security can be set up as fine grained as needed (i.e., by table, class, or user). This assumes that the user already has update access to GOASDMD.

The description, [1-100] on the GTVSDLV page, indicates the minimum and maximum length of this attribute in all of the places that it is used. Typically, they should be the same and if so, only one value will be displayed. The code will be validated against the maximum length.

### *Batch loading of SDE data*

In order to mass load values into SDE fields, you only need to call a few API routines assuming the SDE columns have already been defined.

#### *Mass load SDE data*

You can mass load SDE data into SDE fields.

#### **Procedure**

1. Get the rowid of the parent record that you want to update.
2. Get the SDE primary key based upon the rowid from #1.
3. Validate the value you are entering by calling `gp_goksdif.f_validate_value`.

**Note:** This is only available with General 8.4.

4. Insert the value that you are adding by calling `gp_goksdif.p_set_attribute`.
5. Save your changes.
6. Retrieve your new values using the `<table_name>_ADD` view.

## Results

- This script is an example of how to mass load SDE values
- In this test case the lv\_value is a ethnic code in the Cn range
- and we are going to load an SDE element related to the spriden record
- named 'MASS\_LOAD'

```

DECLARE
lv_pidm spriden.spriden_pidm%TYPE;
lv_value spbpers.spbpers_ethn_code%TYPE;
lv_disc GORSDAV.GORSDAV_DISC%TYPE := '1';
lv_date VARCHAR2(20);
lv_rowid VARCHAR2(18);
lv_pk GORSDAV.GORSDAV_PK_PARENTTAB%TYPE;
lv_msg VARCHAR2(2000);
CURSOR c1 IS
SELECT spbpers_pidm, spbpers_ethn_code
FROM spbpers
WHERE spbpers_ethn_code IN ('C2','C3','C4');
CURSOR c2 IS
SELECT ROWID
FROM spriden
WHERE spriden_pidm = lv_pidm
AND spriden_change_ind IS NULL;
BEGIN
OPEN c1;
<<START_LOAD>>
LOOP
-- Get the pidm and value that we are going to update
-- This data could be retrieved / computed from any location.
FETCH c1 INTO lv_pidm, lv_value;
EXIT WHEN c1%NOTFOUND;
OPEN c2;
-- We need to find the root record with which the SDE data will be
associated.
-- We need the ROWID so that we can determine the SDE primary root key
FETCH c2 INTO lv_rowid;
CLOSE c2;
-- In order to load into SDE, the primary key of the root table must be
-- determined. This can be retrieved when the root table ROWID is
known.
lv_pk := gp_goksdif.f_get_pk('SPRIDEN',lv_rowid);
dbms_output.put_line('Loading ' || lv_value || ' into '
|| lv_pk);
-- We can optionally validate the data being loaded. Whether or not
validation
-- rules have been defined or not, the validation routines can be
called.
-- The result of the validation is either 'Y' indicating a successful
validation
-- or an error message returned from the validation.
-- Make sure to set row id to NULL to enforce insert
lv_msg := gp_goksdif.f_validate_value(p_table_name =>
'SPRIDEN'
,p_attr_name =>
'MASS_LOAD'

```

```

,p_disc =>
lv_disc
,p_pk_parenttab =>
lv_pk
,p_form_or_process=>
'Mass load'
,p_attr_data_type =>
'VARCHAR2'
,p_value_as_char =>
lv_value
);
IF lv_msg != 'Y' THEN
dbms_output.put_line(lv_msg);
GOTO start_load;
END IF;
lv_date := to_char(SYSDATE);
lv_msg := gp_goksdif.f_validate_value(p_table_name => 'SPRIDEN'
,p_attr_name =>
'MASS_LOAD_DATE'
,p_disc =>
lv_disc
,p_pk_parenttab =>
lv_pk
,p_form_or_process=>
'Mass load'
,p_attr_data_type =>
'DATE'
,p_value_as_char =>
lv_date
);
IF lv_msg != 'Y' THEN
dbms_output.put_line(lv_msg);
GOTO start_load;
END IF;
-- Validation has passed, now update the values
-- make sure to set row id to NULL to enforce insert
lv_rowid := NULL;
gp_goksdif.p_set_attribute(p_table_name => 'SPRIDEN'
,p_attr_name => 'MASS_LOAD'
,p_disc => lv_disc
,p_pk_parenttab => lv_pk
,p_gorsdav_rowid => lv_rowid
,p_attr_data_type => 'VARCHAR2'
,p_value_as_char => lv_value
);
lv_rowid := NULL;
gp_goksdif.p_set_attribute(p_table_name => 'SPRIDEN'
,p_attr_name =>
'MASS_LOAD_DATE'
,p_disc => lv_disc
,p_pk_parenttab => lv_pk
,p_gorsdav_rowid => lv_rowid
,p_attr_data_type => 'DATE'
,p_value_as_char => lv_date
);
COMMIT;
END LOOP;
CLOSE c1;
dbms_output.put_line('SDE MASS load process completed');

```

---

```
EXCEPTION
WHEN OTHERS THEN
lv_msg := SQLERRM;
dbms_output.put_line('Error loading ' || lv_value || ' for
' || lv_pk || '-' || lv_msg);
END;
Loading C2 into ?ID 4?A00037105?Race Ethnicity???66073
Loading C2 into ?ID 6?A00037108?Race Ethnicity???66076
Loading C3 into ?ID 11?A00037109?Race Ethnicity???66077
Loading C4 into ?ID 7?A00037110?Race Ethnicity???66078
*Error* Value C4 not found in validation table SPRIDEN.
Loading C3 into ?ID 9?A00037112_Race Ethnicity???66080
```

SDE MASS load process completed.

You can view the loaded data using the SDE view of <table>\_ADD.

## Use of Supplemental Data in Self-Service

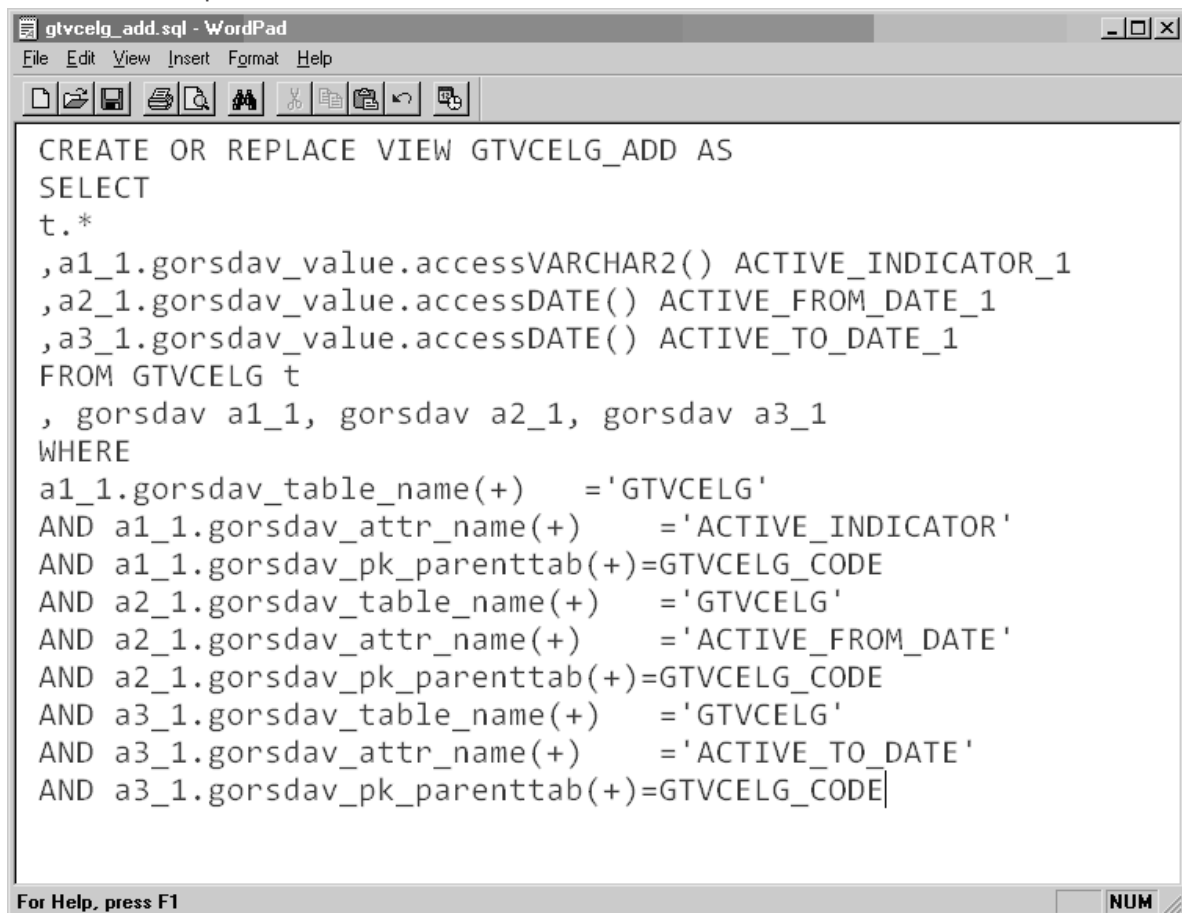
Supplemental data can be used in Banner Self-Service with a limited amount of custom programming. Note that if you modify a Self-Service package to incorporate SDE Views on a Self-Service page, the page is then considered modified and is not longer supported by the Action Line.

### Setup of SDE attributes

SDE attributes have been created for table GTVCELG to add three SDE fields: an **Active Indicator**, a **From Date**, and a **To Date**.

### DDL generation

In the Generate DDL section of GOASDMD, **DDL Type** is set to `Additional Attributes View`, and the **Generate** (hourglass) button is clicked. A script is generated. The script is copied from GOASDMD and pasted into the text editor window shown below.



```

CREATE OR REPLACE VIEW GTVCELG_ADD AS
SELECT
t.*
,a1_1.gorsdav_value.accessVARCHAR2() ACTIVE_INDICATOR_1
,a2_1.gorsdav_value.accessDATE() ACTIVE_FROM_DATE_1
,a3_1.gorsdav_value.accessDATE() ACTIVE_TO_DATE_1
FROM GTVCELG t
, gorsdav a1_1, gorsdav a2_1, gorsdav a3_1
WHERE
a1_1.gorsdav_table_name(+)   ='GTVCELG'
AND a1_1.gorsdav_attr_name(+)   ='ACTIVE_INDICATOR'
AND a1_1.gorsdav_pk_parenttab(+) =GTVCELG_CODE
AND a2_1.gorsdav_table_name(+)   ='GTVCELG'
AND a2_1.gorsdav_attr_name(+)   ='ACTIVE_FROM_DATE'
AND a2_1.gorsdav_pk_parenttab(+) =GTVCELG_CODE
AND a3_1.gorsdav_table_name(+)   ='GTVCELG'
AND a3_1.gorsdav_attr_name(+)   ='ACTIVE_TO_DATE'
AND a3_1.gorsdav_pk_parenttab(+) =GTVCELG_CODE

```

For Help, press F1 NUM

## View generation

The **Apply** button is clicked, and the view shown below is created in the database.

The screenshot shows a WordPad window titled 'gtvcelg\_add.desc - WordPad'. The text inside the window is as follows:

```

10:09:53 SQL> desc gtvcelg_add
Name                               Null?   Type
-----
GTVCELG_CODE                       NOT NULL VARCHAR2(6 CHAR)
GTVCELG_DESC                       NOT NULL VARCHAR2(30 CHAR)
GTVCELG_USER_ID                   NOT NULL VARCHAR2(30 CHAR)
GTVCELG_ACTIVITY_DATE             NOT NULL DATE
ACTIVE_INDICATOR_1                VARCHAR2(4000 CHAR)
ACTIVE_FROM_DATE_1                DATE
ACTIVE_TO_DATE_1                  DATE

10:10:00 SQL> select * from gtvcelg_add
10:10:05      2
10:10:07 SQL> /

GTVCEL  GTVCELG_DESC                               GTVCELG_USER_ID          GTVCELG_A
-----
ACTIVE_INDICATOR_1
-----
ACTIVE_FR ACTIVE_TO
-----
I-20    I-20 Information                          GENERAL                  01-OCT-02
Y
01-JAN-00 31-DEC-10

I-94    I-94 Data                                        GENERAL                  01-OCT-02

IAP-66  International Information                    GENERAL                  01-OCT-02

WWWWWWW WWWWWW___09876543211234567890 GSHALOVK          15-JUN-04

```

At the bottom of the window, there is a status bar that says "For Help, press F1" and a "NUM" indicator.

