University of Wisconsin System
SFS Business Process
RPT.1.02.03 – Intermediate
PeopleSoft Query

Contents

PeopleSoft Query Overview

PeopleSoft Query (Query) is an end-user reporting tool that allows users to extract information from SFS easily and efficiently. Queries can be as simple or as complex as needed; and can be one-time queries or saved queries used repeatedly. This manual walks through the steps of creating a query using the web query tool, and also discusses some advanced query topics that aid in creating powerful queries.

To use Query efficiently, you need a basic understanding of the data (that is, in what record is the data stored) the query will be based upon, and relationships to other records within the database. It is fairly simple to create a query, but it takes time and understanding to create a query and bring back accurate data.

Query has several different ways to do the same task, this manual shows one way. You will likely find different ways to do many items described in this manual. Use the method that works best for you.

Before getting started with Query, remember the following:

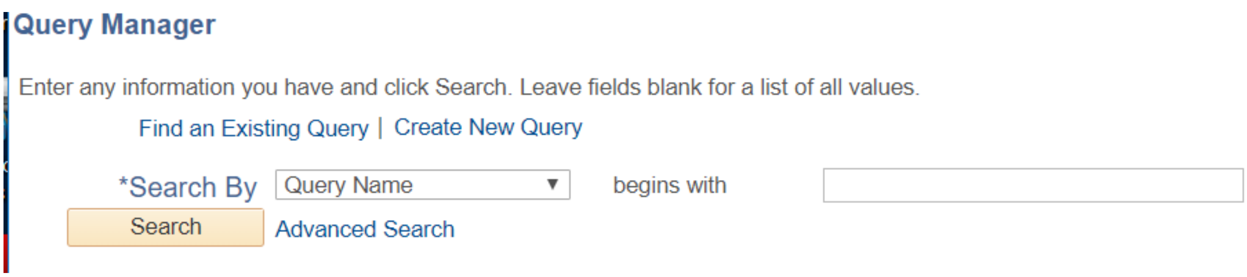
- **Use a single mouse click** when working with Query. There is no need to double click on fields or tabs.
- **Do not use the back button** on the browser when navigating through SFS.
- If the system is processing, **there is not a way for you to stop the processing**. Pressing the stop button on the browser or clicking on another tab will likely cause the system to not respond. You will lose any unsaved data.
- PeopleSoft uses the terms “record” and “table” interchangeably. In this manual, the terms will mean the same thing, which is a two-dimensional arrangement of rows and columns that holds data.

- Queries can be either ‘Public’ or ‘Private’. Public queries are available for any user to review, run or alter. Private queries can only be accessed by the owner.

Process Frequency	Used on an ad-hoc basis.
Dependencies	Some knowledge of SFS records and data.
Assumptions	N/A
Responsible Parties	N/A
Alternate Scenarios	N/A

Process Details - Joins

Navigation: Reporting Tools> Query> Query Manager



I. Creating a Query with Multiple Records

Query Manager allows you to build queries with multiple-record joins. Joins retrieve data from more than one record. PeopleSoft Query links the records, based on common fields, and links the rows on the two records by common fields in shared columns.

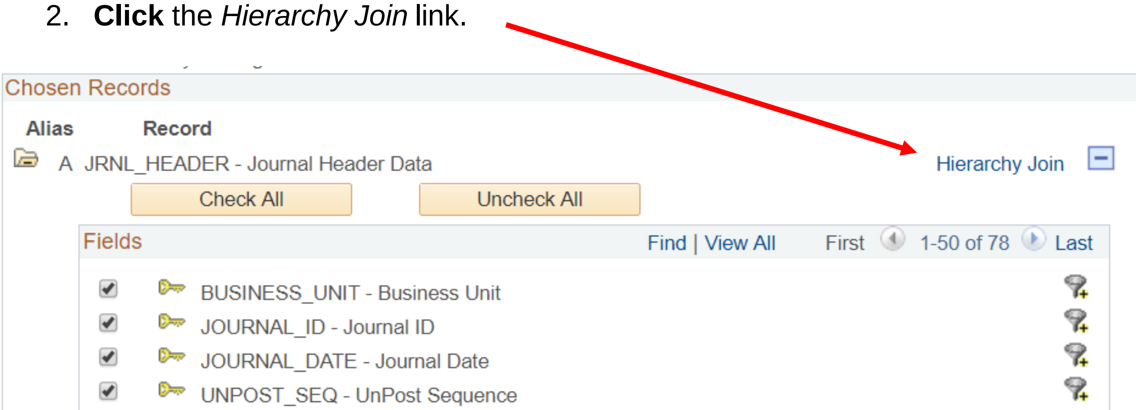
Joined records must each include **at least one** field in both records that contain similar data. For example, if you want to join ***Vendor*** record and ***Voucher*** record, they both must contain a common field, such as a *Vendor ID* field, or a “High level” key field. (symbolized using a Key) to serve as a field on which the data can be joined. Records can be joined on multiple (similar) fields so long as the fields have the ability to match information. Typically (but not always) records are joined on key fields. Key fields are essentially the field(s) that make the record unique, and are shown in Query with a symbol next to them. If you have a query with multiple records, and do not add joins or create incorrect joins, the results will return wrong information may result in a cartesian join and the query could get stuck in a loop and never finish processing…..this is bad and the System Administrators will not like you.

Using joins, you define relationships among fields when you query the records. The procedure for joining records differs depending on how the records being joined are related to each other. Query Manager uses three types of joins: record hierarchy (parent-child relationships), related record (predefined relationships), and any record (relationships the user defines).

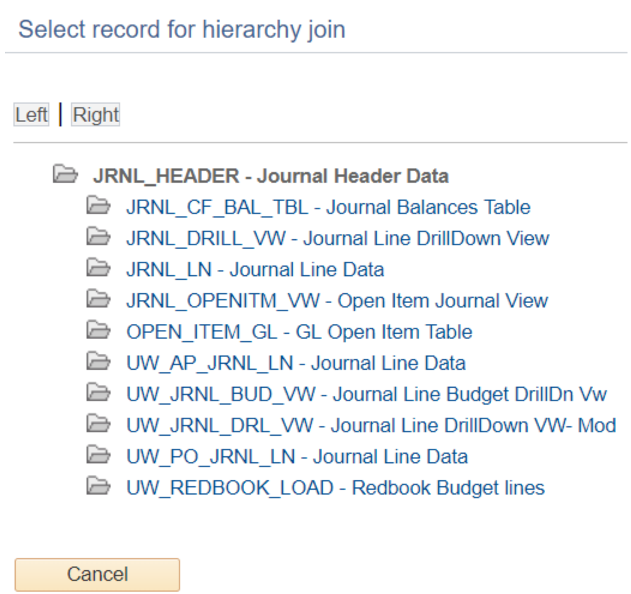
II. Creating Hierarchy Joins

A hierarchy join is similar to a parent/child relationship. An example of this is the JRNL_HEADER and JRNL_LN. This type of join is the easiest to create in Query and PeopleSoft completes the join automatically.

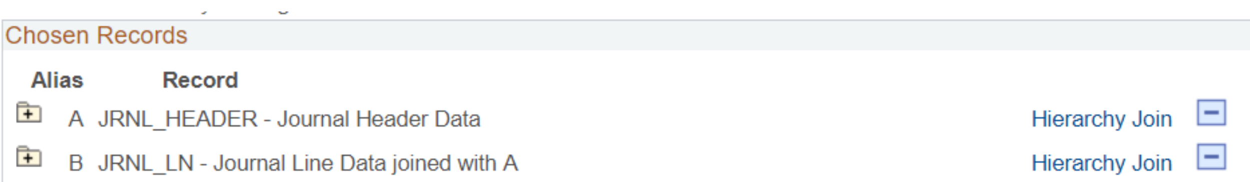
1. To create a Hierarchy Join, **select** the base record for your query (parent)
2. **Click** the *Hierarchy Join* link.



