Spectrum 9.2
Query Training
End User Training Guide

October 2015
Version 1.0
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Query Training
End User Training Guide

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Introduction

Training Focus
This guide has been developed for use by Georgia State University. It is designed to meet the following specifications related to training you to use Web Query in PeopleSoft Financials 9.2:

- Explain the fundamental concepts of using Web Query
- Teach how to edit and create PeopleSoft queries
- Provide a hands-on activity based format for training

This training guide is designed to be used in an instructor-led training session.

In order to gain access to Query Manager, which is required to edit and create queries in the PSFIN 9.2 database, please complete the Spectrum Plus User Access Request Form on the Spectrum website (see below), have your CRT Member sign it, and email it using the instructions on the form.

http://tools.finance.gsu.edu/forms/

PSFIN Web Query
This course centers on using the Web Query Tool that is part of your PSFIN 9.2 database. No additional tools need to be installed on your workstation.

Query Training Topics
This class covers beginner and advanced query topics. The following topics are covered in this class:

- Introduction
- Web Query Overview
- Creating a Basic Query
- Selection Criteria
- Run Time Prompts
- Aggregate Functions
- Working with Multiple Tables
- Finding Data in PSFIN 9.2
- Entity Relationship Diagrams (ERDs)
Web Query Overview

Introduction to Web Query for PSFIN 9.2

This class will introduce you to the basic concepts of the PeopleSoft Financials 9.2 Web Query tool. Query is a graphical tool that allows you to easily retrieve the specific data you want from the PeopleSoft system by specifying the records, fields, and criteria to be applied to the search. Query results can then be viewed via several methods.

You can use Web Query in the following ways:

- Display data in a grid (on the Run tab)
- Run queries as a separate process (Run to HTML)
- Download query results to an Excel spreadsheet
- Forward results to another user
- Serve as a data source for Crystal Reports
- Create a data source for PeopleSoft nVision reports
**Navigation**

To get to the web query tool, select Reporting Tools from the main menu.

![Reporting Tools](image)

**Three Options in Web Query**

- Query Manager: Allows you to view, run, and modify an existing query, or create a new query
- Query Viewer: Allows you to only view and run existing queries
- Schedule Query: Allows you to schedule a run time for standard queries

**Working with Existing Queries**

An existing query is one that already exists in your database. You can search for and view pre-defined queries through either the Query Manager or Query Viewer. For this class, we will be using the Query Manager.

Pre-defined queries can be ones that are BOR-delivered, institution-developed, or private queries that you created.

**Public vs. Private Queries**

- Anyone can use a public query
- Only the person who created a private query can use it
- It is important to not make changes to any query that you did not create. If you want to change a public query, save it under a different name before making any changes.
- Always save your private version that you create from a public query with a unique name. We recommend using your initials as the first portion of the query name (i.e. DWK_QUERY)
- Most GSU employees will only have access to create/save private queries.
- When you search for queries from the Query Manager Search page, PeopleSoft automatically lists all private queries you created. Only you will see these. Public queries are listed after private queries.
- If you run a public query and do not receive results, it is possible that you may not have
authorization to some of the data used in that query.

**Searching for a Predefined Query**

Query Manager opens up to the “Find an Existing Query” selection. To search for a query, enter the first part of its name in the “begins with” field and press the Search button (Basic Search).

Advanced Search: If you want to search for a query with different parameters, click the Advanced Search link. Here you can search on Query Name, Description, Uses Record Name, Uses Field Name, Access Group Name, Folder Name, Query Type, and Owner.
When you find the query you want to run, you can do any of the following from the Search Results page:

- Edit it
- Run it to HTML
- Run it to Excel
- Schedule it to run at a specific time

**Editing an Existing Query**

It is important that you do not change any query that you did not create. If you want to make changes to a query, save it under a different name before making any changes. When you choose to edit a public query, you may receive a message indicating that the query is read-only, and the “Save” button has been disabled. Instead, you would perform a “Save As”. This system displays the Fields tab of the query, where your first action is to click the “Save As” link. Give the query a new name (include your initials), change the description if needed, and make the query a Private query. After clicking OK, notice that your query name has changed. The original public query has not changed though. Now, you can edit your saved query.
Running an Existing Query to HTML

To run the existing query to HTML, click the HTML link. From there you may expand the HTML page to View All results or scroll through your results 100 at a time. You may also download your results to an Excel Spreadsheet and/or Comma Separated Value (CSV) Text File.
Running an Existing Query to Excel

To run the existing query directly to Excel, click the Excel link. You may receive a message whether you want to Open or Save the file. If you choose to save the file, just click the Open button to view your query when your download is complete.

<table>
<thead>
<tr>
<th>GSU Account</th>
<th>Status</th>
<th>Descr</th>
</tr>
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<tbody>
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<td>A</td>
<td>000000</td>
</tr>
<tr>
<td>112000</td>
<td>A</td>
<td>Petty Cash-Cashier</td>
</tr>
<tr>
<td>112010</td>
<td>A</td>
<td>Petty Cash</td>
</tr>
<tr>
<td>112020</td>
<td>A</td>
<td>Petty Cash-Alpharetta Ctr.</td>
</tr>
<tr>
<td>112030</td>
<td>A</td>
<td>Petty Cash-Alpharetta Change</td>
</tr>
<tr>
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<td>A</td>
<td>Petty Cash-Brookhaven Change</td>
</tr>
<tr>
<td>112050</td>
<td>A</td>
<td>Petty Cash-Brookhaven</td>
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<td>Petty Cash-Library Circulation</td>
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<tr>
<td>112160</td>
<td>A</td>
<td>Petty Cash-Library-Media Ctr</td>
</tr>
<tr>
<td>112170</td>
<td>A</td>
<td>Petty Cash-InterLibrary Loans</td>
</tr>
<tr>
<td>112180</td>
<td>A</td>
<td>Petty Cash-Library Spec Colec</td>
</tr>
<tr>
<td>112200</td>
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<tr>
<td>112210</td>
<td>A</td>
<td>Petty Cash-CHARA</td>
</tr>
<tr>
<td>112220</td>
<td>A</td>
<td>Petty Cash-GA Winter Institute</td>
</tr>
<tr>
<td>112300</td>
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<td>Petty Cash-Housing</td>
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<td>112310</td>
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<td>Petty Cash-Rialto Box Office</td>
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<td>112600</td>
<td>A</td>
<td>Petty Cash-AthleticConcessions</td>
</tr>
<tr>
<td>112610</td>
<td>A</td>
<td>Petty Cash - Football</td>
</tr>
<tr>
<td>112700</td>
<td>A</td>
<td>Petty Cash-PantherCard</td>
</tr>
<tr>
<td>112710</td>
<td>A</td>
<td>Petty Cash - Post Office</td>
</tr>
<tr>
<td>112720</td>
<td>A</td>
<td>Petty Cash - Copy Center</td>
</tr>
</tbody>
</table>
Scheduling a Query to Run
To schedule your query to run at a specific time, click the Schedule link. Query Manager interacts with the PeopleSoft Process Scheduler to let users perform this function. The Schedule Query page submits a process request which enables you to specify such variables as where to run the process and in what format to generate the output based on a run control ID.