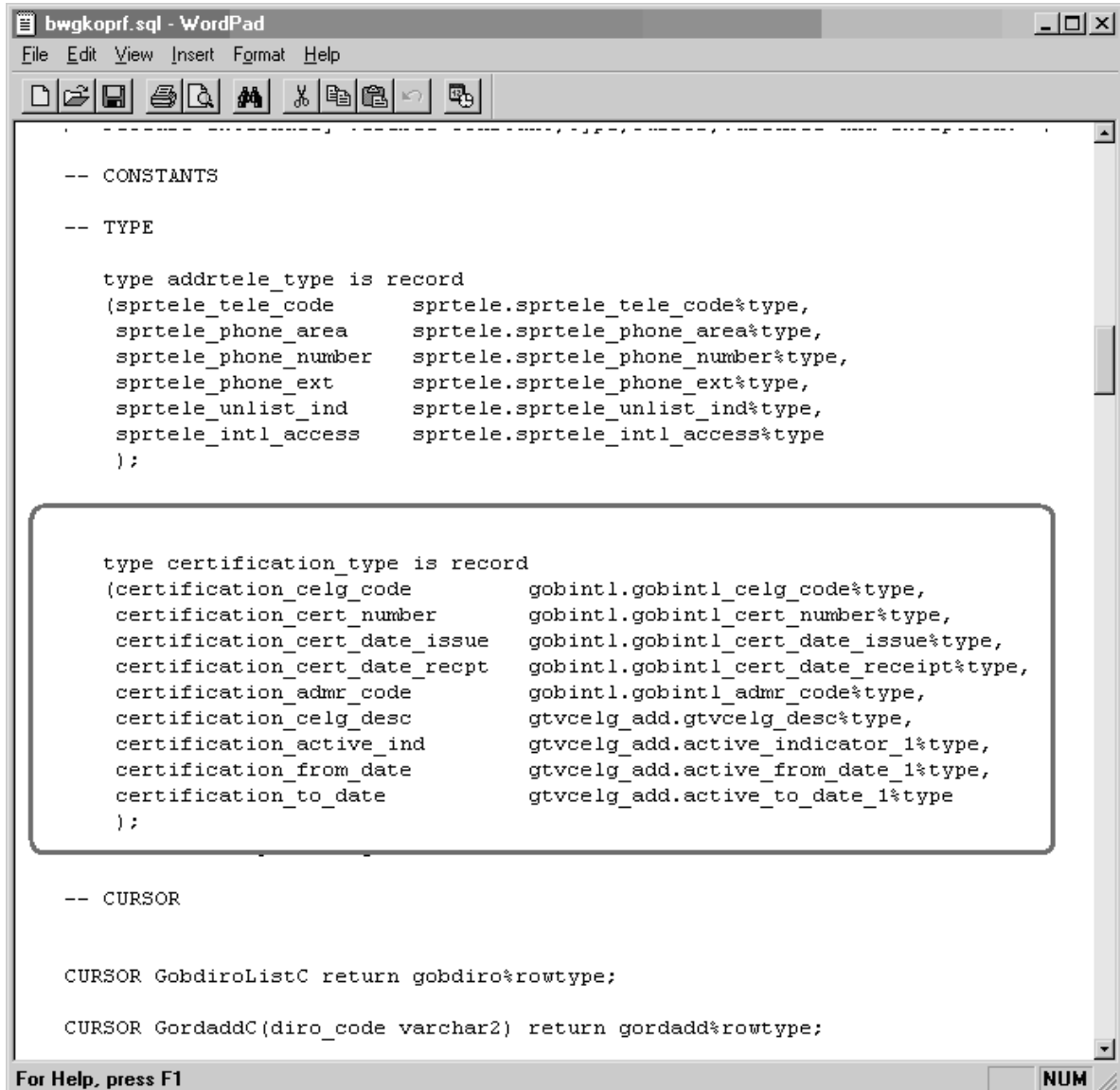
## Backup copy of packages

Before making any changes to a Self-Service package, save a copy of the baseline version of the package.

For example, a copy of the Self-Service package header `bwgkopr1.sql` is saved as `bwgkopr1_baseline.sql`, and a copy of package body `bwgkopr1.sql` is saved as `bwgkopr1_baseline.sql`.

## Modification of the record type in the Self-Service package

The code from the view is inserted into the Self-Service package header `bwgkoprf.sql`. First, the record type is modified to include new columns from the view.



```

-- CONSTANTS

-- TYPE

type addrtele_type is record
(sprtele_tele_code      sprtele.sprtele_tele_code%type,
 sprtele_phone_area    sprtele.sprtele_phone_area%type,
 sprtele_phone_number  sprtele.sprtele_phone_number%type,
 sprtele_phone_ext     sprtele.sprtele_phone_ext%type,
 sprtele_unlist_ind    sprtele.sprtele_unlist_ind%type,
 sprtele_intl_access   sprtele.sprtele_intl_access%type
);

type certification_type is record
(certification_celg_code      gobintl.gobintl_celg_code%type,
 certification_cert_number   gobintl.gobintl_cert_number%type,
 certification_cert_date_issue gobintl.gobintl_cert_date_issue%type,
 certification_cert_date_recpt gobintl.gobintl_cert_date_receipt%type,
 certification_admr_code     gobintl.gobintl_admr_code%type,
 certification_celg_desc     gtvcelg_add.gtvcelg_desc%type,
 certification_active_ind    gtvcelg_add.active_indicator_1%type,
 certification_from_date     gtvcelg_add.active_from_date_1%type,
 certification_to_date       gtvcelg_add.active_to_date_1%type
);

-- CURSOR

CURSOR GobdiroListC return gobdiro%rowtype;

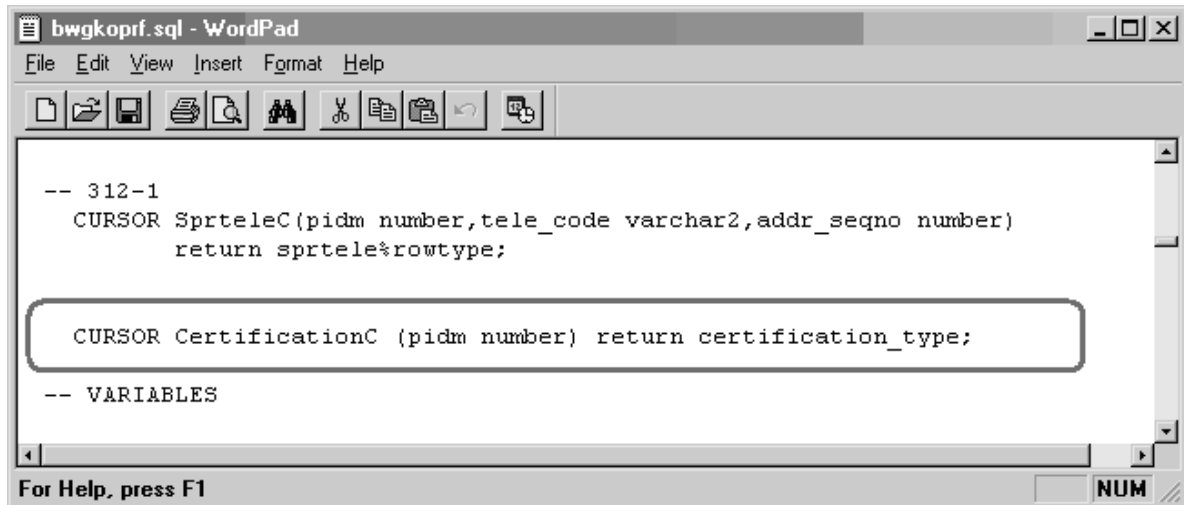
CURSOR GordaddC(diro_code varchar2) return gordadd%rowtype;

```

For Help, press F1

### *Addition of cursor type*

A cursor type for the new columns is added.



The screenshot shows a WordPad window titled "bwgkoprf.sql - WordPad". The menu bar includes File, Edit, View, Insert, Format, and Help. The toolbar contains icons for file operations and editing. The main text area contains the following SQL code:

```
-- 312-1
  CURSOR SprteleC(pidm number,tele_code varchar2,addr_seqno number)
    return sprtele%rowtype;

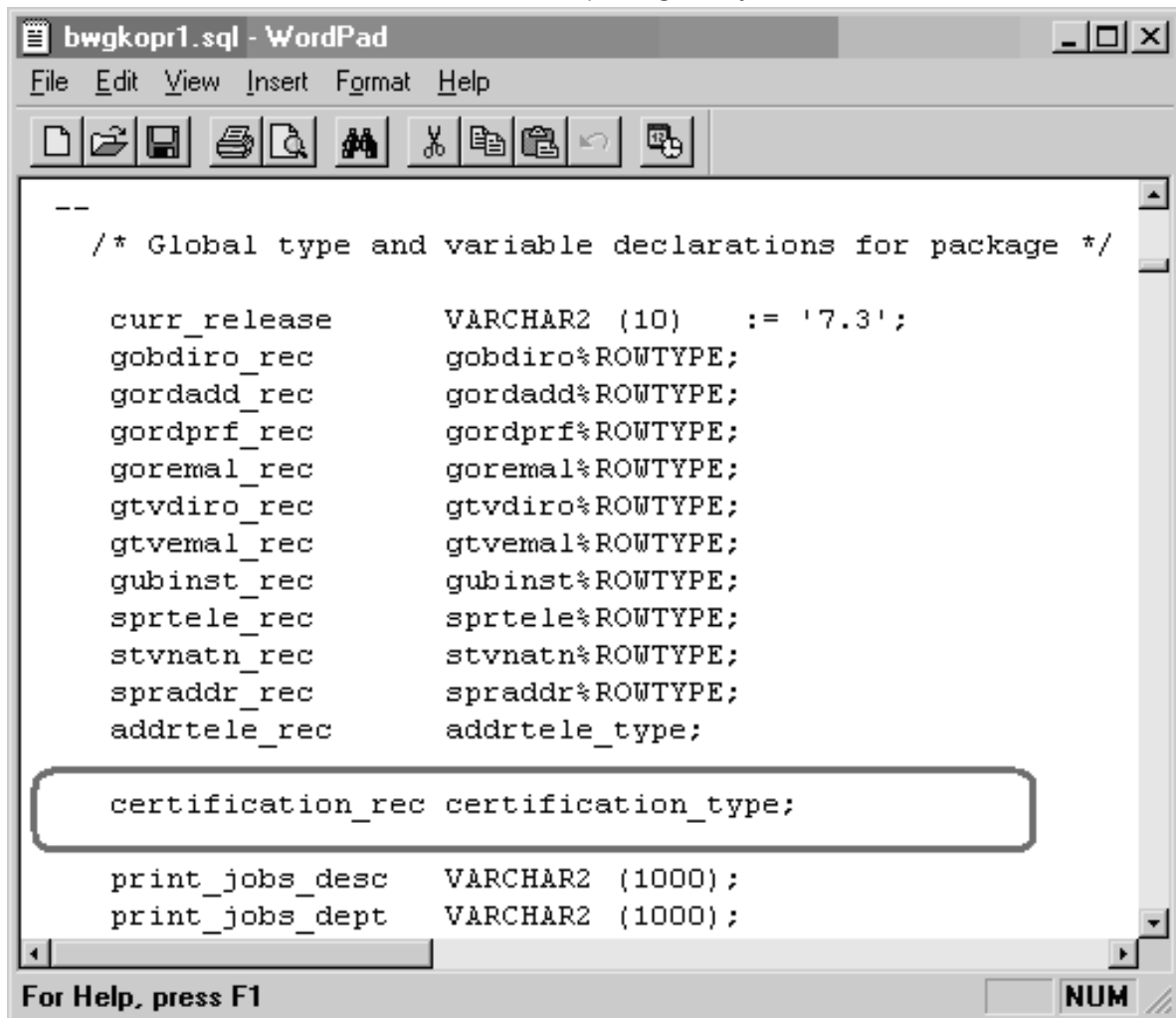
  CURSOR CertificationC (pidm number) return certification_type;

-- VARIABLES
```

The status bar at the bottom left says "For Help, press F1" and the bottom right shows a "NUM" indicator.

### Addition of record reference

Addition of a record reference in the Self-Service package body, `bwgkoprl.sql`.



```
--  
  /* Global type and variable declarations for package */  
  
  curr_release          VARCHAR2 (10)    := '7.3';  
  gobdiro_rec          gobdiro%ROWTYPE;  
  gordadd_rec          gordadd%ROWTYPE;  
  gordprf_rec          gordprf%ROWTYPE;  
  goremal_rec          goremal%ROWTYPE;  
  gtvdiro_rec          gtvdiro%ROWTYPE;  
  gtvemal_rec          gtvemal%ROWTYPE;  
  gubinst_rec          gubinst%ROWTYPE;  
  sprtele_rec          sprtele%ROWTYPE;  
  stvnatn_rec          stvnatn%ROWTYPE;  
  spraddr_rec          spraddr%ROWTYPE;  
  addrtele_rec         addrtele_type;  
  
  certification_rec    certification_type;  
  
  print_jobs_desc      VARCHAR2 (1000);  
  print_jobs_dept      VARCHAR2 (1000);
```

## Addition of cursor body

In the Self-Service package body, the cursor body is added.