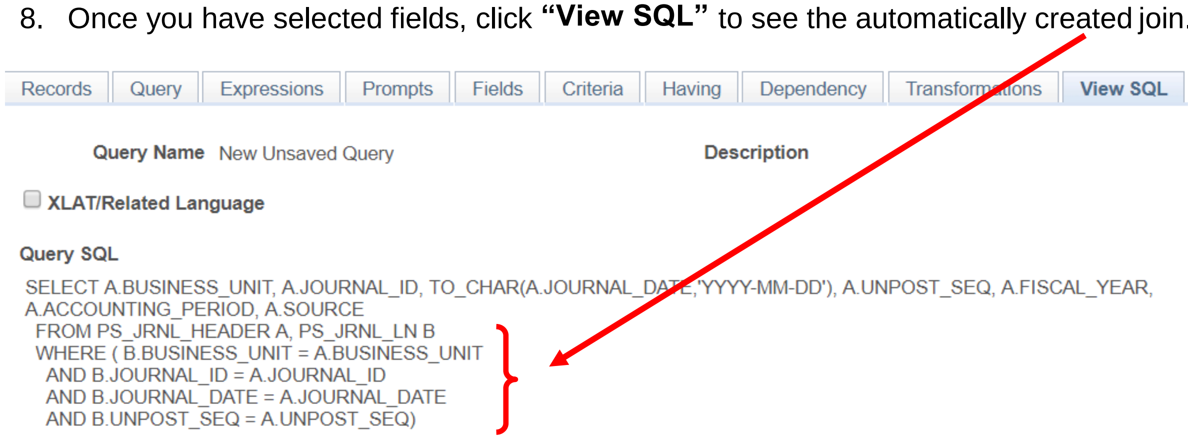
3. Records that have a parent/child relationship will appear.



4. **Select** the child record to join to the parent record…..**select** JRNL_LN record. The join is reflected on . This action automatically creates the necessary joins needed between the two records.



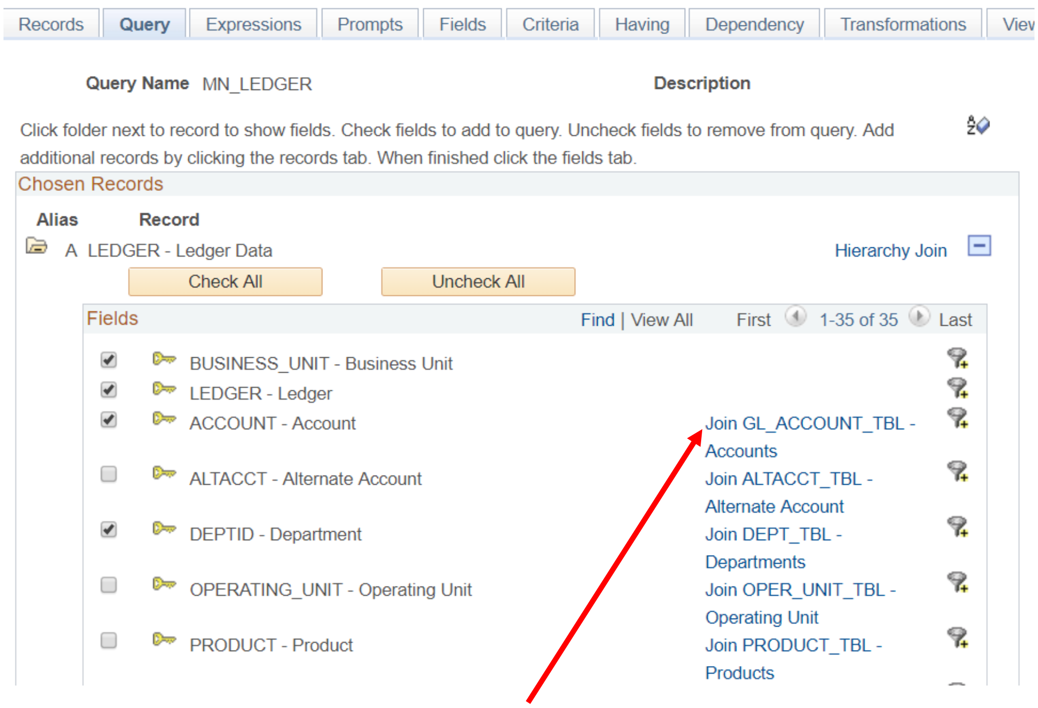
5. You can **select** fields from either record to be included in the results, the same as a query with only one record.
6. **Click** next to the record name to minimize the record, OR
7. **Click** to view the fields from that record.
8. Once you have selected fields, click **"View SQL"** to see the automatically created join.



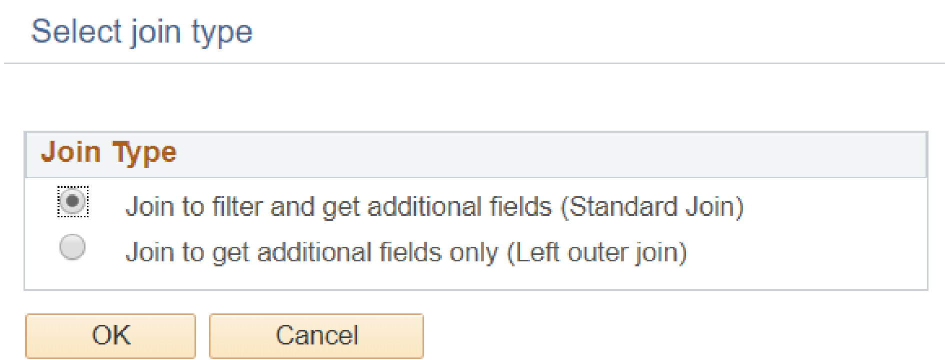
III. Creating Related Record Joins

In a Related Record join, you can automatically join two records based on a relationship that is predefined in the record design.

1. In the example below, the LEDGER record is used in the query. Notice there are several hyperlinks on the right hand side that say "Join…" **Clicking** on one of these hyperlinks will join the record automatically to the record you choose. Click on the link for Account…..



2. When you click on the link to add the record, you will be taken to the “Select join type” screen.



3. **Choose** a join type
4. **Click** OK. (For information on Left Outer Joins, see Section V.)
5. Once you have joined the appropriate record(s), you can **add** fields to your query or view the fields from multiple records in your query.
6. **Navigate** between the records the same way as the Hierarchy Joins above, by **clicking** the next to the record name on Query.

IV. Creating Any Record Joins

Query Manager allows the creation of a join between any two records. Query will attempt to automatically join the records based on the keys on each record, which may or may not be what you want. It is very important to understand the record structure to ensure the links created are appropriate. Additional joins may need to be added that Query does not create. Planning the query becomes more important as query complexity increases.

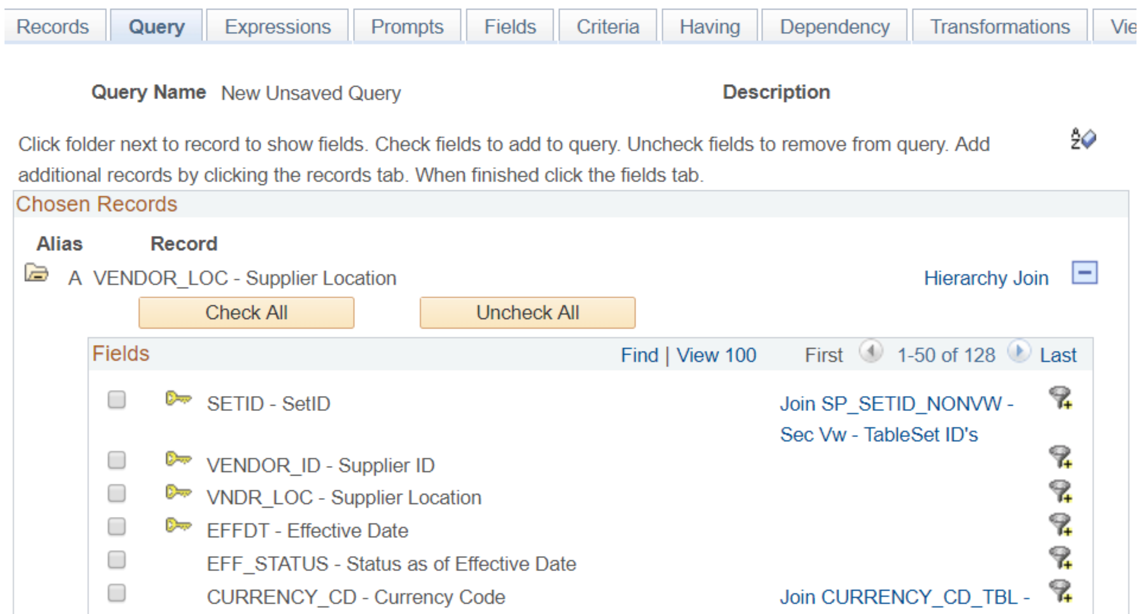
In this example, two AP records are used in the query - VENDOR_LOC and VENDOR_PAY.