The Process Scheduler Request page enables you to set the server, run date and time, how often the process runs, output type, and format. You can go to the Report Manager to see the resulting query after it has run.

Steps for Scheduling a Query:
- Reporting Tools > Query > Query Manager
- Locate the query and click its Schedule link
- Select or add a new Run Control ID
- Enter any values you may be prompted for
- On the Schedule Query page, the Query Name appears. Input a description and click the OK button
- Click on the “Run” Icon. This will take you to the Process Scheduler Request page.
- Leave the Server Name blank
- If you want this query to run on a recurring schedule, select a schedule in the Recurrence drop-down field.
- In the Run Date field, choose the first date you want this query to run.
- If you have chosen to run this on a recurring schedule, the Run Time will default according to your recurrence selection. If not, input the time you want your query to run.
- Under Format, select the output for your query (TXT, HTM, XLS).
- To indicate a specific folder in Report Manager for your query to be housed in, click the Distribution link and select the folder in the Folder Name drop-down field.
- If you have the authority, you can send your query results to another user through the Distribution link.
  - Click the Distribution link.
  - Add a row for each person you want to send results to
  - Leave the ID Type as User and input or lookup the User ID o Click the OK button.
- On the Process Scheduler Request page, click the OK button.

To retrieve your Query results:
- Reporting Tools > Report Manager
- If you saved your query to a particular folder, click the Explorer tab.
  - Locate your query and click its link
  - Select your output file
- If you did not save your query to a particular Report Manager folder, select the Administration tab.
  - Locate your query and click its link (or click the Detail link and select your output file)
Saving Your Query to a Favorites List

For those queries that you run on a consistent basis, you can create a Favorites list so that you do not have to search for the query each time you want to run it. You can add both public and private queries to your Favorites list.

To save a query as a favorite:

- Reporting Tools > Query > Query Manager
- Locate the query you want to save as a favorite
- Select it by clicking in its Select box until a green checkmark appears
- In the Action drop down box, choose Add to Favorites and click the Go button.
You should see all of your “favorite” queries under the heading of “My Favorite Queries” on both the Query Manager and Query Viewer pages.
Activity 1 - Run and Save Existing Query

**Activity 1A**
1. Navigate to the Query Manager.
2. Search for a query that begins with “GSU_SPEED”.
3. Click to edit the GSU_SPEEDTYPE query.
4. Save the query as XXX_SPEEDTYPE (XXX = your initials) – Private.
5. You are now able to edit the query.

**Activity 1B**
1. Navigate to the Query Manager.
2. Search for a query that begins with “XXX_SPEED”.
3. Run the XXX_SPEEDTYPE query to HTML.
4. View the Results.
5. Close the output window.
6. Run the XXX_SPEEDTYPE query to Excel.
7. View the Results.
8. Close the output window.
9. Add XXX_SPEEDTYPE to Favorites.
Creating a Basic Query
To build a new query, perform the following steps:

<table>
<thead>
<tr>
<th>Task</th>
<th>Navigation/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create the new query</td>
<td>Reporting Tools &gt; Query &gt; Query Manager &gt; Create New Query</td>
</tr>
<tr>
<td>Choose the primary record</td>
<td>Search for record and click <strong>Add Record</strong></td>
</tr>
<tr>
<td>Add fields to the query</td>
<td>Select the fields (checkmark) and click the <strong>Fields</strong> tab</td>
</tr>
<tr>
<td>Modify Field Headings, if necessary</td>
<td>On <strong>Fields</strong> tab, select <strong>Edit</strong> button of field; select <strong>Text</strong> for Heading and insert new Field Heading</td>
</tr>
<tr>
<td>Change the column order, if necessary</td>
<td>On <strong>Fields</strong> tab, click the <strong>Reorder/Sort</strong> button; enter new column order</td>
</tr>
<tr>
<td>Set or change the output order, if necessary</td>
<td>On <strong>Fields</strong> tab, click the <strong>Reorder/Sort</strong> button; enter sort order; for Descending, click the <strong>Descending</strong> checkbox</td>
</tr>
<tr>
<td>Review the SQL statement generated</td>
<td>Go to the <strong>View SQL</strong> tab</td>
</tr>
<tr>
<td>Save the query</td>
<td>Click the <strong>Save</strong> button; enter Query name, description and folder; Indicate if query is private or public; enter definition; click <strong>OK</strong></td>
</tr>
<tr>
<td>Run the query</td>
<td>Preview the query by clicking the <strong>Run</strong> tab</td>
</tr>
<tr>
<td>Print the query</td>
<td>Print your results by running the query from the Query Manager or Query Viewer page</td>
</tr>
</tbody>
</table>

Additional basic query options include:

<table>
<thead>
<tr>
<th>Option</th>
<th>Navigation/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on the Distinct option</td>
<td>From any page except the Run page, click on the <strong>Properties</strong> link; select the <strong>Distinct</strong> option</td>
</tr>
<tr>
<td>Modify Translate Fields</td>
<td>On <strong>Fields</strong> tab, select <strong>Edit</strong> button of field; select either <strong>Short</strong> or <strong>Long</strong> for Translate Value</td>
</tr>
</tbody>
</table>

The following pages in this section will show you in detail how the GSU_SPEEDTYPE query was created.
**Create a New Query**

To create a new query, first go to Query Manager and select the Create New Query link.