The screenshot shows a WordPad window titled 'bwgkopr1.sql - WordPad'. The window contains the following SQL code:

```
-- 312-1
CURSOR sprtelec (pidm NUMBER, tele_code VARCHAR2, addr_seqno NUMBER) RETURN
IS
SELECT *
  FROM sprtele
 WHERE sprtele_addr_seqno = addr_seqno
   AND sprtele_status_ind IS NULL
   AND sprtele_tele_code = tele_code
   AND sprtele_pidm = pidm
 ORDER BY DECODE (NVL (sprtele_primary_ind, 'N'), 'Y', 1, 2),
                sprtele_seqno;

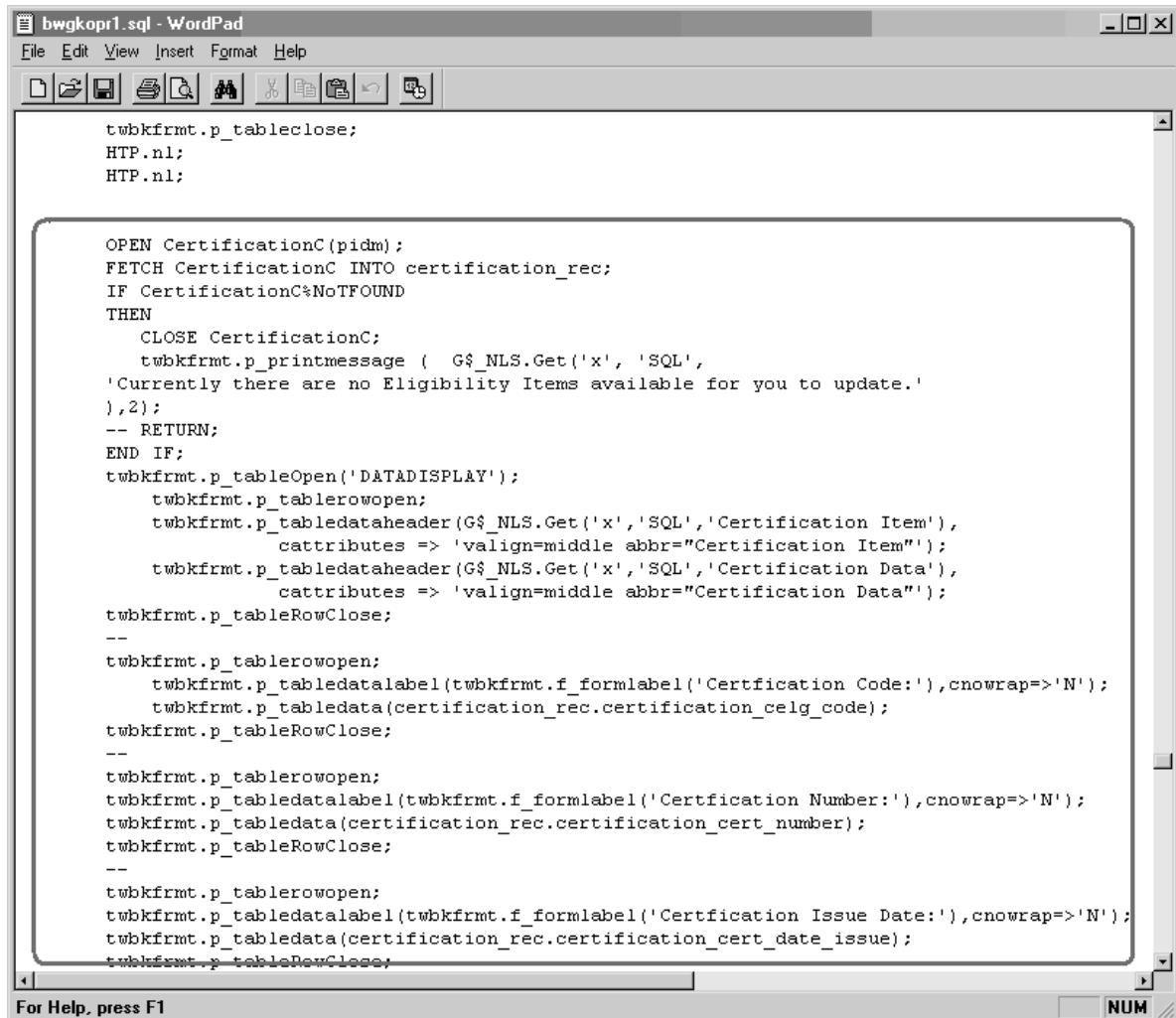
CURSOR CertificationC (pidm NUMBER) RETURN certification_type
IS
SELECT gobintl_celg_code,
       gobintl_cert_number,
       gobintl_cert_date_issue,
       gobintl_cert_date_receipt,
       gobintl_admr_code,
       A.gtvcelg_desc,
       A.active_indicator_1,
       A.active_from_date_1,
       A.active_to_date_1
  FROM gtvcelg_add A, gobintl
 WHERE A.gtvcelg_code = gobintl_celg_code
   AND gobintl_pidm = pidm ;

-----
FUNCTION f_check_class_yr (pidm NUMBER, diro_code VARCHAR2)
RETURN BOOLEAN
```

The window also shows a status bar at the bottom with the text 'For Help, press F1' and a 'NUM' indicator.

## Addition of cursor open and fetch

The cursor open and fetch is added, along with data display statements.



```

twbkfrmt.p_tableclose;
HTP.nl;
HTP.nl;

OPEN CertificationC(pidm);
FETCH CertificationC INTO certification_rec;
IF CertificationC%NOTFOUND
THEN
  CLOSE CertificationC;
  twbkfrmt.p_printmessage ( G$_NLS.Get('x', 'SQL',
'Currently there are no Eligibility Items available for you to update.'
),2);
-- RETURN;
END IF;
twbkfrmt.p_tableOpen('DATADISPLAY');
twbkfrmt.p_tablerowopen;
twbkfrmt.p_tabledataheader(G$_NLS.Get('x', 'SQL', 'Certification Item'),
  cattributes => ' valign=middle abbr="Certification Item" ');
twbkfrmt.p_tabledataheader(G$_NLS.Get('x', 'SQL', 'Certification Data'),
  cattributes => ' valign=middle abbr="Certification Data" ');
twbkfrmt.p_tableRowClose;
--
twbkfrmt.p_tablerowopen;
twbkfrmt.p_tabledatalabel(twbkfrmt.f_formlabel('Certification Code:'),cnowrap=>'N');
twbkfrmt.p_tabledata(certification_rec.certification_celg_code);
twbkfrmt.p_tableRowClose;
--
twbkfrmt.p_tablerowopen;
twbkfrmt.p_tabledatalabel(twbkfrmt.f_formlabel('Certification Number:'),cnowrap=>'N');
twbkfrmt.p_tabledata(certification_rec.certification_cert_number);
twbkfrmt.p_tableRowClose;
--
twbkfrmt.p_tablerowopen;
twbkfrmt.p_tabledatalabel(twbkfrmt.f_formlabel('Certification Issue Date:'),cnowrap=>'N');
twbkfrmt.p_tabledata(certification_rec.certification_cert_date_issue);
twbkfrmt.p_tableRowClose;

```

For Help, press F1 NUM

## Rebuilding of the modified packages

The modified packages are rebuilt by running bwgkopr.f.sql and bwgkopr1.sql.

The resulting new section can be seen on the existing Directory Profile page, which is displayed by the BWGKOPRF package.

Directory Profile - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Print

Address

judyjets\_em@hotmail.com  
Home Email -  
justjudy@hotmail.com

**Maiden Name :** Not Reported

**Home Address :** 123 Permanent Palisade   
456 Permanent Parkway  
789 Permanent Promenade  
Permian Basin, TX 56789  
United States of America

**Home Telephone :** 123 1234567

**Business Address :** Not Reported

**Business Telephone :** Not Reported

**Class Year :** 2005

**Preferred College :** University of Toronto

Certification Item	Certification Data
<b>Certification Code:</b>	I-20
<b>Certification Number:</b>	01-234-5678
<b>Certification Issue Date:</b>	01-OCT-07
<b>Certification Receipt Date:</b>	02-OCT-07
<b>Admission Code:</b>	CLT1
<b>Active From Date:</b>	01-JAN-00
<b>Active To Date:</b>	31-DEC-10
<b>Active:</b>	Y

Submit Changes Reset

## Reports & Processes

This information describes the various reports and processes in the generation™ General System with descriptions, list of parameters, and values.

### Related concepts

[Related report](#) on page 38

[Related processes](#) on page 61

[Related processes and report](#) on page 77

## Purge Report Output (GJPJLIS) process

This process allows you to purge saved report output from the Job Submission server.

Parameter Name	Required?	Description	Values
Override storage days	N	<p>If an override storage day is entered, all options consider the number age of file compared to the override. For example, a GJRJLIS row and file are two years old with Delete After Days equals to 4 days. The override days is set to 360 days or one year. The GJRJLIS example row will be selected and purged because it is over one year old.</p> <p>Particular caution should be exercised when the override storage day is set to 0. No jobs should be running at the time the purge is run, otherwise the output for the jobs in progress will be removed before being viewed by the user.</p>	<p>0-999</p> <p><b>Note:</b> Null/blank is the default value. You can leave it blank and it will use the Delete date in the GJAJLIS table.</p>
Purge output files	N	Delete records from GJAJLIS and their files from the Job Submission server. Defaults to N if no value is provided.	<ul style="list-style-type: none"> <li>Y = Purge rows on GJAJLIS along with the file uploaded to create the record</li> <li>N = Do not purge files and rows on GJAJLIS</li> </ul>

Parameter Name	Required?	Description	Values
Purge all log files	N	Delete GJIREVO records from the GUBOUTP and GUROUTP tables along with their files from the Job Submission server. Defaults to N if no value is provided.	<ul style="list-style-type: none"> <li>Y = Purge all files with log suffix and purge corresponding GJIREVO</li> <li>N = Do not purge</li> </ul>
Purge uploaded files	N	Delete records from GJAJFLU and their files from the Job Submission server. Defaults to N if no value is provided.	<ul style="list-style-type: none"> <li>Y = Purge rows on GJAJFLU along with file on the Job Submission Server</li> <li>N = Do not purge GJAJFLU files and rows</li> </ul>
File name filter	N	If a value is entered in the Filter (param 5), only files like that file name are selected. The filter is case sensitive and applies to all options including listing files in the report.	File name substring. For example, gjr would find files gjrrrpts_1234.lis, gjrrrpts_1234.log, gjrjllis_1234.log.
List all server files	N	Users can optionally list all files on the server. Files are sorted in alphabetical order. The report displays the size and timestamp on the file.	<ul style="list-style-type: none"> <li>Y = List all the files</li> <li>N = Do not list the files</li> </ul>
Run mode	N	If a user runs the process with run mode value U, files will be purged. If the option A is chosen, the files are listed, but not removed from the table and file server. Defaults to A if no value provided.	<ul style="list-style-type: none"> <li>A = Run in audit mode</li> <li>U = Run in update mode</li> </ul>

This process is delivered in the BAN\_ADMIN\_C Banner security class. The system administrator schedules the GJPJLIS process nightly or on regular basis. This process always purges files from the Job Submission server, GJRJLIS, GJRJFLU, GUROUTP, and GUBOUTP based on the input parameters.

GJRJLIS rows and files are purged if the parameter Purge output files is Y.

- Output report file (.lis) has entry in GJRJLIS with Print Date, and the Delete After Date on the GJRJLIS row is less than the current date. The GJRJLIS row and the physical file on the Job Submission server are deleted.

- Output report file (.lis) has entry in GJRJLIS without Print Date, the printer is null, and the Delete After Date on the GJRJLIS row is less than the current date. The GJRJLIS row and the physical file on the Job Submission server are deleted.
- Output report file (.lis) does not have entry in GJRJLIS, but the entry for the job on GJRJBMO exists and is active. The physical file on the Job Submission server is deleted.

If the parameter to Purge uploaded files is Y, any file that has entry in GJRJFLU and the delete after date is less than the current date. The GJRJFLU entry and the physical file are removed.

GUROUTP and GUBOUTP are deleted when the parameter Purge log files is Y.

The parameter to Purge all log files is Y, log files older than 14 days are deleted from GUROUTP, GUBOUTP and the Job Submission server. These are the files created by GURINSO and viewable on GJIREVO. Purge the data in these tables if the file name has .log as suffix.

## Data Privacy Extract (GJRDPEX) process

The Data Privacy Extract (GJRDPEX) job submission process provides institutions the ability to locate and extract all of the Banner data for one or more individuals from the Banner database (baseline and localized products) for a given ID or Population Selection.

This process supports the data privacy regulations, such as the "Right to Know" and "Right to Access" elements of the General Data Protection Regulation (GDPR).

The GJRDPEX process writes all extracted data for each ID to a CSV file and generates a unique password. It then compresses the CSV into a ZIP file, protected with the password, and emails the unique password to the preferred email address for that ID on record. If extracting data for multiple IDs, using a Population Selection is more efficient than running the extract for each ID individually. When using a Population Selection, the process generates a unique and encrypted password for each CSV file, unique to each ID. The generated encrypted password is valid to open only the output file associated with the data extract for a particular ID. If the generated password is lost or the extract needs to run again for the same ID, the process generates a new unique and encrypted password and email for the new output file created.

The output ZIP file is available to download from the Saved JobSub Reports (GJAJLIS) page if you have GJRDPEX enabled on the JobSub Output Definition (GJAJBMO) page.

The GJVDPEX view contains all tables within the database that contain a column ending with PIDM in the column name (*TABLE\_PIDM*) and the Datatype = NUMERIC, across all schemas, to identify a person.

Ellucian delivers GJRDPEX in the BAN\_GENERAL\_C security class with the BAN\_DEFAULT\_M role assigned.

**Table 5: Job Submission parameters**

Parameter Name	Required?	Description	Values
ID	Y*	ID of the person for whom to extract the data.	
Application Code	Y**	Application code of the Population Selection.	Value from the Application Inquiry (GLIAPPL) page.

Parameter Name	Required?	Description	Values
Selection Identifier	Y**	Selection ID of the Population Selection.	Value from the Population Selection Inquiry (GLISLCT) page.
Creator ID	Y**	Creator ID of the Population Selection.	
User ID	Y**	ID of the person who performed the population selection.	
Override Preferred GOAEMAL?	Y	Allows for sending the email containing the generated password to an alternate email. The process uses the override email address identified on the Banner Applications Configurations (GUACONF) page when the ID's preferred email is missing or an email sending failure to the preferred email occurs.	Y = override (use GUACONF), N = use GOAEMAL Default value is N.
Filter columns	N	Filter out metadata columns such as PIDM and SURROGATE_ID.	Y or N A value set to Y excludes PIDM and SURROGATE_ID columns from the data export. Default value is N.

\* Required if running process for a User ID.

\*\* Required if running process for a Population Selection.

### Alternate GJRDPEX email configurations

The Data Privacy Extract (GJRDPEX) process uses the override email address when either the ID's preferred email is missing or an email sending failure to the preferred email occurs.

You can define the four configuration entries for the BAN\_GEN Application ID on the Configurations tab of the Banner Applications Configurations (GUACONF) page.

**Note:** You must customize the values where noted in the table below with the appropriate text to display for your institution. If you do not customize these values, the message and sender fields display the delivered seed data value *UPDATE\_ME* instead of the institution's information.

When the process runs, it generates the following error in the `.LOG` file if the `dpex.email.recipient` and `dpex.email.sender` values are empty.

dpex.email.sender No valid sender email address provided, see GUACONF for application ID BAN\_GEN  
 dpex.email.recipient No valid recipient email address provided, see GUACONF for application ID BAN\_GEN

Configuration Name	Configuration Type	Configuration Value
dpex.email.message	string	HTML email message with substitution parameters. Customize this for your institution.
dpex.email.recipient	string	Email address to Override Preferred (06). You can specify multiple emails by using a comma (,) to separate.
dpex.email.sender	string	From email address. Customize this for your institution.
dpex.email.subject	string	Email subject.