1. **Click** Records
2. **Enter** the *Record Name* 'VENDOR_LOC' in the *begins with* field
3. **Click** Search

Search Results

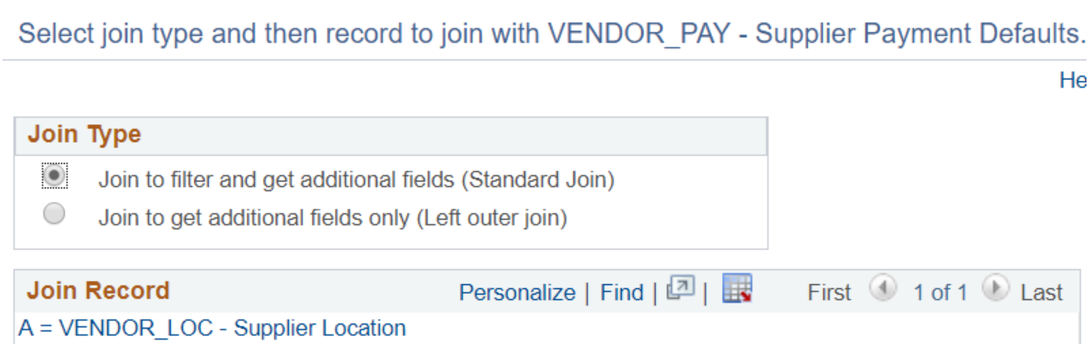
Record	Personalize | Find | View 20 |	First 1 of 1 Last
Recname	**Join Record**	**Show Fields**
VENDOR_LOC - Supplier Location	Join Record	Show Fields

4. **Click** the *Add Record* hyperlink for the *Recname* VENDOR_LOC.
5. You will see the VENDOR_LOC record added to Query.



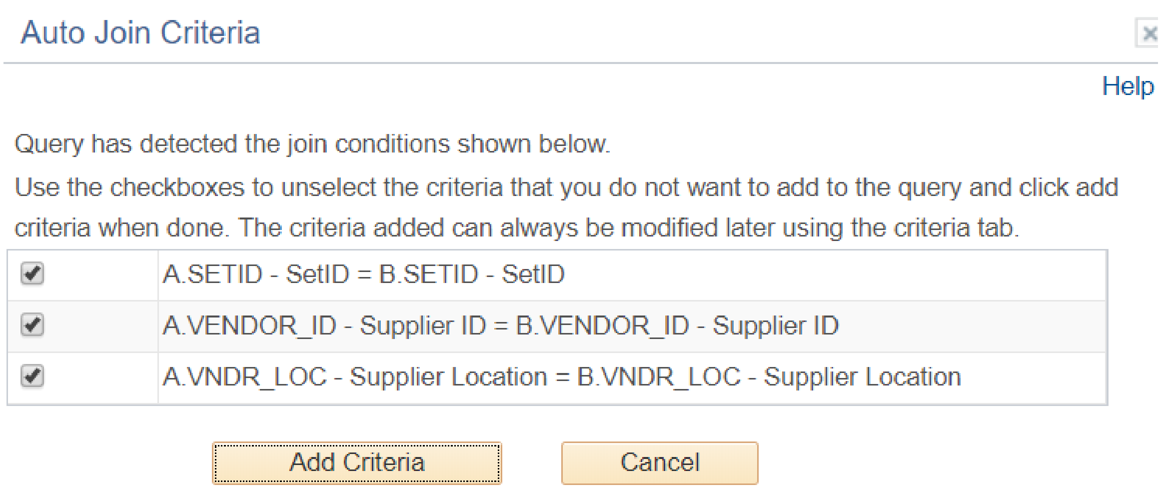
6. To select the second record, **click** Records
7. **Enter** the *Record Name* 'VENDOR_PAY' in the *begins with* field
8. **Click** Search

9. **Click** the *Join Record* hyperlink for the *Recname* VENDOR_PAY.

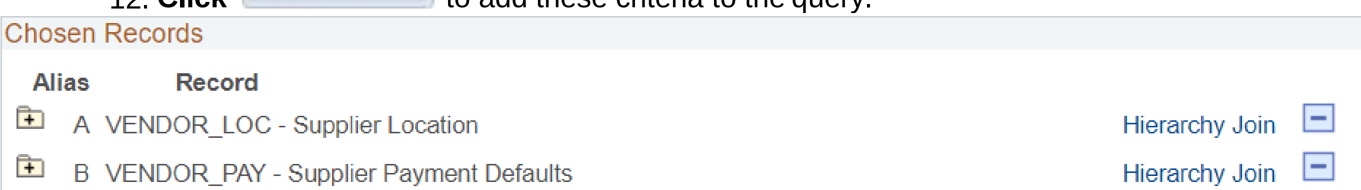


10. **Select** a Join Type
    - A Standard Join will return data only if data is present that matches your criteria in both records.
    - A Left Outer Join will return all data from the first record and additional data where the criteria are met on the second record. It will not filter the results to where the conditions are met on both records. (For more information on Left Outer Joins, see Section V.)

    In this example, we will use a Standard Join, because we want data from the records where data is present in both records.
11. **Click** on the appropriate hyperlink in the *Join Record* section to add the second record to the query. In this example, there is only one additional record, VENDOR_LOC. PeopleSoft will create criteria based on the similar keys between each record.

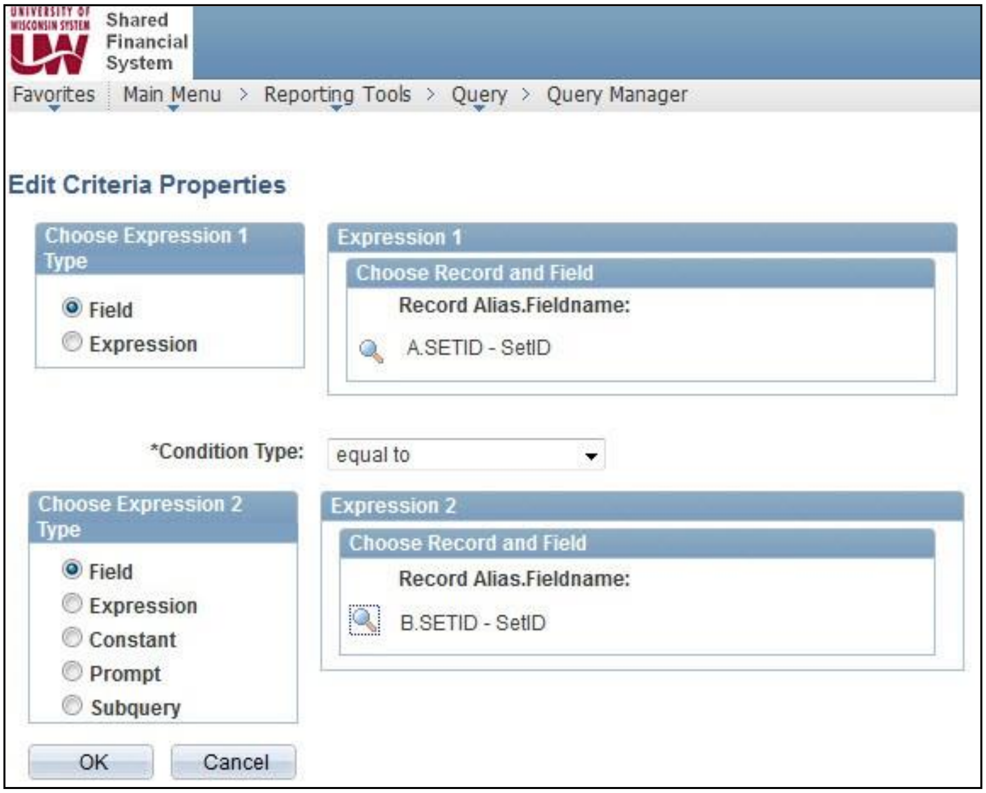


12. **Click** Add Criteria to add these criteria to the query.