Note: You can also access the Create New Query link from any page in Query Manager except the Run page.
Choose the Primary Record

A record is the table that holds the data for which you are searching. To find the appropriate record, enter the name (or first part of the name) of the Record in the Search by field and click the Search button.

When searching for a record, you can also use the Advanced Search page. Click on the Advanced Search link. Here you can specify the following when searching for a record:

- Record Name
- Description
- Uses Field Name
- Access Group Name

Also with Advanced Search, you are not limited to the criteria of “begins with”.

To see which fields are contained within the record before selecting it, click the Show Fields link. Here you can see all of the record’s fields. Click the Return button to go back to the Find an Existing Record page.

To select the record to add to your query, click the Add Record link. Once you have added your primary record, the system takes you to the Query page.
Add Fields to the Query

From the Query page, select the fields you want included from your primary record for your query. Select a field by clicking in the Select checkbox. For this query select, SETID, SPEEDTYPE_KEY, DESCR, ACCOUNT, DEPTID, BUSINESS_UNIT_PC, PROJECT_ID, ACTIVITY_ID, FUND_CODE, CLASS_FLD, PROGRAM_CODE. You may also select all fields by clicking the Check All Fields button.
After you have added all of your fields, go to the Fields tab. Here, you can see all of the fields you have added to your query.
Modify Field Headings

The Field Heading is what is displayed at the top of your column. To change this, click the Edit button for that field. The Edit Field Properties page is displayed for that field.

To change the field heading, you can select one of the following:
- No Heading: The column will not have a heading
- RFT Short: The column heading is the short name from the record definition
- RFT Long: The column heading is the long name from the record definition
- Text: The column heading is the text that you have entered in the text box

The default Field Heading for all fields is RFT Short. To input your own field heading, select “Text” and input your new heading in the Heading Text field and click OK.

Whenever you change the Field Heading, the new modified heading is reflected on the Fields page, in the Heading Text column.
**Change the Column Order**

If necessary, you can change the order in which your columns are displayed. From the Fields page, click the Reorder/Sort button. Under Column, you can see how the columns are currently ordered. In the New Column fields, you can enter the new column number to reorder the columns. Columns left blank or assigned a zero are automatically assigned a number.

![Edit Field Ordering](image)

When you click OK to return to the Fields page, you will see the new order of the columns.
**Change the Output Order**

In addition to reordering columns, you can also change the sort order of your results. From the Fields page, click the Reorder/Sort button. In the New Order By column, you can enter the new sort order. Enter a “0” to remove a sort order. If the field is the first sort order, enter “1”, and the system sorts rows based on this field first. To designate the second sort field, enter “2”, and so on. Select the Descending option to sort fields in descending order.

Once you apply a sort order, you will see this indicated in the “Ord” column on the Fields page.
**Review the SQL Statement**

To view the underlying SQL code of your query, click the View SQL tab. The system displays the underlying SQL code that Query Manager generates based on your query definition. To copy the SQL statement, highlight the text of the statement and copy it. You can then paste it into another application if desired.
Save the Query

You can save a query at any time after you have selected one record and at least one field for it. You can save your query from any Query Manager page, except for the Run page, by clicking the Save button. When saving your query, you must enter some basic information:

- **Query**: Enter a short name for your query, using your initials (i.e. XXX_QUERY_NAME). It is important that there are no spaces in this name (use an underscore ‘_’ to represent a space)
- **Description**: Enter an appropriate description for the query
- **Folder**: If you want to save the query to a specific query folder, enter the folder name here.
- **Query Type**: Leave the Query Type as User.
- **Owner**: Select whether your query is Public or Private
- **Private Queries**: Only the User ID that created the query can open, run, modify, or delete the query
- **Public Queries**: Any user with access to the records used by the query can run, modify, or delete the query (Note: Only super users have the ability to save Public queries)
- **Definition**: You can use this field for a more detailed description or special notes for your query.

![Image showing the save query interface with fields for Query, Description, Folder, Query Type, Owner, and Query Definition.](image_url)
Run the Query

To preview the query, select the Run tab. From here, you can return to any of the Query Manager tabs to make changes to your query.

From there, you can View All, Rerun the Query, or Download your results to Excel.

Print Query

To print the results of your query from the Run tab, download your results to Excel and print the results. You can also run any saved query from the Query Manager or Query Viewer to either HTML or Excel, and then print the results.
To change a translate value, click the Edit button for that field. Select the Translate Value option and the effective date method. Click OK to return to the Fields page.
Activity 2 – Create Basic Query

Activity 2A

1. Create a query against the LEDGER table that lists all ledger balances in the system.
2. Add the following fields so that the columns appear in this order: BUSINESS_UNIT, LEDGER, ACCOUNT, FUND_CODE, DEPTID, PROGRAM_CODE, CLASS_FLD, BUDGET_REF, PROJECT_ID, FISCAL_YEAR, ACCOUNTING_PERIOD, POSTED_TOTAL_AMT.
3. Change the following field Headings to RFT Long: BUSINESS_UNIT, DEPTID, BUDGET_REF, FISCAL_YEAR, ACCOUNTING_PERIOD.
4. Sort the results by FISCAL_YEAR, ACCOUNTING_PERIOD, DEPTID, and ACCOUNT.
5. Save the query as XXX_LEDGER (XXX = your initials) - Private.
6. View the SQL.
7. Run the query.
8. Add XXX_LEDGER to Favorites.
Selection Criteria
To selectively retrieve the data you want in query, you define selection criteria. Selection criteria refine your query by specifying conditions that the retrieved data must meet.

Because your PeopleSoft database stores data in tables, you can identify every individual piece of data by saying what column (field) and row (record) it is in. When you create a query, select the data that you want by specifying which columns and rows you want the system to retrieve.

If you run the query after selecting the fields, the system retrieves all the data in those columns; that is, it retrieves data from every row in the table or tables. This may be much more data than what you really need. You select the rows of data you really need by adding selection criteria to the query.

The selection criteria serves as a test that the system applies to each row of data in the tables that you are not querying. If the row passes the test, the system retrieves it; if the row does not pass the test, the system does not retrieve it.