The following email substitution parameters are available:

Key	Substitution
<<RECIPIENT_NAME>>	Name of person associated with ID
<<ID>>	Person ID
<<OTP>>	The One-Time Password value.

## Import File JobSub Server (GJRJFLU) process

This process is executed from the Import File to JobSub Server (GJAJFLU) page after the user has selected and saved a file. This process imports the file stored as a BLOB in the GJRJFLU table to the Job Submission server.

The process can be run from Job Submission with the following GJRJFLU key columns.

Parameter Name	Required?	Description	Values
Job Name	Y	Name of the job to be submitted.	Job name from GJAJFLU.
File Name	Y	Name of the file.	Name of the file uploaded to GJAJFLU.
One Up Number	Y	Displays the next available number for Job Submission.	One up number from GJAJFLU.

Parameter Name	Required?	Description	Values
JobSub Server File Name	Y	Name of the file as saved in the Job Submission server.	The file name can be different from the name specified on the GJAJFLU record. The file will be written with the new name.

The process displays a warning if the file name already exists for a file. The process has no option to know which user ID submitted the job to write the file because the GJRJFLU record may have been removed. The process is submitted automatically when the user saves the imported files on GJAJFLU. If the file needs to be imported to the Job Submission server for a second time, the user can submit the GJRJFLU process from GJAPCTL.

Files are imported into the user's preference directory defined on the **Job Submission Profile Maintenance (GJAJPRF)** page for Job Submission directory. Both the .lis and .log file for GJRJFLU are written to the **Saved Output Review (GJIREVO)** page. After the file is saved on GJAJFLU, the user can navigate to GJIREVO using the option in the related list.

The process notifies users if the file they import to the Job Submission server is written or read only. If the process is run for a read only file, the user receives an advanced notification of a read only file.

## Saved Job Report Output (GJRJLIS) process

This process converts the output to PDF based on the MIME type submitted with the job, and imports it to the Oracle table GJRJLIS as a BLOB file. Users can view and download the report output from the GJAJLIS page.

This process has an optional 11th parameter to the `gjrjllis.shl` file for log file unique identifier. Users can use this 11th parameter to submit `gjrjllis.shl` for multiple files for the same job and one up number.

Administrators must first enable the jobs to be included in the upload process using the GJAJBMO page while defining the file attributes.

Parameter Name	Required?	Description	Values
Job Name	Y	Name of the job to be submitted.	The job name from GJAJOBS.
MIME Type	Y	Format in which the file should be saved: plain text or PDF.	1 = PDF 2 = Plain Text
PDF Font	N	The PDF font used if the MIME type is PDF. The font is Courier by default.	Courier
PDF Font Size	N	Size of the PDF font. The font size is 8 by default.	8

Parameter Name	Required?	Description	Values
Days to keep	Y	The number of days the file should be saved on the Job Submission server. It is 999 days by default.	999
File name	Y	Name of the file.	
Printer code	N	Code for the printer.	

## Import list of IDs and PIDMs (GJRPSIM) process

The Import list of IDs and PIDMs (GJRPSIM) process allows an institution to import an external CSV file containing a list of either IDs or PIDMs (Person Identification Master) organized in a single column, into the existing Population Selection Extract Base (GLBEXTR) table.

This feature provides an easy way to import IDs and PIDMs into an existing Population Selection. The GJRPSIM process does not create a Population Selection, but rather, uses an already defined Population Selection that might or might not have any population rules created for it. It also provides an additional way to delete all GLBEXTR records, including both system-generated and manually added records as long as the user running the job is the same as the **Creator ID** of the Population Selection. This eliminates the need to access the Population Selection Extract Data (GLAEXTR) page and select the **Delete All** check box.

GJRPSIM imports a CSV data file found in an Oracle directory or a file uploaded to the Job Submission server using the Import File to JobSub Server (GJAJFLU) file upload process with the following requirements:

- File must contain a header row as the first record.
- List of IDs or PIDMs must follow the header row in a single column.
- File must contain either a list of IDs or PIDMs, but not both in the same file.
- File must have the appropriate permissions.

GJRPSIM parses the data file at run-time and notifies the user if the file is missing a header row or is an unsupported file format.

**Note:** While the process allows for the import of PIDMs, Banner continues to follow a standard of not displaying the PIDM on the Population Selection Extract Data (GLAEXTR) page.

Ellucian delivers GJRPSIM in the BAN\_GENERAL\_C security class assigned to the BAN\_DEFAULT\_M role.

**Table 6: GJRPSIM Job Submission parameters**

Parameter Name	Required?	Description	Values
Application ID	Y	Application ID for the Population Selection	Value from the Application Inquiry (GLIAPPL) page.
Selection ID	Y	Selection ID of the Population Selection.	Value from the Population Selection Inquiry (GLISLCT) page.

Parameter Name	Required?	Description	Values
Creator ID	Y	Creator ID of the Population Selection.	Creator ID of the Population Selection.
System Indicator	Y	System Indicator value for Population Selection.	S=System or M=Manual Default value is S.
Import Type	Y	Type of data imported from external CSV file.	I=ID or P=PIDM
File path on JobSub server	Y	Full directory path of the data file (.csv) located on JobSub server.	Use the fully qualified directory path to fit the field validation length or use only the file name as long as you have the parent directory path specified in the GURJOBS_DIRECTORY setting for the given user on the Job Submission Profile Maintenance (GJAJPRF) page.
Purge all records	Y	Purge all records (Manual and System) in existing Population Selection before importing new records.	Y=Yes or N=No  To purge records, the user ID used to run GJRPSIM must match the Creator ID. Otherwise, the process appends the records imported from the data file to the existing Population Selection list.  Default values is N.

Before running the job, ensure that the Application ID, Selection ID and Creator ID parameters are valid for the given Population Selection defined for your business need.

If you are not the creator (Creator ID) of the Population Selection, before you run the process, use the Population Extract Inquiry (GLIEXTR) page to check if the Population Selection is empty or already contains existing records.

When the GJRPSIM process runs, it uses the Import Type parameter to indicate whether the data contains a list of IDs (SPRIDEN\_ID) or PIDs (SPRIDEN\_PIDM). The process parses the CSV data file and validates if the input data is either valid or contains duplicate records and sends the output to the generated reports. The generated report contains the appropriate warnings and error messages if there are any run-time validation or processing failures.

To download the job submission output report (PDF or TXT file) from the GJAJLIS page, ensure that you have enabled the GJRPSIM job on the JobSub Output Definition (GJAJBMO) page with the appropriate mime type and font styles.

## List of Reports and Parameters (GJRRPTS)

This report lists all reports/batch processes and their associated parameters.

A single job name may be specified, or a wildcard may be used to print all jobs that begin with a specified string of characters. Parameter information that is printed includes parameter number, description, length, type, required/optional indicator, single/multiple occurrence indicator, low range, high range, validation label, system default, and validation values. User defaults for all parameters may optionally be printed.

Parameter Name	Required?	Description	Values
Jobs to be Selected	No	Wildcard that determines what reports are listed. Enter % to list all reports and their parameters. Other wildcard selections may also be used; for example, G% lists only the General reports and their parameters.	
Print User Level Defaults	No	Code that determines whether user-level defaults for the parameters are printed.	<ul style="list-style-type: none"> <li>Y = Print default values</li> <li>N = Do not print default values</li> </ul>

## Population Selection Extract (GLBDATA) process

This process selects a population based on the rules entered on the Population Selection Definition Rules (GLRSLCT) page. It can also create a population based on either the union, intersection, or difference of the rules in two existing population selections.

A log file called `glbdata_NUMBER.log` is created, where *NUMBER* is the one-up sequence number created at runtime.

Parameter Name	Required?	Description	Values
Selection Identifier 1	Yes	ID of the first existing population selection that will be used to create a new population selection.  <b>Note:</b> Any dynamic parameters for this population selection are entered after the standard parameters. You must enter a non-blank value for each 88 level prompt.	
Selection Identifier 2	No	ID of the second existing population that will be used to create a new population selection.	

Parameter Name	Required?	Description	Values
New Selection Identifier	No	ID of the new population selection that will be created from the two existing population selections.	
Description for New Selection	No	Free-page description of the new population selection.	
Union/Intersection/Minus	No	Code that determines the contents of the resulting population.	<ul style="list-style-type: none"> <li>• I = Include only those IDs that are extracted by both populations selections.</li> <li>• M = Include all IDs extracted by the first population selection except those IDs extracted by the second population selection.</li> <li>• U = Include all IDs extracted by the first population selection and all IDs extracted by the second population selection. If an ID is selected by both, include only once.</li> </ul>
Application Code	Yes	Application associated with the two existing population selections. This becomes the application associated with the new population selection.	Application Inquiry (GLIAPPL) page
Creator ID of Selection ID	Yes	Oracle ID of the user who created the two existing population selections.	

Parameter Name	Required?	Description	Values
Detail Execution Report	No	Code that determines the contents of the detail execution report.	<ul style="list-style-type: none"> <li>• S = Displays no debug information for selected parameters.</li> <li>• I = Displays no debug information for selected parameters.</li> <li>• Y = Shows debug information for SQL, inserts, and paragraphs.</li> </ul>

## Letter Extract (GLBLSEL) process

This process extracts values from the database for the variables that appear in a specified letter.

These variable values are merged into letters with the Letter Generation Print Report (GLRLETR). An error list is created on request. A log file called `glblsel_NUMBER.log` is created, where *NUMBER* is the one-up sequence number created at runtime.

There is a limit on the number of variables that can be added to a letter (about 121 variables). This limit is controlled by the `WS-PARM-LIST` value in `GLBLSEL.pco`.

Beginning with Release 8.1, the control report for GLBLSEL includes a count of

- number of IDs processed
- number of letters inserted into the collector table
- number of IDs not processed

**Note:** In most cases, the number of IDs processed and number of letters inserted will be the same, but there are some situations where there could be more than one letter for a given ID.

Parameter Name	Required?	Description	Values
Application	Yes	Application associated with the letter being processed.	
Process Pending Letters	Yes	Code that determines how the letter code is processed.	<ul style="list-style-type: none"> <li>• Y = Process all pending letters for the letter code</li> <li>• N = Process the letter code for a specific population</li> </ul>

Parameter Name	Required?	Description	Values
Letter Code	Yes	Code of the letter being processed.  <b>Note:</b> Any dynamic parameters for variables in this letter code are entered after the standard parameters. You must enter a non-blank value for each 88 level prompt.	Letter Code Validation (GTVLETR) page
Selection ID	Yes	ID of the population selection for which the letter is being processed.	Population Selection Inquiry (GLISLCT) page
Creator ID	Yes	Oracle ID of the user who created the population selection.	
User ID	Yes	Oracle ID of the user who extracted the population with the Population Selection Extract Process (GLBDATA).	
Term Code	No <sup>1</sup>	Code of the term for which you want to process pending letters.	Term Code Validation (STVTERM) page
Aid Year	No <sup>2</sup>	Aid year for which you want to process pending letters.	Aid Year Inquiry (ROAIDY) page

<sup>1</sup> For Student applications only.

<sup>2</sup> For Financial Aid letters only.

Parameter Name	Required?	Description	Values
Address Selection Date	No	<p>Address date for which the address of choice must be effective.</p> <p>You can define a system-level parameter default on the Parameter Definition (GJAPDEF) page to use the system date as this date. However, any user-level defaults would override it.</p> <p>If the job is executed with a null value for this parameter, the current system date is used. If the users save their parameters, the null would be saved.</p> <p>If users want some other value than the current system date, they must enter a not-null value on GJAPCTL.</p>	
Address Type	Yes	Type codes of the addresses you want to process, prefixed by the priority of each type code.	Address Type Code Validation (STVATYP) page
Detailed Error Report	No	Code that determines the contents of the glblsel file.	<ul style="list-style-type: none"> <li>• Y = Write error messages for IDs for which variable data could not be extracted.</li> <li>• N = Do not write error messages.</li> </ul>
Detailed Execution Report	No	Code that determines the contents of the detail execution report.	<ul style="list-style-type: none"> <li>• S = Show SQL statements.</li> <li>• I = Show SQL statements and inserts.</li> <li>• Y = Show paragraphs.</li> </ul>

## Parameter Selection Compile (GLBPARM) process

This process identifies population selections and variables that need to be recompiled by the Automatic Letter Compilation Process (GLOLETT) in certain situations, such as when you change

application rules. For each variable/population selection, a record is inserted into the list of records awaiting compilation.

The list of population selections and variables appears on the report. A log file called `glbparm_NUMBER.log` is created, where *NUMBER* is the one-up sequence number created at runtime.

Parameter Name	Required?	Description	Values
Application Code	Yes	Application you want to compile.	Application Inquiry (GLIAPPL) page
Extract Variables Indicator	Yes	Code that determines whether variables are extracted for the application.	<ul style="list-style-type: none"> <li>Y = Extract variable</li> <li>N = Do not extract variable</li> </ul>

## Automatic Letter Compilation (GLOLETT) process

This process compiles variables and population selection rules in the generation database. A log file called `glolett_NUMBER.log` is created, where *NUMBER* is the one-up sequence number created at runtime.

When you run GLOLETT, the variables and population selection rules waiting to be compiled (determined by records existing in GJBPRUN) are compiled. Running the GLBPARM process can identify variables and population selection rules to be compiled.

**Note:** You can model a more complex filter on the following example:

Example where the same table is used in both the query and the subquery:

```
SELECT DISTINCT (SPRIDEN_PIDM), SYSDATE
  FROM SATURN.SPBPERS A, SATURN.SPRIDEN
 WHERE SPBPERS_PIDM = SPRIDEN_PIDM
    AND SPRIDEN_LAST_NAME = 'Smith'
    AND SPRIDEN_CHANGE_IND IS NULL
    AND SPRIDEN_PIDM NOT IN
      (SELECT SPBPERS_PIDM
       FROM SATURN.SPBPERS
       WHERE SPBPERS_DEAD_IND = 'Y'
         AND SPBPERS_PIDM = A.SPBPERS_PIDM )
```

Parameter Name	Required?	Description	Values
Type Indicator	Yes	Record type to be compiled.	<ul style="list-style-type: none"> <li>%V = Variable</li> <li>%S = Population selection</li> </ul>
Application Name	Yes	Application code of the variable or population selection to be compiled.	