13. You will see the VENDOR_PAY record added to Query.

14. If additional criteria need to be entered, **navigate** to Criteria and add appropriate criteria, with the *Expression 1 Type* and *Expression 2 Type* for both being ‘Field’. This would look like the following:

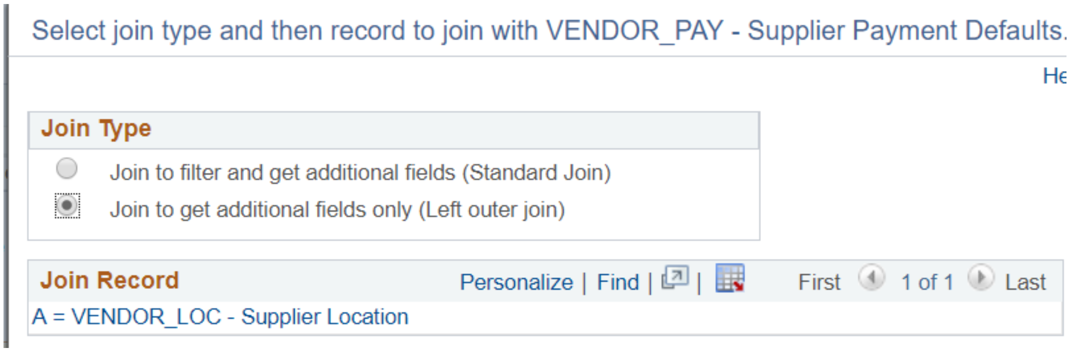


TIP: If you are unsure of the record structures and how the records are related, run the query with only one record at a time and review the information to determine proper relationships.

V. Left Outer Joins

Query Manager enables you to easily create a Left Outer Join. The query will then bring back all rows of the first (left) record in the result set, even if there are no matches in the joining record.

1. **Select** the Left Outer Join option for the Type of Join



When you **select** Left Outer Join as your Join Type, join to the most recently added record in the query, or you will receive an error message. If you are creating a query with more than 2 records, be sure to add the "left" record just before the "right" record.

Here is an example, following are two sample records and how the different joins would return data:

- *Standard Join* - Rows are returned <u>only</u> where there is data in both records. (Result set contains 6 rows)

Cust.#	Customer First	Customer Last	Email	Order ID	Item	Item#	Quantity	Shipped	Total Order Amt
2	Frank	Smith	frankie@email.com	1	Sponge	29892974	4	☑	$25.25
3	Jennifer	Johnson	Jjgirl@email.com	6	Napkins	20777744	100	☑	$4.55
3	Jennifer	Johnson	Jjgirl@email.com	4	Paper Plates	29379246	25	☑	$11.56
4	Robert	Green	begreen@email.mail	5	Napkins	29797746	100	☑	$4.55
6	Timothy	Dominick	tdominick@emailaddressplace.com	3	Dish Towel	20742749	2	☑	$4.75
6	Timothy	Dominick	tdominick@emailaddressplace.com	2	Scraper	28797294	1	☑	$5.23

- *Left Outer Join* - All rows are returned from the first (left) record, and any data from the second (right) record is also presented. (Result set contains 8 rows)

Cust.#	Customer First	Customer Last	Email	Order ID	Item	Item#	Quantity	Shipped	Total Order Amt
1	Penny	Nickels	pnickels@email.com						
2	Frank	Smith	frankie@email.com	1	Sponge	29892974	4	☑	$25.25
3	Jennifer	Johnson	Jjgirl@email.com	4	Paper Plates	29379246	25	☑	$11.56
3	Jennifer	Johnson	Jjgirl@email.com	6	Napkins	20777744	100	☑	$4.55
4	Robert	Green	begreen@email.mail	5	Napkins	29797746	100	☑	$4.55
5	Suzy	Worthington	suzywor@emailaddy.com						
6	Timothy	Dominick	tdominick@emailaddressplace.com	2	Scraper	28797294	1	☑	$5.23
6	Timothy	Dominick	tdominick@emailaddressplace.com	3	Dish Towel	20742749	2	☑	$4.75

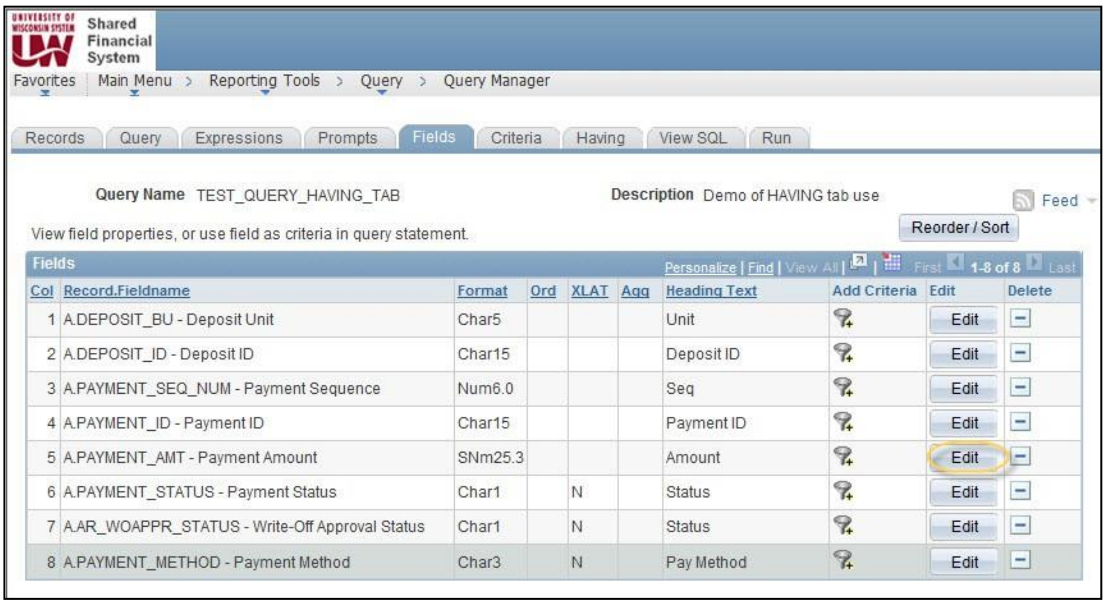
VI. Using Having Criteria

SQL does not support the use of aggregate functions in WHERE clauses. When an aggregate function is applied to a field (i.e. sum, count, etc.) you cannot add a typical limit to it. To limit rows based on the results of an aggregate function, Query Manager creates HAVING criteria.

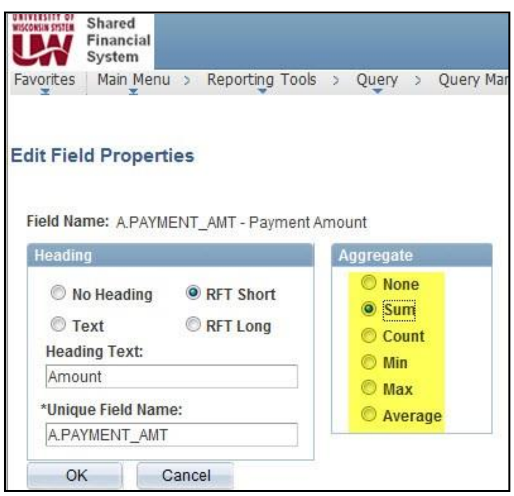
An example of using a HAVING criteria would be to create a list of departments that have greater than $5,000 posted to a particular account during a fiscal year.

When you click the *Add Criteria* icon from the Fields tab for an aggregate field, new criteria is added to Having tab instead of Criteria tab. The selection criteria using the Having tab in the same way you add selection criteria using Criteria tab.