In most cases, a selection criterion compares the value in one of a row’s fields to a reference value. In other situations, you might compare the value to the value in another field or to a value that the user enters when running the query.
Adding Criteria to a Query

There are several ways to add criteria in Web Query:

- Funnel icon on the Query page
- Funnel icon on the Fields page
- Add Criteria button on the Criteria page

Funnel icon on the Query page
Funnel icon on the Fields page

Add Criteria button on the Criteria page

In most cases for this class, we will be using the funnel icon on the Fields page to add criteria. To modify criteria, go to the Criteria page.
**Edit Criteria Properties**

When adding criteria to a query, you will see the following edit criteria properties:

1. **Choose Expression 1 Type/Expression 1**: Expressions are made up of two components: Expression Type and Value. For Expression 1, valid expression types are Database field and Query Expression. The expression type specified drives the expression value selected. This is the left expression in the criteria.
2. **Operand/Condition Type**: The Operand (or Condition Type) indicates how Expression 1 relates to Expression 2 (i.e., Equal to, Between, In List, etc.).
3. **Choose Expression 2 Type/Expression 2**: For Expression 2, valid expression types are: Database field, Constant, Prompt, Query Expression, or SubQuery. This is the right expression in the criteria (as noted on the Criteria page).

**Comparison/Expression 1 Values**

The following value types may be used for the Expression 1:
<table>
<thead>
<tr>
<th>Value Type</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>The value in the selected field is compared to the value in another field, usually a field in another record component.</td>
</tr>
<tr>
<td>Expression</td>
<td>The value in the selected field is compared to an expression that you enter, which PeopleSoft Query evaluates once for each row before comparing the result to the value in the selected field.</td>
</tr>
</tbody>
</table>
## Operands/Condition Types
The following Operands/Condition Types may be used:

<table>
<thead>
<tr>
<th>Operand</th>
<th>Return Values</th>
<th>Expression Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal To</td>
<td>The value in the selected record exactly matches the comparison value.</td>
<td>Constant, Field, Prompt, Expression, SubQuery</td>
</tr>
<tr>
<td>Greater Than</td>
<td>The value in the record field is greater than the comparison value.</td>
<td>Constant, Field, Prompt, Expression, SubQuery</td>
</tr>
<tr>
<td>Less Than</td>
<td>The value in the record field is less than the comparison value.</td>
<td>Constant, Field, Prompt, Expression, SubQuery</td>
</tr>
<tr>
<td>In List</td>
<td>The value in the selected record field matches one of the comparison values in a list.</td>
<td>List</td>
</tr>
<tr>
<td>Between</td>
<td>The value in the selected record falls between two comparison values. The range is inclusive.</td>
<td>Constant - Constant; Constant - Expression; Field - Constant; Field - Field; Expression - Constant; Expression - Field; Expression - Expression</td>
</tr>
<tr>
<td>Exists</td>
<td>This operator is different from the others, in that it does not compare a record field to a comparison value. The comparison value is a SubQuery. If the SubQuery returns any data, PeopleSoft Query returns the corresponding row.</td>
<td>SubQuery to check for the existence of the value in another table</td>
</tr>
<tr>
<td>Like</td>
<td>The value in the selected field matches a specified string pattern. The comparison value may be a string that contains wildcard characters.</td>
<td>Similar to equal - makes use of wildcards</td>
</tr>
<tr>
<td>Is Null</td>
<td>The selected record field does not have a value in it. You do not specify a comparison value for this operator. Key fields, required fields, character fields, and numeric fields do not allow null values.</td>
<td>No value in the field.</td>
</tr>
<tr>
<td>In Tree</td>
<td>The value in the selected record field appears as a node in a tree created with PeopleSoft Tree Manager. The comparison value for this operator is a tree or branch of a tree that you want PeopleSoft Query to search.</td>
<td>Searches for existence of row within a tree node</td>
</tr>
</tbody>
</table>

Note: Each Operand has a corresponding “Not” value.
Comparison/Expression 2 Values
The following value types may be used for the Expression 2:

<table>
<thead>
<tr>
<th>Value Type</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>The value in the selected field is compared to the value in another field, usually a field in another record component.</td>
</tr>
<tr>
<td>Expression</td>
<td>The value in the selected field is compared to an expression that you enter, which PeopleSoft Query evaluates once for each row before comparing the result to the value in the selected field.</td>
</tr>
<tr>
<td>Constant</td>
<td>The value in the selected field is compared to a single fixed value. Note: A list of constants is available only for fields that have translate values or an assigned prompt table.</td>
</tr>
<tr>
<td>Prompt</td>
<td>The value in the selected field is compared to a value that you enter when running the query.</td>
</tr>
<tr>
<td>SubQuery</td>
<td>The value in the selected field is compared to the data that is returned by a SubQuery.</td>
</tr>
<tr>
<td>In List</td>
<td>The value in the selected field is compared to a list of values that you enter. This value type is available only when the selected operators is ‘in list’ or ‘not in list’.</td>
</tr>
<tr>
<td>Current Date</td>
<td>The value in the selected field is compared to the current date on the database server.</td>
</tr>
<tr>
<td>Tree Option</td>
<td>The value in the selected field is compared to a selected set of tree nodes. This value type is available only when the selected operator is ‘in tree’ or ‘not in tree’.</td>
</tr>
<tr>
<td>Effective Sequence</td>
<td>Used on some effective-dated records, the effective sequence is a sequencing number that is provided to further refine the effective date.</td>
</tr>
</tbody>
</table>

The next sections will describe how to use these expressions and conditions to define selection criteria for the GSU_SPEEDTYPE query.
“Equal” Condition Type
This is the most commonly used Condition Type. It will select rows that match the exact value for a particular field.

To add an ‘Equal To’ condition type:
1. On the Fields page, click the funnel icon (add criteria) for the field you want to specify criteria.
2. The Edit Criteria Properties page displays.
3. Leave the Expression 1 Type as Field. In the Expression 1 - Choose Record and Field group box, you should see the field you want to specify criteria.
4. For Condition Type, select ‘equal to’.
5. Choose your Expression 2 Value Type and define it.
“In List” Condition Type

The “In List” condition type is used for fields for which you may want to retrieve rows which match any one of a list of values. This is an easier method of using the ‘OR’ operand for the same field with different values that satisfy the criteria.