Parameter Name	Required?	Description	Values
Selection ID or Variable Name	No	Code that identifies the population selection or variable.	
Creator ID of Selection ID	Yes	User ID of the Oracle user who created the population selection or variable.	

## Letter Generation Print Report (GLRLETR)

This report prints letters with data extracted by the GLBLSEL process. It can also be used to produce a download file for Microsoft Word for Windows.

Parameter Name	Required?	Description	Values
Application Code	Yes	Application code for the letters being printed. One code may be entered per run.	Application Inquiry (GLIAPPL) page
Word Processor Extract Option	Yes	Type of output file to be created.	<ul style="list-style-type: none"> <li>• 0 = None</li> <li>• 1 = Word</li> </ul>
Process ALL Pending Letters	No	Code that determines which letters are printed for the application code.	<ul style="list-style-type: none"> <li>• Y = All pending letters extracted for the application code</li> <li>• N = Specific letter code</li> </ul>
Letter Code	No	Code of the letter to be printed. Letter code is only requested if all pending letters are not selected.	Letter Code Validation (GTVLETR) page
Sort Variable	No	Name of the variable used to sort letters in a specific order (for example, the ZIP/postal code or name). The variable name must start with an asterisk (*) and must be entered in all capital letters.	Use a sort variable that returns a single value. If the sort variable returns more than one value, the process will generate duplicate letters.
Term Code	Yes <sup>3</sup>	Term code for which letters are being printed. One term code must be specified per run.	Term Code Validation (STVTERM) page.

<sup>3</sup> for Student applications only

Parameter Name	Required?	Description	Values
Module Code	Yes	Code that identifies the module associated with the letters being printed. This code updates the Mail Table.	<p>Examples include:</p> <ul style="list-style-type: none"> <li>• A = Admissions</li> <li>• G = Gift/Pledge</li> <li>• C = Constituent</li> <li>• R = Recruiting</li> <li>• B = Billing</li> <li>• H = History</li> <li>• F = Registration</li> </ul> <p>This parameter is not validated.</p> <p>Module codes vary by Banner product.</p>
Audit Indicator	No	Code that determines whether a sample letter is printed.	<ul style="list-style-type: none"> <li>• Y = Print sample letter</li> <li>• N = Do not print sample letter</li> </ul>
Free Format Date 1	No	Freeform date (up to 30 characters) that is printed on letters where the *DATE1 variable is referenced.	
Free Format Date 2	No	Freeform date (up to 30 characters) that is printed on letters where the *DATE2 variable is referenced.	
Free Format Date 3	No	Freeform date (up to 30 characters) that is printed on letters where the *DATE3 variable is referenced.	
Aid Year Code	Yes <sup>4</sup>	Aid year code for Financial Aid letters.	Aid Year Inquiry (ROIADY) page

## Sample letter

This is a sample letter using the data extracted from the GLBLSEL process.

April 11, 2002

Richard Scott  
312 Bridle Rd.

<sup>4</sup> For Financial Aid letters only

Villanova PA 19101  
Dear Richard,  
It's a pleasure to send the information you requested. Take your time reading it to find out more about the Institute of Technology. I invite you to learn firsthand about us by visiting the campus. We'll be glad to welcome you for a personal visit between 8:00 a.m. and 5:00 p.m. Monday through Friday. Just stop by or, better yet, write or call for an appointment. Our Preview provides another good way to see and learn about the Institute of Technology. It takes place MAY 30, 2002, so mark your calendar now. We will send you more information after APRIL 30,2002. We appreciate each opportunity to serve you as you make your college choice. Of course, we hope that you'll agree with us that the Institute of Technology can be for you.  
Sincerely,  
B. Andrew Stevens III  
University President  
S.C.T. Institute of Technology

## Person Geo Region/Divisions Report (GORPGEO)

This process assigns regions to individuals using the data in the GORCGEO collector table in combination with the rules defined on the Geographic Region Rules (SOAGEOR) page. These regions are then stored with the GORPGEO table.

Parameter Name	Required?	Description	Values
Use Collector File	Yes	Code that determines what IDs are used to run the process.	<ul style="list-style-type: none"> <li>• C = Use all IDs in collector table GORCGEO</li> <li>• I = Use individual ID in collector table</li> <li>• P = Use population selection</li> </ul>
ID	No	ID of the person for whom you want to create geographic region/division records.	

Parameter Name	Required?	Description	Values
Application Code	No	Code that identifies the application group for which the population selection was defined. All or none of the population selection parameters must be entered.  You can use the Population Selection Extract Inquiry (GLIEXTR) page to review the people who will be processed in the load based on the selection identifier and application code entered.	Application Inquiry (GLIAPPL) page
Selection Identifier	No	ID of the population selection with which you want to work. The selection identifier must be defined on the Population Selection Inquiry (GLISLCT) page. All or none of the population selection parameters must be entered.	Population Selection Inquiry (GLISLCT) page
Creator ID	No	User ID of the person who created the population selection. The creator ID must have been specified when defining the selection identifier. All or none of the population selection parameters must be entered.	
Address Type	No	Address type for the ID or population selection.	Address Type Code Validation (STVATYP) page

Parameter Name	Required?	Description	Values
Run in Sleep/Wake Mode	No	Code that determines whether the process is run in sleep/wake mode.	<ul style="list-style-type: none"> <li>Y = Run in sleep/wake mode.</li> <li>N = Do not run in sleep/wake mode</li> </ul>
Sleep/Wake Time	No	Number of seconds to sleep, if the sleep/wake parameter is Y.	The default is 60 seconds.
Sleep/Wake Printer	No	Printer used in the Sleep/Wake process, if the sleep/wake parameter is Y.	Printer Validation (GTVPRNT) page
Audit Indicator	Yes		<ul style="list-style-type: none"> <li>A = Run in audit mode</li> <li>U = Run in update mode</li> </ul>
Report Indicator	Yes		<ul style="list-style-type: none"> <li>Y = Print all details</li> <li>N = Suppress details and print summary totals only</li> </ul>

## SEVIS Batch Export (GORSEVE) process

In 2008, Ellucian provided notice that they would no longer enhance or upgrade existing SEVIS related objects and processes in Banner.

You can find further clarification of this support statement in *FAQ 1-4ZW5AZ - What is Ellucian's support with regard to SEVIS and visa case management?*. As stated in that communication, support for Banner SEVIS/SEVISTA batch processing ended with the option for current customers to license SEVIS Connection from March 2008 through September 2009. For institutions needing SEVIS batch processing, Ellucian provides International Student and Scholar Management - a premier visa case management system for international student / scholar offices managing international student and exchange visitor information and SEVIS regulatory processes. While Ellucian transformed certain SEVIS forms to Banner 9 administrative pages, maintenance, enhancements and regulatory updates remain ceased.

You can find guidance for SEVIS functionality and processing in Banner General User Guides, versions 9.3.11 and earlier.

GORSEVE allows you to extract information about students and exchange visitors so it can be sent to the U.S. Government for SEVIS reporting in a batch transaction using the Internet. All dependent data is extracted as well.

If you have created the appropriate rules, and if you have selected the parameters Business Action = Y and Auto-populate = Y, GORSEVE will create the student and exchange visitor records (Business Actions), and it will automatically populate columns in the GOBSEVS table for that person with data that exists in other generation tables (Auto-population).

---

**Note:** When either of these parameters is set to Y, you must run GORSEVE with IDs or with a population selection.

**Note:** When you are on the SEVIS Information (GOASEVS) page, you can also select Auto-populate and Business Action from the Options menu. You cannot select them when your cursor is in the key block, however.

GORSEVE converts special characters (ampersand, quotation mark, and so on.) into their ASCII equivalents. The files cannot be transmitted without this conversion.

The process will look at GOBSEVS\_SVCR\_CODE for each record so determine if the record applies to a student or to an exchange visitor. Different information is sent to the U.S. Government, depending on whether the person is a student or an exchange visitor. If the usage indicator associated with the creation code on the SEVIS Creation Reason Code Validation Table (GTVSVCR) contains 1, the person is a student, and the process will extract student data. If it contains 2, GORSEVE will extract exchange visitor data.

GORSEVE creates GORSEVS records (either student or exchange visitor) with the transmittal status code of W (or M for an adjudicated event for a student). It is affected by the parameters for the Banner ID or what was set up in a population selection.

GORSEVE creates separate batches for student and exchange visitor records. Because each batch can contain a maximum of 250 records, you may have a number of files to transmit to the U.S. Government in a batch.

Batch IDs are in the following format:

```
yyymmddhhmissxx.XML
```

The batch ID is the date and timestamp, followed by a 2-digit sequence number. You must send them in ascending order, otherwise they will be rejected by the U.S. Government.

At the time specified for transmission to the U.S. Government, GORSEVE:

1. Assigns a batch ID to the set of records being transmitted
2. Creates SEVIS History Table (GORSEVS), SEVIS Dependent History Table (GORSEVH), SEVIS Employment History Table (GORSVEH) and SEVIS Activity Site History Table (GORSVAH) records where changes to the person's information have been detected in the SEVIS Data Table (GOBSEVS), SEVIS Dependent Data Table (GORSEVD), SEVIS Employment Information Table (GORSVEI), and SEVIS Activity Site Table (GORSVAS).
3. Creates rows in temporary tables for each batch (GOTSVBH) and each transaction within each batch (GOTSVBT).
4. Uses the processing parameters, where necessary, to create the SEVIS data.
5. Prints the SEVIS Record Extract Report, including all records transmitted in that batch.

**Note:** It is recommended that you schedule GORSEVE to run every night.

## SEVIS Batch Export Process (GORSEVE) fields

This process has the following fields.

Parameter Name	Required?	Description	Value
School Code	Yes	Your institution's code as defined by the U.S. Government.	
SEVIS User ID (Batch Approver)	Yes	Administrative user ID assigned by SEVIS for the batch approve.	
SEVIS User ID (Transaction App)	Yes	Administrative user ID assigned by SEVIS for the transaction approve.	
Program Number	Yes	The 9-character number the U.S. Government assigned to your institution's exchange visitor program.	
Process Business Actions	Yes	Choose whether to process business actions.	<ul style="list-style-type: none"> <li>• Y = yes</li> <li>• N = no</li> </ul>
Process Auto-population	Yes	Choose whether to process column auto-population.	<ul style="list-style-type: none"> <li>• Y = yes</li> <li>• N = no</li> </ul>
Term Code	No	Term code for business action processing or auto-population processing.	
Banner ID	No	If you are running in update mode or audit mode and you want to include a few people, list the Banner IDs and the process will process only those IDs.	
Application	No	The application code for population selection, an optional field used when creating a batch through population selection.	
Selection ID	No	The selection identifier for population selection.	
Creator ID	No	The generation ID for the person who created the population selection.	
User ID	No	The User ID associated with the population selection.	

Parameter Name	Required?	Description	Value
Print No Activity	No	Determines if a warning message is displayed in the LIS file, Updates cannot be sent until SEVIS ID has been assigned.	<ul style="list-style-type: none"> <li>• Y = The message will be displayed for all IDs that do not have a SEVIS ID</li> <li>• N = The message will not be displayed</li> </ul> <p>The U.S. Government differentiates between create records (information about a person they do not have in their database yet) and update records (a change for a person they have in their database). Create records will never have a SEVIS ID; all update records must have one.</p> <p>If this parameter is Y, you will not receive the warning message for create records, but you will receive it for update records.</p>
Mode	Yes	The mode the process will run under.	<ul style="list-style-type: none"> <li>• A = Audit mode</li> <li>• U = Update mode</li> <li>• E = Extract mode</li> </ul>

Parameter Name	Required?	Description	Value
Department Owner ID for Extract	Yes, if using ISSM	Used by ISSM. If you are creating the CSV file for another purpose, this parameter is optional.  The minimum data required by GORSEVE for each record extracted is a creation reason or termination reason code. Records that do not have one or the other will not be processed by GORSEVE and included in the CSV file, but the records will appear on the .lis file. Records that have both a creation reason code and a termination reason code will not be processed by GORSEVE. GORSEVE requires the 02 = Batch Approver parameter to execute in Extract mode, but it is not required by ISSM. You can enter any value for Batch Approver; it cannot be left blank (be null).	Determined by ISSM.

## SBGI Geo Region/Divisions Report (GORSSEO)

This process assigns regions to high schools and colleges using the high school address in combination with the region rules set up on the Geographic Region Rule (SOAGEOR) page.

This process will also assign regions to colleges if the college meets the SOAGEOR rule. These regions are then stored in the GORSSEO table.

Parameter Name	Required?	Description	Values
Audit Indicator	Yes		<ul style="list-style-type: none"> <li>A = Run in audit mode</li> <li>U = Run in update mode</li> </ul>
Report Indicator	Yes		<ul style="list-style-type: none"> <li>Y = Print all details</li> <li>N = Suppress details and print summary totals only</li> </ul>
Source/Background Inst Code	No	Source/background institution code for which you want to assign region records. Leave blank to select all codes.	Source/Background Institution Validation (STVSBGI) page

Parameter Name	Required?	Description	Values
Activity Date	No	Beginning date for selecting all changed records on SOBSBGI.  For example, if the activity date equals 10-MAY-2006, the process runs against all SOBSBGI records having an activity date greater than (or equal to) 10-MAY-2006.	

## Address Purge (GPPADDR)

This process purges address information for people. You can purge by address expiration date (date must exist to be purged), or you can purge all inactive addresses (regardless of date).