1. To add Having criteria, **go** to Fields tab.

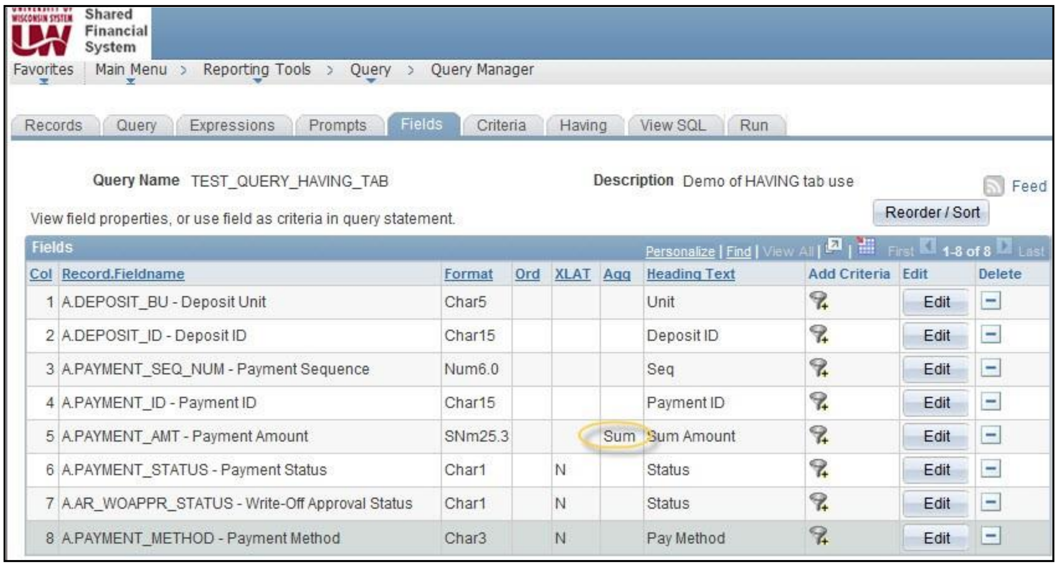


2. On the field you would like to aggregate, **click** Edit

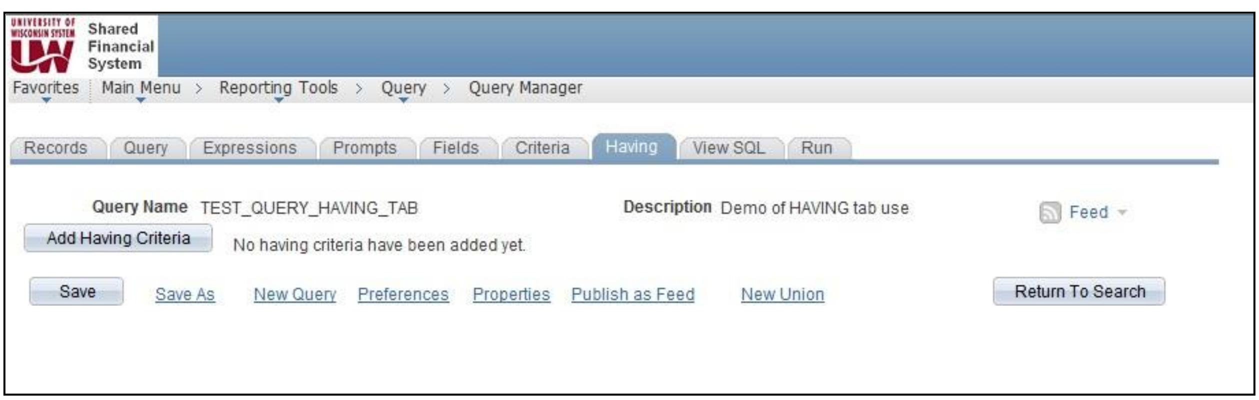


Aggregate	Action
None	No action
Sum	Numeric total of values
Count	Number of rows returned in criteria
Min	Smallest numeric value
Max	Largest numeric value
Average	Mean/Average numeric value

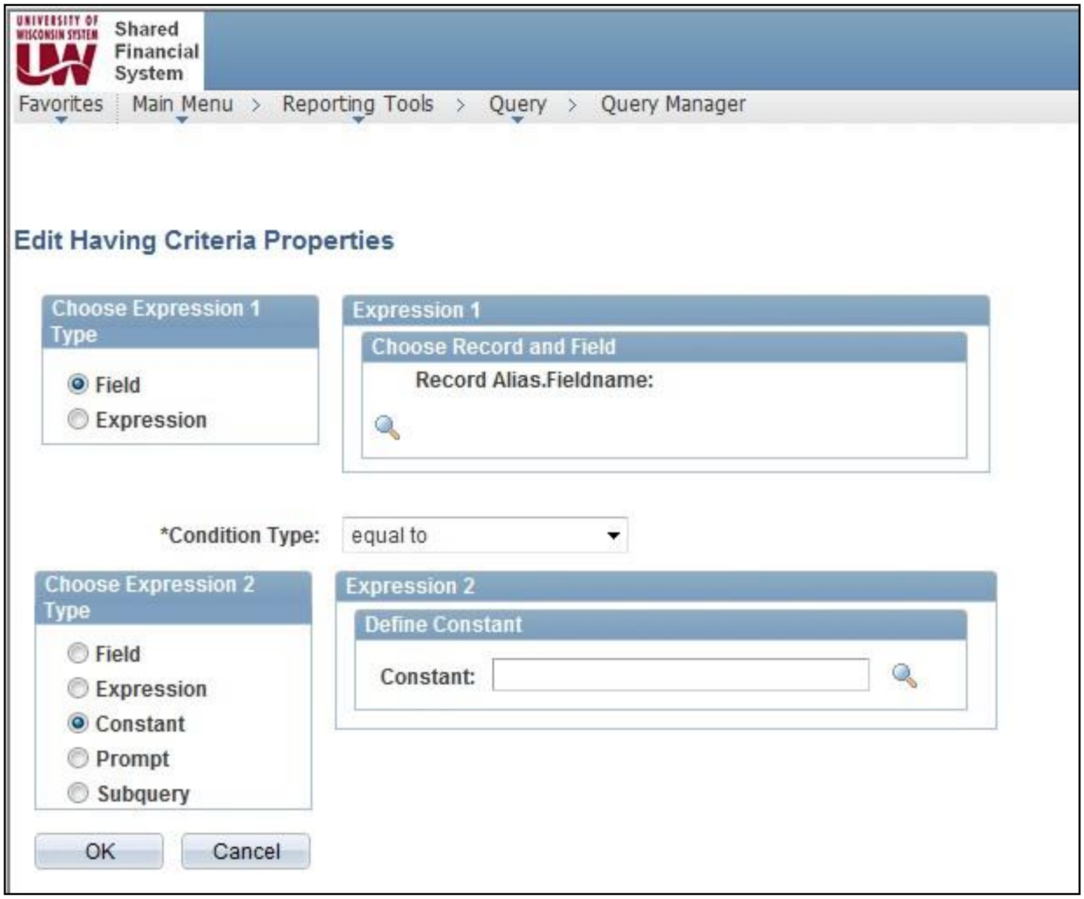
3. **Choose** an Aggregate function to perform on your field.
4. **Click** OK



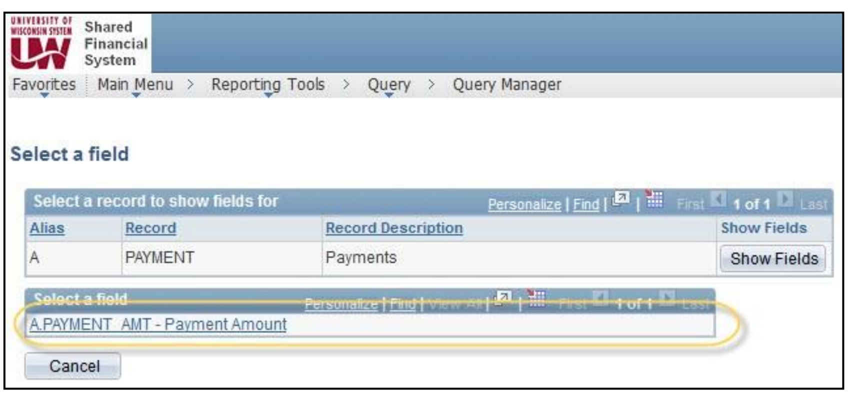
5. You will now see the aggregate function appear on Fields tab in the *Agg* column
6. **Click** Having



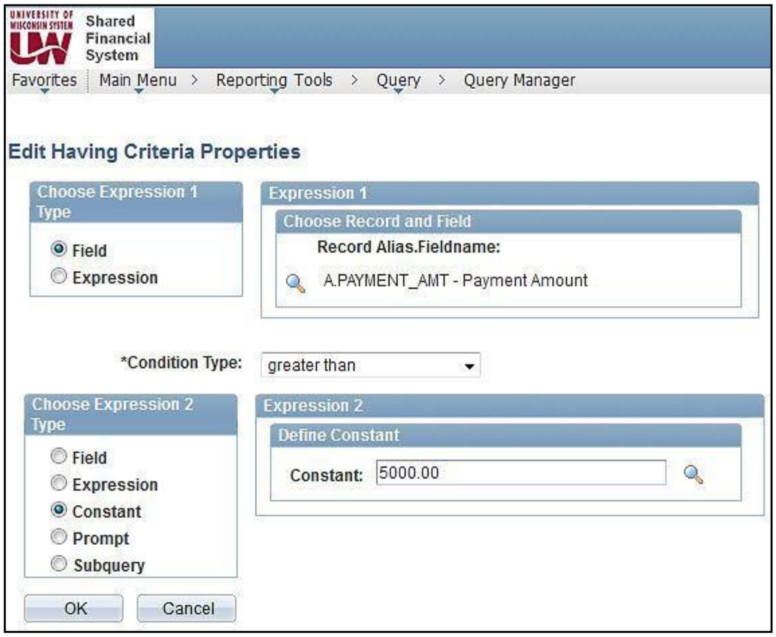
7. **Click** Add Having Criteria



8. In the *Expression 1* box, use the icon to select the field for *Record Alias.Fieldname.*



9. Any fields that have aggregate functions will be available to choose from. **Click** the hyperlink to select your field.