When you select “In List” as your comparison value, the Edit List page appears. Use this page to build a list of values for Web Query to compare to the value from the first expression. (After you have created such a list, you can also use this page to select from the list.)
To add a comparison value to the list, click the Look Up button on the Edit List page. This displays the Edit List page, which dynamically reflects which record is used.

- **List Members**: Lists the values that have been selected using the Add Value button. (Note: the grid, containing the selected value, appears when a value is selected.) To delete a value, select the checkbox to the left of the appropriate List Members value and click the Delete Checked Values button.
- **Value**: To add a value, enter it into the Value text box and click the Add Value button. The value appears in the List Members grid. To select from a list of values, click the Search button to display the Select a Constant page. Click the Look Up button to display the Look Up page. Enter part of a value in the text box. The system automatically adds a wild card to the end of the entry, which enables you to do a partial search. Click the Look Up button to display the list of values that corresponds to the search criteria. Select the desired value from the list by clicking its associated link. The Select a Constant page appears again. Click OK. The selected value appears in the List Members grid.
- **Add Prompt**: Select to add one or more prompts to the list so that users can enter the comparison values when they run the query. Note: The prompts must be defined before you select them. If no prompts have been defined, you will receive an error message.
- **OK**: Click to accept the values that are listed in the List Members grid. You will return to the Edit Criteria Properties page, where the selected values are displayed in the Edit List page.
- **Cancel**: Click to return to the Edit Criteria Properties page without saving selections.
“Like” Condition Type

The “Like” condition types retrieves data containing fields that match specified portions of a character string.

This condition type uses wild card characters. PeopleSoft supports two standard wild cards; individual database platforms may support additional or different wild cards.

<table>
<thead>
<tr>
<th>Wild Card</th>
<th>Definition</th>
</tr>
</thead>
</table>
| %         | Retrieves any values which meet the criteria preceding or succeeding the wild card. For example:  
  • C% > finds any string beginning with the letter C  
  • %C > finds any string ending with the letter C  
  • %C% > finds any string containing the letter C |
| _ (underscore) | Replaces one character to facilitate retrieving any values which meet the criteria following the wild card. For example:  
  • _ones > finds any value ending in “ones”, such as Jones, Cones, Tones. Because this wild card is limited to replacing a single character, the expression would not retrieve Stones. A query using the % wild card (%ones) should be used to retrieve Stones. |

Wild cards may be combined in the same expression.

To add a “like” expression:

1. On the Fields page, click the funnel icon (add criteria) for the field you want to specify criteria.
2. The Edit Criteria Properties page displays.
3. Leave the Expression 1 Type as Field. In the Expression 1 - Choose Record and Field group box, you should see the field you want to specify criteria.
4. For Condition Type, select ‘like’.
Edit Criteria Properties

Choose Expression 1
Type
- Field
- Expression

Expression 1
Choose Record and Field
- Record Alias.Fieldname
- A.DEPTID - Department

Condition Type
- like

Choose Expression 2
Type
- Constant
- Prompt

Expression 2
Define Constant
- Constant [11%]
“Between” Condition Type
The “Between” condition type selects fields with a value between two specified values. Between” expressions establish an inclusive range where upper and lower values, as well as in between values are searched by the expression. This is often used with dates.

To add a “Between” expression:
1. On the Fields page, click the funnel icon (add criteria) for the field you want to specify criteria.
2. The Edit Criteria Properties page displays.
3. Leave the Expression 1 Type as Field. In the Expression 1 - Choose Record and Field group box, you should see the field you want to specify criteria.
4. For Condition Type, select ‘between’.
5. Choose the value types in the Choose Expression 2 Type box and define Expression 2.
“Is Null” Condition Type

“Is Null” expressions identify fields with no value in the field. Null values are not synonymous with zeros in numeric fields or blanks/spaces in character fields. Only certain fields accept null as a valid field value: Long Character, Image, Date, Time, and Date/Time.

To use an “Is Null” expression:
1. On the Fields page, click the funnel icon (add criteria) for the field you want to specify criteria.
2. The Edit Criteria Properties page displays.
3. Leave the Expression 1 Type as Field. In the Expression 1 - Choose Record and Field group box, you should see the field you want to specify criteria.
4. For Condition Type, select ‘is null’.
5. No value is needed for Expression 2.
Using Boolean Operands in Expressions

When you specify two or more selection criteria for a query, you must tell Web Query how to coordinate the different criteria. When your query includes multiple criteria, link them using ‘AND’, ‘AND NOT’, ‘OR’, or ‘OR NOT’. When you link two criteria with ‘AND’, a row must meet the first and second criterion for Web Query to return it. When you link two criteria with ‘OR’, a row must meet the first or the second criterion, but not necessarily both.

By default, Web Query assumes that you want rows that meet all of the criteria that you specify. When you add a new criterion, Web Query displays ‘AND’ in the Logical column on the Criteria tab. To link the criterion using one of the other options instead, select the required option from the drop-down list.

To use Boolean Operands:
1. Add criteria to your query.
2. Go to the Criteria page.
3. To change the Boolean Operand, change the selection in the Logical drop-down box for that field.
Using Grouping Criteria with Boolean Operands

When your query includes multiple criteria, Web Query checks the criteria according to the rules of logic: it evaluates criteria that are linked by “ANDs” before those that are linked by “ORs”. When all the criteria are linked by “ANDs”, this order always returns the correct results. When you include one or more “ORs”, however, this is not always what you want.

For example, let’s say you want to query all SpeedTypes with a Department like 11% AND Program 14600 OR Class 11000. If you use the following selection criteria without Grouping Boolean Operands, you may get more results than expected:

This set of criteria returns a list of all SpeedTypes for Departments like 11% and Program equals 14600 or Class equals 11000 (regardless of the Department and/or Fund). The reasoning for this is that Web Query evaluates criteria in order of appearance.
What you really want Web Query to evaluate the “OR” before the “AND”. When a list of criteria includes parentheses, Web Query evaluates the criteria inside the parentheses before the criteria outside the parentheses. This is called Grouping.

**To Group Criteria:**

1. Click the Group Criteria button on the Criteria page. The Edit Criteria Grouping page appears.
2. Use the edit boxes to enter parentheses for the criteria needed. A parenthesis appears at the beginning of the Expression 1 column for the first row that you selected and at the end of the Expression 2 column for the last row that you selected.
3. In the example above, notice that the “AND” operator precedes the parentheses, while the “OR” operator is located within the parentheses. You can add as many parentheses as needed.