**Note:** The Address API (gb\_address) maintains the deletion of associated telephone records. It only deletes phone records if there is exactly one phone number associated with the address. If there is more than one telephone number, then the API raises an exception. When an exception is raised, GPPADDR simply reports the error, skips that address, and continues processing.

**Note:** In audit mode, the API is called to delete the address, and then that transaction is rolled back. This allows the user to view any addresses in the .lis file that the API cannot delete because multiple phone records exist.

Parameter Name	Required?	Description	Values
Purge Option	Yes	Criteria by which address information should be purged.	<ul style="list-style-type: none"> <li>1 = Purge by address expiration date. (Date must exist to be purged.)</li> <li>2 = Purge inactive addresses. (Purge occurs regardless of expiration date.)</li> </ul>
Address Selection Date	Yes <sup>5</sup>	Date used with option 1 to purge addresses. Addresses with an expiration date on or before this date are purged.	Date format of DD-MMM-YYYY

<sup>5</sup> If option 1 chosen

Parameter Name	Required?	Description	Values
Address Types to be Bypassed	No	Address types to be excluded from the purge process. Multiple types are permitted.	Address Type Code Validation (STVATYP) page
Run Mode	Yes	Code that indicates the mode for running the process.	<ul style="list-style-type: none"> <li>A = Audit mode (no addresses purged)</li> <li>U = Update mode (addresses purged)</li> </ul>

## Document Code Delete (GUPDEL) process

This new process is used to delete inappropriate documents from the GURFEED and GURTEXT tables. Job parameters allow specification of multiple document numbers.

**Note:** It is recommended that access to the Document Code Delete Process (GUPDEL) be restricted to staff members responsible for maintenance of data in the GURFEED and GURTEXT tables. Caution should be exercised when selecting a document for removal. This process can be used for any document in GURFEED (not just those from FUPLOAD). As such, AR, Advancement, and HR information could be deleted without chance of recovery.

To enter multiple Document Codes, enter the first document to be deleted. Use the Insert Record Function. Enter the parameter value "01" in the parameter number column and enter the next document to be deleted in the parameter value column. The Insert Record/Duplicate Record Function can also be used if document numbers are similar and only requires changing a few values for each.

Some sub-systems may not be able to recreate transactions that have been fed to GURFEED and GURTEXT.

Delete operations are not performed in Audit Mode.

Parameter Name	Required?	Description	Values
Enter Document Number	Yes	Alpha, 8 characters, allow multiple numbers.	
Enter Run Mode	Yes	Code that indicates the mode for running the process.	<ul style="list-style-type: none"> <li>A = Audit</li> <li>U = Update</li> </ul>
Enter System ID	Yes	Specify SYSTEM_ID for the document(s) to be deleted.	

## Banner Environment Comparison Tool (GURBCTR) report

The Banner Environment Comparison Tool (GURBCTR) process compares an institution's Banner environment against a Banner baseline environment to highlight the code and schema differences.

**Note:** Running the Banner Environment Comparison Tool is the responsibility of the institution's system administrator or database administrator.

To prepare for cloud migration and deprecating obsolete customizations, institutions must identify customizations that exist with a Banner environment. The Banner Environment Comparison Tool identifies and reports on objects within the Banner environment, granular to the column level, that are different from baseline. The Banner Environment Comparison Tool scans the Banner database and applicable components in the Banner code tree to flag items that are different from Ellucian delivered versions of those items. The tool allows for applying filters to the results to help isolate specific customizations of interest while iteratively researching customizations within environments.

Before you can run GURBCTR you must have the BECT\_USER with the appropriate permissions created by your institution's system administrator.

The GURBCTR process generates one signature file for each schema in your database and one signature file for all objects in your Banner links directory, then runs the comparison report against the set of signature files that you choose.

This process supports only a Job Submission server running on CentOS/Redhat version 6 or later, or Windows(64-bit). If you attempt to run GURBCTR from a different operating system, the following error message appears in the GURBCTR log file on the Saved Output Review (GJIREVO) page.

```
Banner Environment Comparison Tool not supported on your Jobsub OS. You
must run banner_compare at the command line on a supported OS. Follow
the instructions in general/misc/banner_compare_readme.txt to install
banner_compare on a supported operating system.
```

Please contact your institution's system administrator and refer to the *Banner General Technical Reference Manual* available in the Banner Documentation library of the Ellucian Customer Center for additional details and instructions about running the Banner Environment Comparison Tool (GURBCTR) process.

### Banner Environment Comparison Tool (GURBCTR) Job Submission parameters

The Job Submission parameters identify the values available to apply when you run the GURBCTR process. You can select a specific schema, set of signature files, and apply filtering to exclude objects from the report.

Parameter Name	Required?	Description	Values
Schema	N	Name of schema	Schema name or leave blank to run against all schemas.

Parameter Name	Required?	Description	Values
Compare	Y	The set of signatures against which you want to compare your environment.	BASELINE or BASELINE-SAAS
Filter Code	N	The filter code that represents the objects to exclude from the Banner Environment Comparison Tool (BECT) report	Enter DEFAULT or a previously defined filter code to exclude objects from the comparison. Leave empty to compare all objects.

The following administrative pages assist in creating filter codes and rules for running the GURBCTR process.

- Banner Environment Comparison Tool Filter Code Validation (GTVBCTF) page - Use this page to create the filter codes used to define the database objects to exclude from the Banner Environment Comparison Tool (BECT) report.
- Banner Environment Comparison Tool Filter Rules (GURBCTF) page - Use this page to specify the objects to exclude from the Banner Environment Comparison Tool (BECT) report for the associated filter code created on the Banner Environment Comparison Tool Filter Code Validation (GTVBCTF) page.

## Banner Environment Comparison Tool (GURBCTR) output

The GURBCTR process generates output files available to view or download from the Saved Output Review (GJIREVO) page.

The following output files having the naming convention of `gurbctr_jobnumber_file`. For example, `gurbctr_66921_diff_checksum_links.csv`. You can download the files by selecting **Tools > Show Document (Save and Print File)**.

- A CSV file of differences found in the links directory (`diff_checksum_links.csv`).
- A CSV file of differences found in the selected schemas (`diff_schema_consolidated.csv`).
- A CSV file showing objects that were filtered out of the comparison report (`filtered_objects.csv`).
- A text file showing total counts per object type in links directory and selected schemas (`summary.txt`).

## Document Detail Report (GURDETL)

This report is used to list transaction data for any document stored in the Banner General Interface to Finance Table (GURFEED).

Parameter Name	Required?	Description	Values
Document Number	Yes	Alpha, 8 characters, allow multiple numbers.	

## Print Dynamic Help for a page (GURHELP)

This report lists all the Dynamic Help for a selected system, module, or page. This report should be run only by your data center.

To print Help for a single page, specify the page name (for example, GJAPDEF).

To print Help for the pages in a single module, specify the first two characters of the pages with a wildcard indicator (for example, GJ% for all pages in the Job Submission module).

To print Help for all pages in a system, use the system designation followed by the wildcard indicator (for example, G%).

Parameter Name	Required?	Description	Values
Page Name	Yes	page(s) for which help is to be printed. Wildcards are acceptable.	
Level	Yes	Level of help to be printed.	<ul style="list-style-type: none"> <li>• 1 = page help</li> <li>• 2 = page and section help</li> <li>• 3 = page, section, and field help</li> </ul>

## Insert Output Program (GURINSO)

This program reads a file from the file system and loads it into the database. You can then use the Saved Output Review (GJIREVO) page to access the file on the database.

This program is run from the operating system with the following command line switches:

Switch	Required?	Description
-j <job/process name>	Yes	Job or process that generated the file.
-i <input file>	Yes	File to be loaded into the database.
-n <number>	Yes	One-up number created when the batch program was executed.
-w <username>	Yes	User who ran the job.
-o <output file name>	No	New name of the file after it is loaded into the database.
-t	No	Switch that turns on sql_trace.
-x	No	Switch that turns on extended debugging; notifies entry to each function.

## Institution Role Maintenance (GURIROL) process

The Institution Role Maintenance Process (GURIROL) is used to maintain institution role information in the GORIROL table.

This process uses the rules that are set up on the Business Rules (GORRSQL) page to determine users' roles, and then calls the `gb_institution_role.p_maintain_roles` procedure in the Institution Role API to insert, update, or delete those roles from GORIROL.

**Note:** Institution roles are created from Banner data (PIDMs) only for individuals who are defined as Person Entities (`spriden_entity_ind = P`), are not dead (`spbpers_dead_ind = N`), and meet the criteria defined to create their role.

You can use Population Selection to limit the number of users processed. This process can be run at any time to update the GORIROL table. This process is used to support Integration for e-Learning. The person role information stored in the GORIROL table is used by Integration for e-Learning's extract and event process for partner data synchronization.

**Note:** This process is designed to be run through the Job Submission (GJAPCTL) page. Running it from the host is not supported by Ellucian, and should only be used for troubleshooting purposes.

Parameter Name	Required?	Description	Value
Application Code	No	Application code of the Population Selection.	Choices come from the Application Inquiry (GLIAPPL) page.
Selection ID	No	ID of the Population Selection.	Choices come from the Population Selection Inquiry (GLISLCT) page.
Creator ID	No	ID that created the Population Selection rules.	
User ID	No	ID of user who selected the population.	
Role Group	Yes	The Institution Role group is the same as the <b>Process Code</b> used on the Business Rules (GORRSQL) page.	For Integration for e-Learning clients, INTCOMP is the valid value.
Role	No	Person Institution role(s) that you want to process. You can specify one role and population selection per individual job run.  If you leave this parameter blank, then all institution and custom roles will be processed.	For Integration for e-Learning clients, all valid institution and custom roles are supported.

## Data Element Dictionary (GURPDED)

This report shows information for all the database columns, including type, scale, and column comments.

**Note:** Tables in the Oracle recycle bin (a feature introduced in Oracle 10gR2) are excluded from the report.

Parameter Name	Required?	Description	Values
USERID of Table Creator	Yes	Oracle account under which the table was created (owner of the table). For example, a General table is owned by GENERAL.	
Table(s) to be Reported	Yes	Name of a specific table to be printed. Wildcards are allowed.	
USERID of View Creator	No	Oracle account under which the view was created (owner of the view).	
View(s) to be Reported	No	Name of a specific view to be printed. Wildcards are allowed.	
Binding Margin Option	Yes	Code that indicates whether an extra binding margin is required.	<ul style="list-style-type: none"> <li>N = Do not increase the top margin</li> <li>Y = Increase the top margin (default)</li> </ul>
Heading Underline Option	Yes	Code that indicates whether report and page headings are underlined.	<ul style="list-style-type: none"> <li>Y = Underline</li> <li>N = Do not underline (default)</li> </ul>

## Condensed Table Listing (GURTABL)

This report lists selected system tables.

**Note:** Tables in the Oracle recycle bin (a feature introduced in Oracle 10gR2) are excluded from the report.

Parameter Name	Required?	Description
Table Owner	Yes	Owner of the tables you want to list, such as GENERAL.
Table Name	Yes	Name of the tables you want to list. Wildcards are allowed. For example, to list all General validation tables enter <code>gtv%</code> .

## Document Code Report (GURTEXT)

This report is used to list document numbers currently stored in the External Feed Document Text (GURTEXT) table. There are no parameters for this report.

## PIN Create (GURTPAC) process

This process will take a population selection (list of PIDMs) and will assign Third Party Access PIN records and external user IDs based on settings in the Enterprise PIN Preferences (GUAPPRF) page.

Parameter Name	Required?	Description	Values
Application	Yes	Application for the population selection.	Application Inquiry (GUIAPPL) page
Selection ID	Yes	Selection identifier for the population selection.	Population Selection Inquiry (GLISLCT) page
Creator ID	Yes	Creator of the Selection ID rules.	
User ID	Yes	ID of the person who performed the population selection.	
Print Detail Report?	Yes	Specifies if the detail report should be printed.	<ul style="list-style-type: none"> <li>Y = Print a detailed listing of results</li> <li>N = Print the control report</li> </ul>

## User ID/Password Verification (GUAVERFY) process

This process verifies the correct user ID and password. A log file called `guavrfy_NUMBER.log` is created, where *NUMBER* is the one-up sequence number created at runtime.

This process contains no parameters.

## Import OraDirFile JobSub Server (GURJSDN) process

This process allows the users to transfer the files that have been uploaded to Oracle directory using the **File Upload Utility (GUAUPLP)** page to the Job Submission server.

Parameter Name	Required?	Description	Values
Oracle Directory	Y	Name of the Oracle directory where the file is uploaded.	The name of the Oracle Directory specified on GUAUPLP.

Parameter Name	Required?	Description	Values
File Name	Y	Name of the file.	The name of the file specified on GUAUPLP.
JobSub Server File Name	Y	Name of the file as saved in the Job Submission server.	New name for when the file is saved on the Job Submission Server.

## SDE Inquiry and Delete (GUSMDID) process

This process allows you to review and delete orphaned supplemental data records. Supplemental data records can become orphaned when their corresponding "parent" records in base Banner tables are deleted.

Although the supplemental data record cannot be viewed after the parent record is deleted it still exists in the Supplemental Data Table. The GUSMDID process gives you an optional way to clean up these orphaned records.

The Supplemental Data Engine (SDE), introduced in Release 8.0, is a way to add new data elements without changing the baseline Banner data model.

The report output shows, for each record found, the table name, attribute name, primary key, and parent status.

**Note:** The GUSMDID report does not show the actual values for each supplemental data record. To review the actual data, you can use supplemental data views for each attribute. Code to create these views can be generated in the Generate DDL section of the Supplemental Data Attributes Definition (GOASDMD) page.

Parameter Name	Required?	Description	Values
Audit/Update	Yes	Choose whether to report only (to view orphaned records) or to actually delete orphaned records.	<ul style="list-style-type: none"> <li>A = (Audit): report only; no data will be changed</li> <li>U = (Update): SDE records selected by the process with a parent status of No Parent will be deleted</li> </ul>
Table	Yes	The base Banner table(s) for which you want to find orphaned supplemental data records	<p>Enter the short table name. You can use wildcards.</p> <p>For example, enter G% for all General tables.</p>

Parameter Name	Required?	Description	Values
Attribute Name	Yes	The SDE attribute for which you want to find orphaned supplemental data records.	Enter the attribute name. You can use wildcards to select multiple attributes.  Enter % by itself to select all attributes for the tables selected in parameter 02.