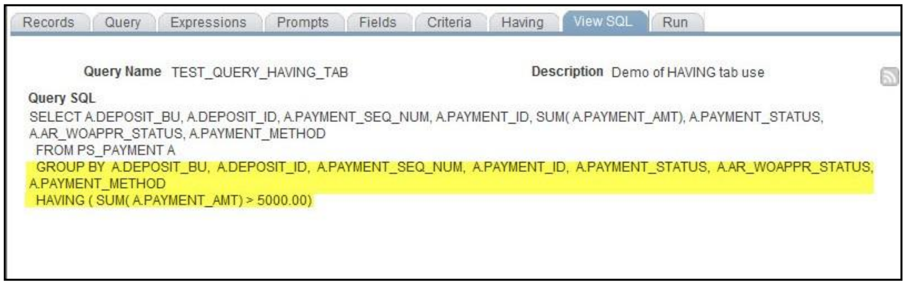
10. **Select** the appropriate *Condition Type* from the dropdown menu.
11. In the *Expression 2* box, enter your *Constant* in the Define Constant section in the same way you would define any other criteria. (In this instance, we are looking for any total payment amount greater than $5,000.00.) Your screen should look something like this:

12. Click OK

13. You will now see your Having Criteria on Having. Having criteria cannot be seen on Criteria.

14. The limit setup is the same as a traditional limit; however, the SQL written behind the scenes is different.

15. Click View SQL



VII. Using Wildcard Characters to Find Information

PeopleSoft applications support three wildcard characters to help you search for data in character fields. You can use these wildcard characters to find the exact information that you need.

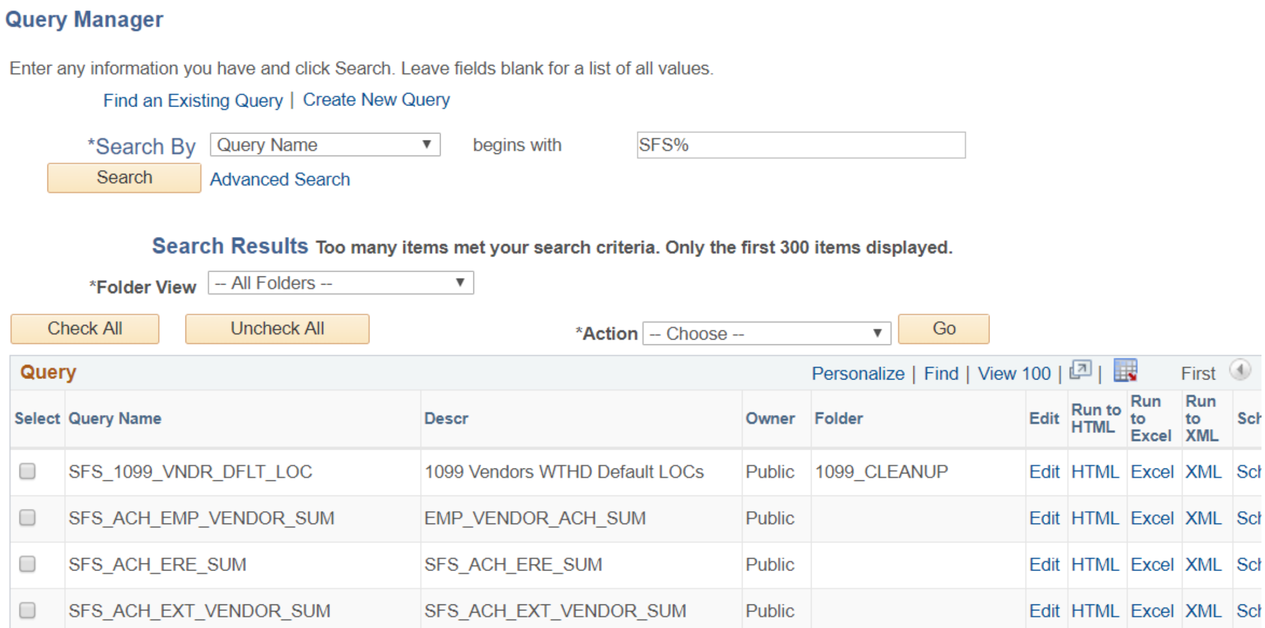
NOTE: Wildcard characters only work with the 'begins with' and 'contains' operators.

The supported standard wildcard characters are:

Wildcard	Search Action
% (percent symbol)	Match one or more characters.
_ (underscore)	Match any single character.
\ (backslash)	Escape character; do not treat the next character as a wildcard.

- *%* matches any string of zero or more characters. For example, *C%* matches any string starting with C, including C alone.
- _ matches any single character. Such as, *_ones* matches any five-character string ending with *ones,* such as Jones or Cones.
- To use one of the wild-card characters as a literal character, meaning to include a *%* in your string, precede the % character with a \, as \%.

The following will demonstrate an example, if you wanted to find the SFS Centrally maintained queries, you could search for 'SFS%' in the *begins with* search box for *Search By* 'Query Name'. However, the system returns a list of all queries that begin with *SFS* which includes queries that are NOT maintained centrally, as you can see below:



Query Manager

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Query | Create New Query

*Search By: Query Name — begins with: SFS%

Search | Advanced Search

Search Results Too many items met your search criteria. Only the first 300 items displayed.

*Folder View: -- All Folders --

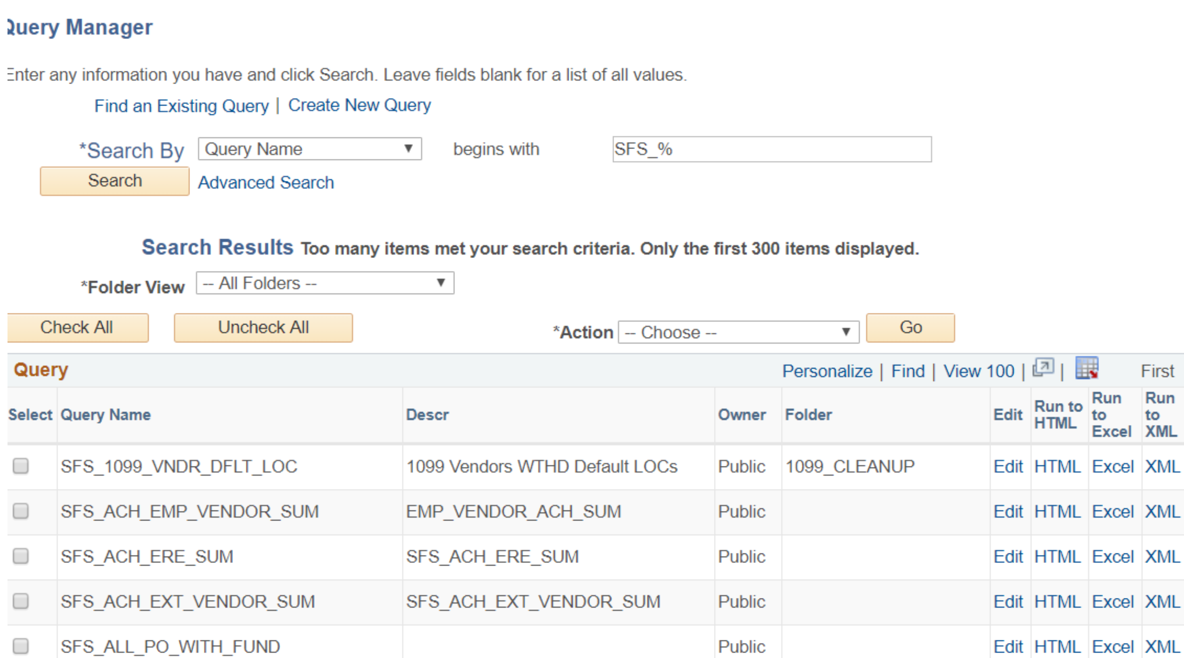
Check All | Uncheck All | *Action: -- Choose -- | Go