On the Criteria tab, the opening parenthesis appears just before the field name and the closing parenthesis appears just after the comparison value. For example, the following set of criteria returns the result you want:
See how it looks on the Criteria page.

Now see the results:
Reordering Expression Criteria

It is important to order the criteria for a query correctly to maximize performance. As a general rule, you should enter criteria in the order of the table. However, if you enter your criteria out of order and need to move an expression component, click the Reorder Criteria button, enter the new positions for the criteria on the Edit Criteria Ordering page, and click OK.
**Using Effective Dates in Expressions**

Effective dated records include the field ‘EFFDT’. This field is used to give an historical perspective to the field values, and to determine which value is valid for use at a particular point in time.

If a query uses an effective-dated record, the developer will be prompted to choose a default value for processing the effective date in the query. When you use a PeopleSoft application for day-to-day processing, you usually want the system to give you the currently effective rows of data - the rows where the effective date is less than or equal to today’s date. You do not want to see the history rows, which are no longer accurate, nor do you want to see future-dated rows, which are not yet in effect.

When you query an effective-dated table, however, you may want to see some rows that are not currently in effect. You might want to see all the rows, regardless of their effective dates. Or you might want to see the rows that were as of some date in the past.

When you choose the record that has EFFDT as a key field, Query Manager automatically creates the default criteria and adds that criteria to the Criteria page. This criteria is used to specify which row of data Web Query retrieves for each item in the table. The default is the currently effective row. Defaults are:

- **Expression 1** Record Alias.EFFDT
- **Condition Type** EFFDT <=
- **Expression 2** Current Date
- **Effective Sequence** Last

Valid Effective Date Options include:

<table>
<thead>
<tr>
<th>Effective Date Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Date</td>
<td>Uses the current system date from the server</td>
</tr>
<tr>
<td>Constant</td>
<td>Uses a specific date value entered in the query design process</td>
</tr>
<tr>
<td>Field</td>
<td>Prompts the developer to enter a specific record and date field</td>
</tr>
<tr>
<td>First Effective Date</td>
<td>Returns the row with the lowest (oldest) effective date value</td>
</tr>
<tr>
<td>Last Effective Date</td>
<td>Returns the row with the highest (newest) effective date value</td>
</tr>
<tr>
<td>No Effective Date Option</td>
<td>Does not use the effective date logic</td>
</tr>
</tbody>
</table>

We will create a new query using the SPEEDCHART_DTL record to show how Effective dates are managed.
Add an effective dated record.

View the Criteria page.

**Turn on the Distinct Option**
The distinct option selects only unique rows based on the fields selected. To use the distinct option for a query, select the Properties link from any page but the Run page. Then select the Distinct option.
Modify Translate Fields

Translate Values are codes that you can use in order to display your query results differently:

- **N** = None - displays the code value in the output
- **S** = Short - displays the 10 character XLAT short name based on the effective date
- **L** = Long - displays the 30 character XLAT long name based on the effective date

When you change the Translate Value to either Short or Long, you will also have different effective date options:

- **Current Date** - Uses the current date as the comparison date to determine the effective row for the XLAT description
- **Field** - Uses a date field in the table as the comparison date to determine the effective row for the XLAT description
- **Expression** - Uses a query defined expression as the comparison date to determine the effective row for the XLAT description

If a field has a translate value associated with it, either an N, S, or L will be listed under the XLAT column on the Fields tab. SPEEDCHART_HDR has a translate value.
## Spectrum 9.2

### Query Training

#### End User Training Guide

![Oracle Interface Screenshot](image)

**Edit Field Properties**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>A.EFF_STATUS - Status as of Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heading</strong></td>
<td></td>
</tr>
<tr>
<td>No Heading</td>
<td>RFT Short</td>
</tr>
<tr>
<td>Text</td>
<td>RFT Long</td>
</tr>
<tr>
<td>Heading Text</td>
<td>Status</td>
</tr>
<tr>
<td><em>Unique Field Name</em></td>
<td>A.EFF_STATUS</td>
</tr>
</tbody>
</table>

**Aggregate**

- None
- Sum
- Count
- Min
- Max
- Average

**Translate Value**

- None
- Short
- Long

**Effective Date for Short/Long**

- Current Date

*Add Prompt* *Add Field*
Activity 3 – Create Query with Selection Criteria

Activity 3A

1. Update your XXX_LEDGER for ACTUALS Ledger balances for your Department or Departments.
2. Save the query as XXX_YYYYYYYY_LEDGER (XXX = your initials, YYYYYYYYY = your Department) - Private.
3. Add select criteria where LEDGER = “ACTUALS”
4. Add select criteria for your Department or Departments.
5. Save the query.
6. View the SQL.
7. Run the query.
Run Time Prompts

Adding a prompt lets you further refine a query when you run it. For example, suppose that you want to change a query so that you could prompt the user to enter a value for the Department. Before you add the prompt, the query always retrieves rows for all accounting periods based on a defined constant value on which to make a comparison. Adding a prompt to the query enables the user to enter any Department, and then the query’s results are based on the value provided when running the query.

If the field for which you are prompting has an associated prompt table (even if it is the Translate Table), the Edit Table drop-down list box shows its name. Prompt Tables don’t always default correctly, and may be difficult to find.

For example, we could add a run time prompt on Department to the GSU_SPEEDTYPE query. We will call the resulting query GSU_SPEEDTYPE_DEPT for GSU SpeedTypes by Department.

Defining a Run Time Prompt

1. On the Fields page, click the Funnel Icon (add criteria) for the field you want to specify criteria.
2. The Edit Criteria Properties page displays.
3. Leave the Expression 1 Type as Field. In the Expression 1 - Choose Record and Field group box, you should see the field you want to specify criteria.
4. For Condition Type, select ‘equal to’ or ‘like’. ‘Like’ allows for wildcards (%).
5. In the Choose Expression 2 Type group box, select “Prompt”.
6. In the Expression 2 - Define Prompt group box, select the New Prompt link.