## Text Manager overview

The Text Manager module gives you the ability to define translations that customize Banner text strings in a base language and other languages.

After you define translations for an application, the text automatically displays in the application without the need to restart it. Your customizations are retained from release to release and you can add more customizations any time.

Text Manager can also prevent accidental deletion of strings during customization because you do not need to edit the properties files. You can use data from previous customizations and translations to pre-translate the strings and messages in a file. This saves time and effort in translation and localization work.

Using the Text Manager module, you can complete the following customization and translation tasks.

- Upload the properties strings from the Banner administrative application and Banner Self-Service application properties files to the database.
- Use a Banner administrative page to customize the strings in the base language used by your institution and other Ellucian supported languages.
- Translate strings into non-provided languages that you can customize.

### Related concepts

[Create a project](#) on page 284

[Upload properties](#) on page 289

### Related tasks

[Configure a project](#) on page 285

[Use the Interactive Translator](#) on page 290

### Related reference

[Configuration keys](#) on page 286

## Text Manager customization support

Text Manager supports customizations of text strings in the application properties files for Banner administrative and Banner Self-Service applications; however, it does not support language customization of reports and processes.

## Prerequisites with Banner Admin Common and Banner Self-Service

You must be using certain releases of the Banner Admin Common and Banner Self-Service applications to see the customized strings within an administrative application.

See the documentation for each administrative application to determine which ones can display the Text Manager customized text strings.

## Create a project

A project is the basic building block of Text Manager. The project defines the pages and properties files to customize. It can include all the files needed to customize a complete piece of software.

Use the Text Manager Projects (GMAPROJ) page to create and maintain projects. You can either create a new project from scratch or copy an existing project to create a new one.

Text Manager includes a default project named `*DEFAULT_APP` that is a template for configuration data. You can copy this project and use it to create a new project.

## Create a new project from scratch

Create a new project from scratch when no similar project exists that you could use as a basis for your project.

### Procedure

1. Access the **Text Manager Projects (GMAPROJ)** page.
2. Click **Insert**.
3. At **Project Code**, enter a new unique project code.
4. At **Project Description**, enter a brief description.
5. Click **Save New Project**.

---

## Copy an existing project to create a new project

Create a new project by copying an existing project when there is an existing similar project that you can use as a template. The \*DEFAULT\_APP project is provided for you to use as a project template.

### Procedure

1. Access the **Text Manager Projects (GMAPROJ)** page.
2. At **Project Code**, choose the code of the project that you want to copy. Choose the \*DEFAULT\_APP project to use that template.
3. At **New Project Code**, enter a new project code.
4. At **Project Description**, enter a brief description.
5. Click **Save New Project**.

### Results

Text Manager saves a new project with the same configuration as the project that was copied.

## Configure a project

Create configuration keys for a project to define which applications will use it.

### About this task

Banner administrative applications require that you define the BAN\_APP, MODULE\_NAME and USE\_IN\_APP configuration keys. Banner Self-Service applications require that you define the BAN\_APP configuration key.

### Procedure

1. Access the **Text Manager Projects (GMAPROJ)** page.
2. Click the **Configuration** tab.
3. Define the required parameters.  
To configure a project that customizes a Banner administrative application, add and define the following parameters:
  - BAN\_APP
  - USE\_IN\_APP
  - MODULE\_NAMETo configure a project that customizes a Banner Self-Service application, add and define the BAN\_APP parameter.  
Refer to the *Configuration keys* section to see valid values that you can associate with each key.
4. Click **Save**.

**Related reference**

[Configuration keys](#) on page 286

**Configuration keys**

Configuration keys define which applications will use a project. You define configuration keys on the Text Manager Project (GMAPROJ) page.

Key	Values	Description
BAN_APP	BANADMIN or name of the Self-Service application  To customize text in a Self-Service application, set BAN_APP = the value for app.name in the <code>application.properties</code> file of that application.	Defines the associated Banner Administrative application.  Any project with a key value pair of BAN_APP = BANADMIN uploads properties from the Banner Administrative applications. Use this key along with the MODULE_NAME key to define which Administrative module to associate the project with.
USE_IN_APP	<ul style="list-style-type: none"> <li>Yes = Administrative application reads the translated text strings from this project in the database.</li> <li>No = Administrative application reads the text strings from the properties file.</li> </ul>	Use to enable the project in Administrative applications that will be used to read database properties.  Do not use this key when configuring a project for customizing a Self-Service application.
MODULE_NAME	ALUMNI, ARSYS, BDR, DOCUMENT, EXTSOL, FINAID, FINANCE, GENERAL, COMMON, PAYROLL, POSITIONCONTROL, STUDENT, STUDENTAID	Defines the Administrative module to associate the project with.  This key is used to upload properties for Banner Administrative applications. You can use this key with the BAN_APP of BANADMIN.  Do not use this key when configuring a project for customizing a Self-Service application.

**Related tasks**

[Configure a project](#) on page 285

[Use the Interactive Translator](#) on page 290

## Project configuration key examples

These examples illustrate how to define the configuration keys for a project.

### Banner Administrative application example

This example illustrates the configuration key values for a project that uploads properties from a Banner Administrative application, specifically Banner General.

Key	Value	Description
BAN_APP	BANADMIN	Identifies that the system uploads properties from a Banner Administrative application.
USE_IN_APP	Yes	Enables the Administrative application to read translated text strings from the database.
MODULE_NAME	GENERAL	Identifies that the project it associated with Banner General application.

### Banner Self-Service application example

This example illustrates the configuration key value for a project that uploads properties from a Banner Self-Service application, specifically Banner Extensibility. When configuring a project associated with a Banner Self-Service application, you need to define only the BAN\_APP key.

Key	Value	Description
BAN_APP	BannerExtensibility	Identifies to upload properties from the Banner Extensibility application.

## View a project

You can view a project, including information about the source properties files and translation statistics, on the Text Manager Main (GMAMAIN) page.

### Procedure

1. Access the **GMAMAIN** page.
2. At **Project**, click the associated ellipses, choose a **Project Code**, and click **OK**.

### Results

On the Locators and Statistics tabs, you can now see the list of source properties files that are part of the project, when they were last extracted, their related targets, and statistics about the translations.

---

## Locators and properties files

Locators are a list of the properties files that have been uploaded into a project. Each locator includes information about when and how the properties were added to the project.

Double-click a row in the Locators tab to open that record in the Text Manager Interactive Translator (GMATRAN). GMATRAN lists the text strings for a locator properties file where you can define custom translations for each string.

## View project statistics

The Text Manager Main (GMAMAIN) page includes counts of the possible statuses for all translation records in a project. You can view these counts by the number of text records or words.

### About this task

Statistics include information about the customizations that have been performed on a properties file. They include the following data:

- Count of total text strings or words uploaded from a properties file.
- Count of text strings or words in the properties file that have been translated.
- Counts for each status, like translated and pre-translated, that you established on the Interactive Translator page.
- Percentage of text strings or words that have been translated.

### Procedure

1. Access the **GMAMAIN** page.
2. At **Project**, click the associated ellipses, choose a **Project Code**, and click **OK**.
3. Select the **Statistics** tab.  
**Result:** By default, the statistics display text record counts for each translation status.
4. Select the **Count in words** check box to view word counts for each translation status.

## Filter project translation records

Filters define how to narrow the list of customized text strings displayed on the Text Manager Main (GMAMAIN) Locators tab. Use a filter to view the translation text strings in a more organized manner.

### About this task

Filter the translation records within a project so that you can work with a subset of the information. You can filter on source, type, extracted date or location, target, last action, and action date. For example, you could create a filter that finds the text strings for the GTVLANG page by defining the filter "Source contains GTVLANG".

---

### Procedure

1. Access the **Text Manager Main (GMAMAIN)** page.
2. At **Project**, click the associated ellipses, choose a **Project Code**, and click **OK**.
3. Select the **Locators** tab.
4. Click the **Filter** button.
5. Click **Add Another Field...** and choose the field you want to filter on.
6. Click and choose an operand like *Contains* or *Equals*.
7. Enter a value for the filter field to finish defining the filter.
8. Repeat steps 5 on page 289-7 on page 289 to add more filters.
9. Click **Go**.

### Results

Only the translation records that satisfy the filter value are listed.

## Upload properties

You need to upload the properties strings from both Banner Administrative and Banner Self-Service applications. The process you use depends on whether you are uploading from an Administrative or Self-Service application.

### Related tasks

[Upload properties from a Banner Administrative application](#) on page 289

[Upload properties from a Banner Self-Service application](#) on page 290

## Upload properties from a Banner Administrative application

Properties from the Banner Administrative application pages must exist in the database so that you can access the Text Manager pages in the Banner Administrative application and customize the messages that have been uploaded to the database.

### Procedure

1. Access the **Text Manager Properties Upload (GMAUPLD)** page.
2. Enter the **Root Locale**. This is the base language of your institution.
3. Check the boxes to upload **Other Locales** if you plan to customize text from other locales.
4. Choose the **Project** where the properties will be uploaded.
5. Click **Fetch Files** to load the resources for the module defined on the project.
6. Choose the resources to upload from the properties files.
7. Check **Include** for each of the resources that you want to upload.

8. Click **Upload Files**.

**Result:** The specified resources are uploaded from the application properties file to the Banner database.

## Upload properties from a Banner Self-Service application

Properties from a Banner Self-Service application must exist in the project database.

### Before you begin

Your user account must have the `WTAILORADMIN` role assigned to access Banner Self-Service.

### Procedure

1. Open the Banner Self-Service application.
2. Select **Tools > Upload Properties**.
3. Enter the **Root Locale**. This is the base language of your institution.
4. Check the boxes to upload **Other Locales** if you plan to customize text from other locales.
5. Click **Upload all application resources to database** or check the **Advanced** check box to select specific resources to upload.
6. If using the **Advanced** check box, check the boxes for the specific resources and click **Save**.

### Results

After you have saved at least one file, the upload is ready.

## Use the Interactive Translator

The Interactive Translator lets you find and replace text strings that you can customize in the target. You can also use the Translator to go directly to a target text field and change the target text.

### About this task

Some translation projects can include many translation records that take a long time to display when you initially load the page. You can define fields to filter the data, described in the following steps, to reduce the number of records returned. This gives you a more manageable properties list to work with and takes less time to load.

### Procedure

1. Access the **Text Manager Interactive Translator (GMATRAN)** page.
2. Select the **Project** where the application properties were previously uploaded or imported.
3. Select the base **Source Language** to customize.  
If you are customizing text in your institution's base language, select root.

4. Select the **Target Language**.  
If you are customizing text in your base language, enter the code of the base language.
5. Click **Go**.  
**Result:** The page expands into Query mode giving you the option to filter which project properties the system returns.  
  
**Note:** In Query mode, you cannot change the Project, Source Language, or Target Language fields; they are read-only. If you need to change one of those fields, click **Start Over**.
6. If you do not want to filter the list of records returned, click **Go** in the Interactive Translator section.
7. If there are a large number of translation records for this project, add filters.
  - a) In the Interactive Translator section, click **Add Another Field** and select a field.
  - b) Click **Contains** and select the filter action, for example, Contains, Starts With, Ends With, Equals, and so on.
  - c) In the blank entry field (the third field that defines the filter), enter the value that you want the filter to display.
  - d) Repeat these sub-steps to add more filters as needed.
  - e) After adding desired filters, click **Go** in the Interactive Translator section.

## Results

Depending on your selections, Text Manager lists either all the properties associated with the project or only the ones that satisfy the filters you defined.

## What to do next

See the topics listed under Related Links to perform specific translation tasks.

### Related tasks

[Populate targets with source text](#) on page 292

[Pre-translate existing text](#) on page 292

[Perform a fuzzy match](#) on page 293

### Related reference

[Configuration keys](#) on page 286

## Customize text strings

Customize text strings to define labels and descriptions in a target application.

### About this task

These steps outline a basic flow for how to customize text strings.

### Procedure

1. Access the **Text Manager Interactive Translator (GMATRAN)** page.

2. Navigate to the **Search and Replace** section to find the text strings you are planning to customize.
3. At **Find What**, enter the value you want to find.
4. Select **Search** in Source Text or Target Text.
5. To replace the text strings in the **Target** field, click the **Replace** option and enter the new text in the **Replace With** field.
6. Click **Replace All** to replace all occurrences of the text string in the target field with the new customized text.

### Results

When text is replaced, the new text appears in the **Target Text** field with a Translated status.

## Populate targets with source text

You can use the **Populate Targets** button to copy source text to the target text for every record listed in the Interactive Translator section that has a Populated status. This allows you to observe syntax requirements when doing translation.

### About this task

The following steps describe how to copy text for all records that have a Populated status. You can also copy the source text to the target text for a single record with an Untranslated status by clicking the > button between the source and target fields of that record.

### Procedure

1. Access the **Text Manager Interactive Translator (GMATRAN)** page.
2. Navigate to the project with the records that you want to populate.
3. Click **Populate Targets**.

### Results

The target text is populated with the source text for all records with a Populated status.

## Pre-translate existing text

The Pre-translate feature lets you search all projects for existing translations in the database and match the text strings in the current project's source. If translations exist, you can save translation time by using them in the current project.

### Before you begin

Establish your pre-translate user options on the Pre-Translate Options (GMAPRTO) page before using the pre-translate option. See the topic listed under Related Links for instructions on how to do this.

---

### Procedure

1. Access the **Text Manager Interactive Translator (GMATRAN)** page.
2. Select a project, Source Language, and Target Language, and click **Go**.
3. Click **Pre-translate**.

### Results

If Text Manager finds any pre-existing customizations or translations, those customized values display in the target column with a Pre-translated status.