Query — Personalize | Find | View 100 | First

Select	Query Name	Descr	Owner	Folder	Edit	Run to HTML	Run to Excel	Run to XML	Sch
☐	SFS_1099_VNDR_DFLT_LOC	1099 Vendors WTHD Default LOCs	Public	1099_CLEANUP	Edit	HTML	Excel	XML	Sch
☐	SFS_ACH_EMP_VENDOR_SUM	EMP_VENDOR_ACH_SUM	Public		Edit	HTML	Excel	XML	Sch
☐	SFS_ACH_ERE_SUM	SFS_ACH_ERE_SUM	Public		Edit	HTML	Excel	XML	Sch
☐	SFS_ACH_EXT_VENDOR_SUM	SFS_ACH_EXT_VENDOR_SUM	Public		Edit	HTML	Excel	XML	Sch

Understanding that the centrally maintained query inventory list uses a naming convention of 'SFS_module two letter designation_query name' then you could reduce the list to those that are centrally maintained by using ALL three wildcard options.

1. *Search by* 'Query Name' *begins with* 'SFS_%'
2. You can also find these special queries by changing the *Search by* to 'Folder Name' *begins with* 'SFS%Inventory'



Query Manager

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Query | Create New Query

*Search By: Query Name — begins with: SFS_%

Search | Advanced Search

Search Results Too many items met your search criteria. Only the first 300 items displayed.

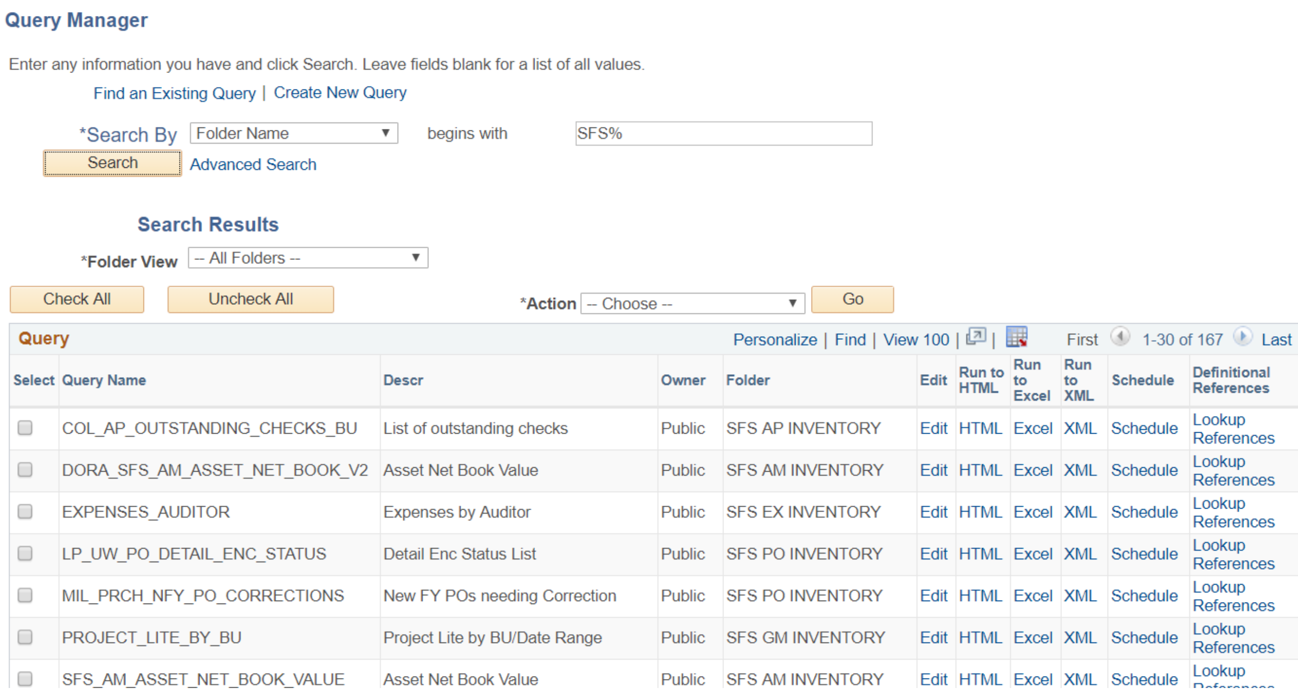
*Folder View: -- All Folders --

Check All | Uncheck All | *Action: -- Choose -- | Go

Query — Personalize | Find | View 100 | First

Select	Query Name	Descr	Owner	Folder	Edit	Run to HTML	Run to Excel	Run to XML
☐	SFS_1099_VNDR_DFLT_LOC	1099 Vendors WTHD Default LOCs	Public	1099_CLEANUP	Edit	HTML	Excel	XML
☐	SFS_ACH_EMP_VENDOR_SUM	EMP_VENDOR_ACH_SUM	Public		Edit	HTML	Excel	XML
☐	SFS_ACH_ERE_SUM	SFS_ACH_ERE_SUM	Public		Edit	HTML	Excel	XML
☐	SFS_ACH_EXT_VENDOR_SUM	SFS_ACH_EXT_VENDOR_SUM	Public		Edit	HTML	Excel	XML
☐	SFS_ALL_PO_WITH_FUND		Public		Edit	HTML	Excel	XML

Search by Folder Name:



Query Manager

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Query | Create New Query

*Search By Folder Name begins with SFS%

Search Advanced Search

Search Results

*Folder View -- All Folders --

Check All Uncheck All *Action -- Choose -- Go

Query Personalize | Find | View 100 | First 1-30 of 167 Last

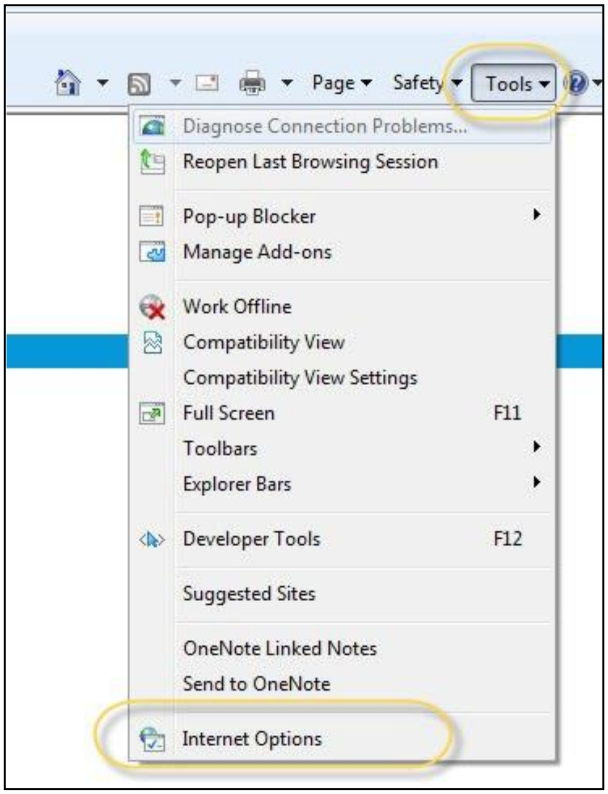
Select	Query Name	Descr	Owner	Folder	Edit	Run to HTML	Run to Excel	Run to XML	Schedule	Definitional References
	COL_AP_OUTSTANDING_CHECKS_BU	List of outstanding checks	Public	SFS AP INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup References
	DORA_SFS_AM_ASSET_NET_BOOK_V2	Asset Net Book Value	Public	SFS AM INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup References
	EXPENSES_AUDITOR	Expenses by Auditor	Public	SFS EX INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup References
	LP_UW_PO_DETAIL_ENC_STATUS	Detail Enc Status List	Public	SFS PO INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup References
	MIL_PRCH_NFY_PO_CORRECTIONS	New FY POs needing Correction	Public	SFS PO INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup References
	PROJECT_LITE_BY_BU	Project Lite by BU/Date Range	Public	SFS GM INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup References
	SFS_AM_ASSET_NET_BOOK_VALUE	Asset Net Book Value	Public	SFS AM INVENTORY	Edit	HTML	Excel	XML	Schedule	Lookup