7. The following fields are on the Run Time Prompt Parameter Page:
   a. **Field**: this is the field you are specifying the criteria for
   b. **Type**: this indicates what type of field it is
   c. **Format**: this specifies the field format; over a dozen formats are available including name, phone, SSN, and zip code
   d. **Length**: this indicates the field length
   e. **Decimals**: this defines the number of decimals that are allowed
   f. **Edit Type**: this defines the type of field edit for the specified field. “No Table Edit” is typically the default.
   g. **Heading Type**: Select a heading type for the prompt from the values in the table below.
   h. **Heading Text**: Displays the label for the text box where you enter the comparison value.
   i. **Unique Prompt Name**: This is a default value that Query Manager generates for globalization
   j. **Prompt Table**: If the edit type is Prompt Table, you can select a prompt table to use. If the edit type is Translate Table, the value in the drop-down list box determines the values used. Typically, you will want to use No Table Edit.

8. Update the Heading Type, Edit Type, and Prompt, if necessary. Populate the Prompt Table to enable “search” (magnifying glass) capability when using a run time prompt. *Note that the default Prompt Table is not always the correct prompt table, nor do all Fields in the system have a correlating Prompt Table.*
9. Click OK to return to the Edit Criteria Properties page.
10. Click OK to return to the Fields page.

When you now run the query, you are prompted to enter a Department value. Notice that the search capability works, however with like you may not use a wildcard. In Edit Type you will need to select No Table Edit.
**Defining Multiple Prompts**

You can add more than one prompts to your query. You may add multiple prompts through the Prompts tab or through the Fields tab as you did with a single run time prompt. You may use any number of Condition Types to allow for different constraints on your run time prompts.

The above criteria will create the following dialog box before executing the query:
Using “Between” Condition Type with Prompts

Sometimes, you may need to add the Prompt before you can use it as a select criteria. For example, if you want the user to be able to enter a “From” and “To” value when using the “Between” condition type.

Adding “Between” condition type with prompts:

1. On the Prompts page, click the Add Prompt button.
2. Select the Field Name for which you wish to prompt.
3. Adjust the Header Type and Heading Text to enable a “From” prompt.
4. Typically, you do not want to modify the Character, Format, Unique Prompt Name, Length, or Decimals fields.
5. Select the Edit Type you wish to choose.
6. Search for and Select the correct Prompt Table (Note, this may be more difficult that you think…).

7. Click OK to return to the Prompts page.
8. Repeat steps 1 - 7 to enable a “To” prompt.
9. After adding all of your prompts, Edit Criteria to allow the “From” and “To” prompts to be used as expressions when using the “Between” condition type.

10. Click OK to return to the Criteria page.
11. Change the Boolean Operands if needed.
The above criteria will create the following dialog box before executing the query:

Note, there are no Prompt Tables on the From Class or To Class fields.
Activity 4 – Create Query with Run Time Prompts

Activity 4A
1. Edit your XXXYYYYYYYY_LEDGER query to be run for a range of Departments and/or Accounts.
2. Save the query as XXX_LEDGER_DEPT_ACCT (XXX = your initials) – Private.
3. Modify the DEPTID selection criteria to incorporate the following properties
   a. Condition Type = like
   b. Expression 2 Type = Prompt
4. Add a new Prompt (:1) with the following properties by clicking the New Prompt hyperlink in the Define Prompt box:
   a. Field = DEPTID
   b. Heading Type = Text
   c. Heading Text = Department
   d. Do not change the Character, Format, Unique Prompt Name, Length, or Decimals fields.
   e. Edit Type = No Table Edit
   f. Prompt Table = DEPT_BU_VW
5. Add a new Prompt (:2) for From Account by clicking the Add Prompt button on the Prompts page. Choose the following properties:
   a. Field = Account
   b. Heading Type = Text
   c. Heading Text = From Account
   d. Do not change the Character, Format, Unique Prompt Name, Length, or Decimals fields.
   e. Edit Type = No Table Edit
   f. Prompt Table = blank
6. Add a new Prompt (:3) for To Account by clicking the Add Prompt button on the Prompts page. Choose the following properties:
   a. Field = ACCOUNT
   b. Heading Type = Text
   c. Heading Text = To Account
   d. Do not change the Character, Format, Unique Prompt Name, Length, or Decimals fields.
   e. Edit Type = No Table Edit
   f. Prompt Table = blank
7. Add selection criteria for Account by clicking the Add Criteria button on the Criteria page. Choose the following properties:
   a. Choose Expression 1 Type = Field
b. Record Alias.Fieldname = A.ACCOUNT  
c. Condition Type = between  
d. Choose Expression 2 Type = Expr-Expr  
e. Define Expression / Expression = :2  
f. Define Expression / Expression 2 = :3  

8. Add a new Prompt (:4) with the following properties by clicking the New Prompt hyperlink in the Define Prompt box:  
   a. Field = FISCAL_YEAR  
   b. Heading Type = Text  
   c. Heading Text = Fiscal Year  
   d. Do not change the Character, Format, Unique Prompt Name, Length, or Decimals fields.  
   e. Edit Type = No Table Edit  
   f. Prompt Table = No Value  

9. Save the query.  
10. View the SQL.  
11. Run the query entering your Department(s) and Accounts from 400000 to 499999 (for all Revenues).  
12. Run the query entering your Department and Accounts from 500000 to 999999 (for all Expenses).
Aggregate Functions

In a normal query, each row that Web Query retrieves corresponds to an individual row in the table you are querying. Sometimes though, what you want is a summary of the information in multiple rows. An aggregate function is a special type of clause that returns a single value based on multiple rows of data. When your query includes one or more aggregate function, Web Query collects related rows and displays a single row that summarizes their contents.

The following Aggregate Functions are available:

<table>
<thead>
<tr>
<th>Aggregate Function</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum</td>
<td>Adds the values from each row and displays the total</td>
</tr>
<tr>
<td>Count</td>
<td>Counts the number of rows</td>
</tr>
<tr>
<td>Min</td>
<td>Checks the value from each row and returns the lowest one</td>
</tr>
<tr>
<td>Max</td>
<td>Checks the value from each row and returns the highest one</td>
</tr>
<tr>
<td>Average</td>
<td>Adds the values from each row and divides the result by the number of rows</td>
</tr>
</tbody>
</table>

For example, suppose you would like to know the Account balance by Fund posted to the ACTUALS Ledger for your Department. You would create a query that selects the Fund and Account and Sum of the Posted Total Amount field from the Ledger table where Ledger is equal to ACTUALS and Department is equal to your Department. Without aggregate functions, you would most likely retrieve multiple rows for each account. If you use the Sum aggregate function, you will get a single row for each Fund and Account combination with the summarized amount for all the rows.