### What to do next

You can repeat the pre-translation action later in the translation project to match on new translations that have been added.

## Define Pre-translate options

Before you use the pre-translate feature on the Text Manager Interactive Translator GMATRAN page, you must define the options that you will use during the pre-translate process.

### Procedure

1. From the **GMATRAN** page, select **Related > Pre-Translate Options (GMAPRTO)**.
2. Set the options for your pre-translation requirements.  
See the Online Help topic for the GMAPRTO page for descriptions of the options.
3. Click **Save**.

### What to do next

You can now successfully use the Pre-translate button on the GMATRAN page to search for existing translations that match the strings you are translating.

## Perform a fuzzy match

The fuzzy match feature lets you search for an existing translation that is similar to the one you are currently customizing. Use it to retain consistency across translations.

### Before you begin

Under **Tools > > User Options**, you can select to Always Fuzzy Match on the Source text column regardless of whether you are searching the source or target column using the Interactive Translator.

### Procedure

1. Access the **Text Manager Interactive Translator (GMATRAN)** page.
2. Navigate to the project with the records that you want to fuzzy match and translate.

3. Place the cursor in the field that you want to match; either **Source Text** or **Target Text**.  
If you have selected the **Always Fuzzy Match on the Source** text column on the User Options page, that will override any selection you make here.
4. Click **Fuzzy Match**.
5. In the Fuzzy Matching section, set the following values.
  - a) At **Search**, enter a text string.  
The search term needs to include at least one string with a minimum of four characters and no spaces. Without a four character string, the Fuzzy Match will not find any matches.
  - b) Choose whether to perform the text match in the **Source** or **Target** text columns.
  - c) At **Target Language**, enter the language code. This allows you to fuzzy match on another language or on several languages based on the language code.
  - d) At **Complete %**, enter a value between 0 and 100 or accept the default value, which should work well in most cases.  
The percentage establishes the search extent. A low percentage value performs a faster, less complete search. A higher value performs a more comprehensive search. A search using 100 percent can potentially return a large number of records.
6. Click **Fuzzy Match**.  
**Result:** Results of the Matching process display in the Source Text or Target Text column.
7. Select a record and choose how to replace the text. You have the following button options.

Option	Description
<b>Insert Left</b>	Appends the text that is currently in the Target Text field of the Fuzzy match result to the left of the existing target text in the record that was selected on the Interactive Translator.
<b>Insert Right</b>	Appends the text that is currently in the Target Text field of the Fuzzy match result to the right of the existing target text in the record that was selected on the Interactive Translator.
<b>C</b>	Copies the text that is currently in the Target Text field of the Fuzzy match result and replaces the existing target text in the record that was selected on the Interactive Translator.

8. Click **Show** to show the selected match in another instance of Interactive Translator, which shows the project, source, and other keys.

## User Options in the GMATRAN page

The User Options define how the Pre-translation and Fuzzy Match features will work. Select **Tools > User Options** to access these options.

User Option	Description
Auto-Propagate	This option automatically translates matching source text when the same source text occurs multiple times in adjacent rows. After entering the Target Text, use the Down arrow key or Tab key to cycle through targets that match. You can choose to replace the text, retain the existing text, cancel the action, or replace all matching text.
Always Fuzzy Match Source	Select this box to do a Fuzzy Match on the Source text. Clear the box to do a Fuzzy Match on the Target text.  <b>Note:</b> Define a match in the Fuzzy Matching section to override the source or target matching settings specified here.
Pre-Translate Match Case	Select this box to perform Pre-Translation using the exact case of the Source string (Case Sensitive).
Pre-translate Copy Case	Select this box to ignore the case of the target translation; instead it will reformat the string using the source string case.
Max Target length %	Sets the target language field's maximum length. For example, if set to 120%, the target field can be 20% longer than the source field. The Interactive Translator ignores this value when it is able to exactly determine the maximum length of source and target.

## Delete records from the Interactive Translator

When you are using the Interactive Translator, you can delete all of the current records.

### About this task

**Warning!** Use caution when deleting records. This action deletes all target language translations currently listed based on your last selection criteria and resets the Status to Untranslated. You cannot undo the delete action.

### Procedure

1. Access the **Text Manager Interactive Translator (GMATRAN)** page.
2. Navigate to the project with the records that you want to delete.
3. Click **Delete Listed Records**.
4. Confirm the deletion in the warning dialog box.

---

## Results

Text Manager deletes the records listed in the Interactive Translator section.

## Translations

A "translation" refers to the set of translated text objects associated with a Text Manager project and the parameters that define those objects.

## Share translations

You can share your translations with other users using the Text Manager export and import features. You must save files in CSV format to import or export them.

### Import a project

You can import a project shared by another user or to access a project you created in another environment.

#### Before you begin

You can only import properly escaped CSV files. Before you import a file, check that its escape flag is `\`. If it is not, you may get a warning about unescaped strings when you import the file. You can still import the file if you know that the file does not contain unescaped strings.

#### About this task

The following processing occurs when importing file:

- Text Manager sets the **Extracted Date** of all imported files to the date you imported the project, not the date you originally extracted the files into the original project. After you import files, the **Extracted Date** and **Action Date** for each imported file is the same.
- Strings with a New status in the original project have an Untranslated status in the imported project.

#### Procedure

1. Access the **Text Manager Projects (GMAPROJ)** page.
2. Open the project you want to import data into.
3. Click the **Import** tab.
4. Click the folder icon next to the **File Name** field.
5. Navigate to the file you want to import and click **Open**.
6. Specify the CSV languages you want to import and the corresponding language codes in your project.
7. Verify that the **CSV Project** name and **Character Set** are correct.

8. Select the **Overwrite** check box to replace the previous version of a file you are importing if one exists.
9. Click **Start**.
10. When the import finishes, review the **Import Status** messages when the import.
11. Click **Save**.

## Results

Text Manager imports the file into your local instance.

## Export a project

Exporting a project is the easiest way to share your translations with other Text Manager users or across multiple environments.

### About this task

When you perform an export, Text Manager verifies that the strings use correct escaping, specifically for new lines and carriage returns. Text Manager adds a Yes or No flag to the CSV output file that indicates whether exported data is properly escaped.

### Procedure

1. Access the **Text Manager Projects (GMAPROJ)** page.
2. Open a project.
3. Click the **Export** tab.
4. At **File Name**, enter the name of the file you want to export.
5. Select the languages you want to export by selecting the **Inc** check box associated with the language.
6. Check **Compress Keys** to reduce the size of the exported file.
7. Click **Start Export** to export data into the indicated file.  
An imported file's module count can be lower than its count in the original exported project because Text Manager does not extract modules that do not include any translatable items.
8. When the export finishes, review the Export Status messages.
9. Go to the output directory, open the CSV file, and verify that it contains the data you wanted to export.
10. In the header of the CSV file, check that the escape flag is  $\backslash$  indicating that relevant characters like newlines and carriage returns are properly escaped.

You must properly escape the file so that other users can import that file into their Text Manager instance without issues.

## Results

Text Manager exports the file data to a CSV file.

## CSV file considerations

A CSV file, or comma-separated value file, is a plain text file that stores numbers and text in a tabular format. Each line of the file is a data record that includes one or more fields separated by commas. You can import and export CSV files in Text Manager.

The CSV file is UTF-8 encoded. This means that non-ASCII characters may not display correctly in a spreadsheet or editor if it does not use UTF-8 encoding to interpret the file. The separator character is always a comma. However, the regional settings of your computer may influence the separator character assumed by other programs when interpreting CSV files. For example, Microsoft Excel uses the semicolon instead of a comma in countries where the number decimal separator is a comma.

## Translation history

A translation history list stores all project translations.

On the Pre-Translate Options (GMAPRTO) page, you can define that the translation feature use the translation history if there are no other matches. If Text Manager finds multiple different matches in history, the pre-translation algorithm decides which to use based on the age and frequency of translations.

## Clear translation history

Text Manager stores previous versions of translations in project history. When you are finished with a project translation, clear it from the project history.

### Procedure

1. Access the **Text Manager Project (GMAPROJ)** page.
2. Navigate to a project.
3. Click the **History** tab.  
**Result:** You will see a record count for each language that has history records.
4. Select the **Clear** check box associated with each translation that you want to delete.
5. Click **Clear History**.
6. Click **OK** when asked to confirm the deletion.

### Results

Text Manager deletes the history for the selected languages.

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## Work with the cache

Banner Administrative applications store pages in the application cache browser. After you change a text string in Text Manager, remove previous page changes from the Text Manager cache and clear the browser cache to see the new customized string in the Banner application.

## Display translations in administrative application

After you make translation changes in Text Manager, you need to clear both the browser cache and server cache to correctly display new translations in the administrative application.

### Procedure

1. Verify that the refresh interval time period has elapsed.  
If you are using the default value for this interval (`locale.properties.db.refresh.interval=30`), the changes will not take effect until 30 minutes have elapsed.
2. Clear the server cache.
  - a) Access the **Text Manager Projects (GMAPROJ)** page.
  - b) Open the changed project.
  - c) Click the **Cache** tab.
  - d) Select the **Select** boxes associated with the appropriate pages, and click **Get Cache Status**.
  - e) If the Cache Status is Yes, then click **Remove from Cache** to clear the server cache for those pages.

**Note:** Using the Remove from Cache feature does not bypass the refresh interval defined in the `config.properties` file. After you clear the cache, you must still wait for the time limit to pass before changes display in the Administrative application.

3. Instruct users of the administrative applications that use Text Manager to clear the web browser cache in the administrative application. This removes cached information from the computers.  
**Result:** This removes cached information from the computers so that any new translations display.
4. Each user needs to clear their web browser cache to remove all cached information from their computer.

## Customized text strings do not display in the application pages

Customized text does not display in the Banner application pages.

### Invalid `localizationProvider` property setting

The `localizationProvider` property value in the Banner application `config.properties` file is incorrect; it must be `dbLocalizationServicesProvider`.

**Remedy**

Database Administrator

**Procedure**

1. Open the application `config.properties` file.
2. Verify whether the `localizationProvider` property is set to `dbLocalizationServicesProvider` and change the property value if necessary.
3. Save and close the `config.properties` file.

**Database refresh interval has not passed**

Changes were made in Text Manager but the server hasn't yet communicated the changes to the Banner application.

**Remedy**

Database Administrator

**Procedure**

1. Open the application `config.properties` file.
2. Check the value of the `locale.properties.db.refresh.interval` property.  
If the time defined in this property has not passed, the text changes do not display in the Banner application.
3. Save and close the `config.properties` file.
4. Wait until the time has passed and check the application page again.

**Configuration properties**

Banner Administrative applications store information about the service provider and the server checking frequency in the application `config.properties` file.

Property	Description
<code>localizationProvider</code>	This property value must be <code>dbLocalizationServicesProvider</code> so that translations made using the Interactive translator display in the associated Banner application.
<code>locale.properties.db.refresh.interval</code>	<p>Defines, in minutes, how frequently the server checks for updated text. This much time must pass before your translation changes will display in the Banner administrative application.</p> <p>Update this property to change the interval. For example, in a test environment, where changes occur more frequently, you can decrease the time interval; in a production environment, where changes occur less often, you can increase the interval.</p>

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## Terminology database

The Terminology Database (TDB) is one of the main drivers in the translation and localization process. In the TDB, you define the source and target language or "terminology" for commonly used terms, messages, and other text elements used in the Banner administrative application.

You can create and maintain the TDB in a tool like Dejavu or Excel and export the data to a Comma Separated Values (CSV) file, which you can then load in Text Manager.

Text Manager expects the CSV file to have the following formatting:

- First row is a header row that includes the column names.
- File includes at least two rows, one row with the source language text and another with the target language text of your current Text Manager session.
- Character set of the CSV file must match the character set of the Text Manager session.

## Load terminology database

After you have created a Terminology Database in a third-party tool like Dejavu or Excel, you can load it into Text Manager.

### Before you begin

The Terminology Database must be a CSV file.

### Procedure

1. Access the **Text Manager Load Terminology Databases (GMAEXDB)** page.
2. Enter a **Project Code**, **Source Language**, and **Target Language** and click **Go**.
3. Click the folder icon next to the **File Name** field, find the database to load, and click **Open**.
4. Select a text field in the column and click the **Source** button. This associates that column with the Source Language.
5. Select a text field in the column and click the **Target** button. This associates the column with the Target Language.
6. Click **Load**.

## Define locales to identify source and target languages

You must define locales using ISO language and country (or territory) codes. Use these locales to identify the source and target languages that you plan to translate.

### About this task

Ellucian recommends that you use a concatenation of Language Code [ISO 639] and Country Code (or Territory) [ISO 3166], for example, enUS or enGB. Choosing the Oracle NLS parameters

is very important. Text Manager requires you to use these parameters if you use Text Manager to internationalize the strings within PL/SQL. This makes the text strings dependent on the Oracle NLS\_LANGUAGE parameter of the Oracle session created by Forms and Reports. You set this in the application server environment or the registry on Windows servers. The system also uses the parameters for C internationalization to generate the appropriate names for the Resource Files that are derived from a concatenation of the file, language, and territory fields.

### Procedure

1. Access the **Text Manager Languages (GTVLANG)** page.
2. Navigate to the bottom of the **Languages** list, select the bottom row, and press the down-arrow to create an empty record.
3. At **Code**, enter a an ISO 639 language code.
4. In the **Description** field, enter a brief description of the language.
5. In the **Oracle Language** field, choose a language from the list.  
Refer to Oracle documentation to determine the correct Oracle NLS parameters (Language, Territory, and Character Set) to associate with the Text Manager Language Codes.
6. In the **Oracle Territory** field, choose a territory from the list.
7. In the **Oracle Character Set** field, choose a character set from the list.

**Note:** Text Manager sets the **Length Semantics** field to CHAR because that is the only supported value.

8. Click **Save**.

### Results

You successfully defined locales that identify the source and target language for a translation.