VIII. Internet Explorer Settings for Query Download to Excel

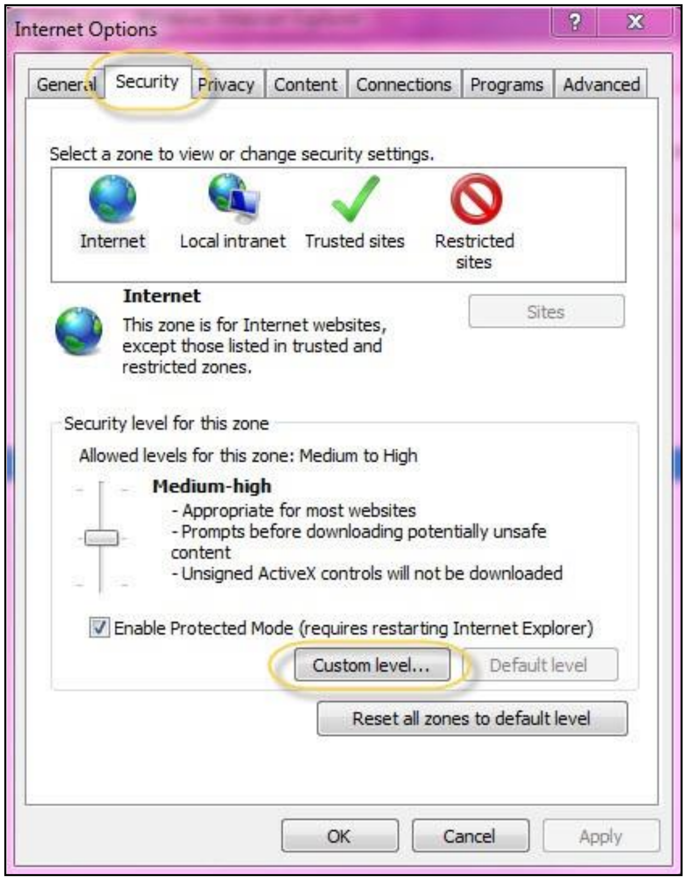
Depending on the settings on your computer, when you run a query to Excel, it may or may not open in the Internet Explorer browser window. If Excel does open in the browser window, Excel functionality is not available. This setting is defined in Internet Explorer.

To adjust the settings:

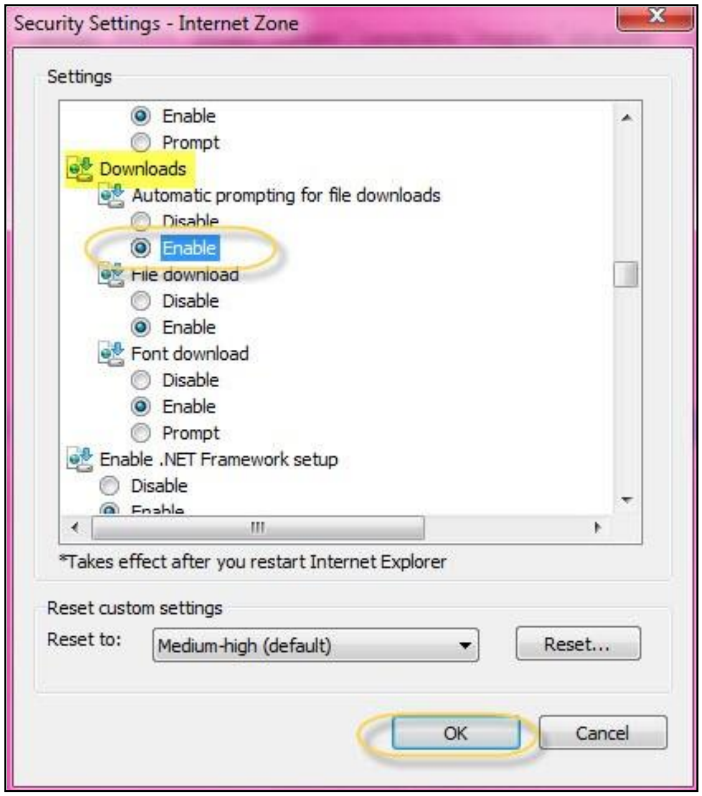
1. **Open** an Internet Explorer Window.
2. **Choose** “Tools” from the menu in the upper right hand corner.

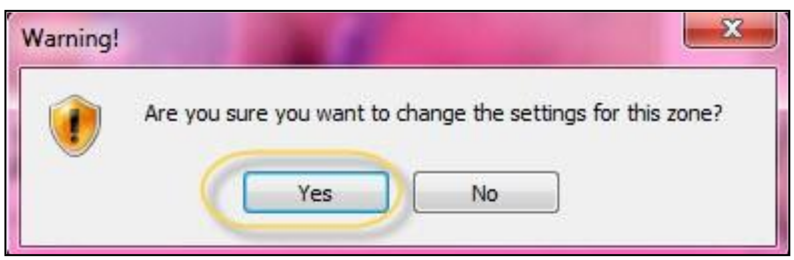


3. **Click** Internet Options.
4. In the Internet Options screen, **click** Security.
5. **Click** Custom level... .

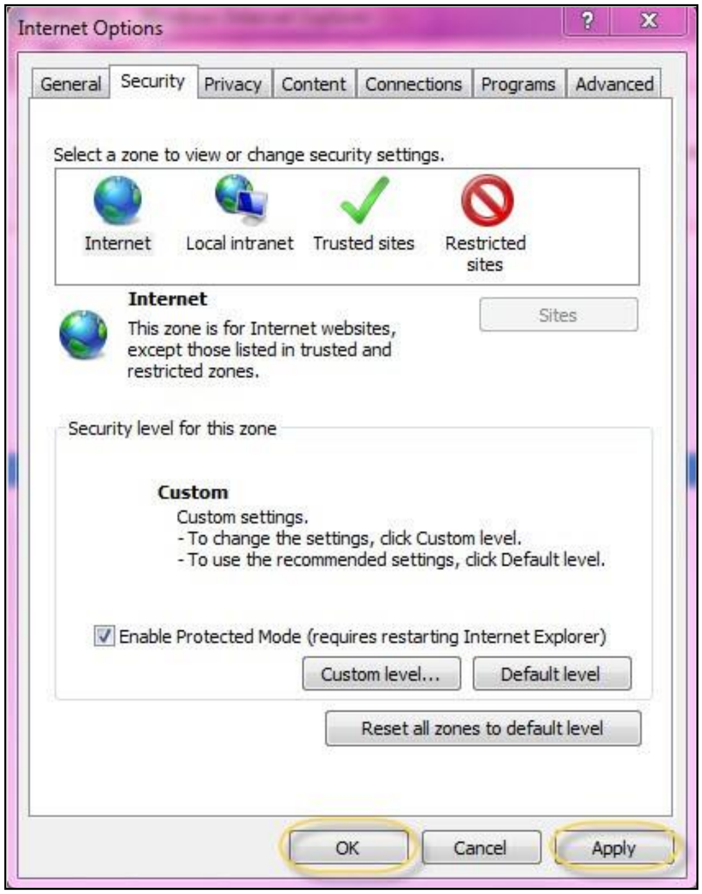


6. **Scroll** down to the "Downloads" heading.
7. Under "Automatic prompting for file downloads", **choose** the "Enable" radio button.





8. **Click** Yes
9. **Click** OK



10. **Click** Apply

11. **Click** OK.

12. Excel will now open in a new window when opened.

Revision History

Author	Version	Date	Description of Change
Andrea Vredberg	1.0	06/24/13	Initial Draft from 8.9 version
Stacy VanWormer	2.0	07/26/13	Revision
Susan Kincanon	2.1	09/5/2013	Review, edit, format, add sections VI and VII for team review
Mike Niebanck	3.0	12/7/2013	Update to v9.2