To use an aggregate function:

1. Create a new query.
2. Add the record LEDGER where LEDGER = ACTUALS and fields Account, Fund and Posted Total Amount.
3. Click the Edit button on the field you want to apply the aggregate to. The Edit Field Properties page displays.
4. Select the appropriate Aggregate in the Aggregate group box.
5. Click OK.
Once you have added an aggregate function to a query, you can see the function under the Agg Column on the Fields page.
**Grouping in Aggregate Functions**

When using an aggregate function for a field in a query, Web Query automatically groups by all other fields selected for a query. If selecting Fund and Account, and summing the Posted Total Amount, the query will group the result by the first two fields. Therefore, a row for each unique combination of the first three fields will be retrieved with a summation of posted total amount for each combination.

To see how PeopleSoft performs the grouping, view the SQL created.

```sql
SELECT A ACCOUNT, A FUND_CODE, SUM( A POSTED_TOTAL_AMT)
FROM PS_LEDGER A
WHERE ( A LEDGER = 'ACTUALS' )
GROUP BY A ACCOUNT, A FUND_CODE
```
“HAVING” Criteria

SQL does not support the use of aggregate functions in “WHERE” clauses. Therefore, after you have applied an aggregate function to a field, you cannot use that field in your selection criteria, which corresponds to a SQL WHERE clause. When you want to select rows based on the results of an aggregate function, Query Manager enables you to create “HAVING” criteria.

In SQL, a “HAVING” clause is similar to a “WHERE” clause for rows of data that have been aggregated into a single row of output. The system evaluates “WHERE” clauses by looking at the individual table rows before they are grouped by the aggregate function, and then it evaluates “HAVING” clauses after applying the function. So if you want to check the value that is returned by the function, you must define a “HAVING” criterion.

When you click the Add Criteria icon from the Fields or Query page for an aggregate field, new criteria is added to the “Having” tab instead of the Criteria tab. Add selection criteria using the “Having” tab in the same way that you add selection criteria using the Criteria tab.
Activity 5 – Create Query with Aggregate Function

Activity 5A

1. Create a query to display the number of active Departments in the system.
2. Add the DEPT_TBL record.
3. Check the DEPTID field.
4. On the Fields page, Edit Field Properties on the DEPTID field to use the Count Aggregate Function.
5. Add selection criteria to only select EFF_STATUS = ‘A’.
6. Save Query as XXX_DEPT_COUNT (XXX = your initials) – Private.
7. View the SQL.
8. Run the query.
Working with Multiple Tables

When writing queries, it is simple to retrieve information from one table. In many cases however, you want to retrieve information from more than one table, or specify criteria in your query from a second table. In those cases, you need to link at least two tables in one query.

There are two methods to selecting data from multiple tables: Joins and Unions.

Joins

A join enables you to retrieve data from two or more records, or specify criteria from more than one record. Whenever you perform a join, the records involved are linked based on the common fields, typically the keys to the table.

Query Manager enables you to create queries that include multiple-table joins. Joins retrieve data from more than one table, presenting the data as if it came from one table. PeopleSoft Query links the tables, based on common columns, and links the rows on the two tables by common values in the shared columns.

Joins are what make relational databases relational. Using joins, you define relationships among fields when you query the records, not when you create the records. Because PeopleSoft records are highly normalized (they each describe one type of entity), you can easily use Query Manager to create joins.

The procedure for joining tables differs depending on how the tables that are being joined are related to each other. Query Manager recognizes three types of joins:

- Record Hierarchy
- Related Record
- Any Record

In Web Query, predefined joins can be generated from either a hierarchical or related record. Since the links between these records are predefined, you don’t have to link the records manually.

Joins can also be manually created through the Join Any Record menu option. This allows you to join any record to another record, but often you must specify the fields on which the records are joined.
Creating Record Hierarchy Joins

A record hierarchy join joins a parent table to a child table. (A child table is a table that uses all of the same key fields as its parent, plus one or more additional keys.) The parent/child relationship is specified using the Parent Record Name option in PeopleSoft Application Designer.

To create a record hierarchy join:

1. Select the primary record for your query and select the appropriate fields and criteria.

2. Go to the Query page and click the Hierarchy Join link.
   a. All of the records that have a parent/child relationship with your selected record appear.
3. Select the second record for the join. The join is reflected on the Query page. Notice that your primary record is preceded by “A”, and the related record is preceded by “B”.

4. Select the field and add any criteria for the second record.
5. Look at the SQL statement that is created by joining the two tables:
Creating Related Record Joins

In a Related Record Join, you can automatically join two records based on a relationship that has been predefined in the record designer. For example, if a field has a prompt table defined for it, Web Query displays a join link to the right of the shared field.

To create a Related Record Join:

1. Select the primary record for your query and select the appropriate fields and criteria.
2. From the Query page, click the related record join link (if available, to the right of the field name.
3. From the Select Join Type page, select the Standard Join option and click OK.
4. The join is reflected on the Query page.

5. View the SQL Statement. The following example shows that you can join the VOUCHER table and the VOUCHER_LINE table through a Record Hierarchy Join; and then join the UNITS_TBL table to the VOUCHER_LINE table through a Related Record Join.
SELECT B.VOUCHER_LINE_NUM, B.PO_ID, B.MERCHANDISE_AMT, C.DESCRC
FROM PS.VOUCHER A, PS.VOUCHER_LINE B, PS_UNITS_TBL C
WHERE ( B.BUSINESS_UNIT = A.BUSINESS_UNIT
AND B.VOUCHER_ID = A.VOUCHER_ID
AND C.UNIT_OF_MEASURE = B.UNIT_OF_MEASURE )
Creating Any Record Joins

Using Query Manager, you can create a join between two records (any record join) by selecting your initial primary record, defining its output fields and associated criteria, and then returning to the Record page to select the second record. When you return to the Records page, you will see the link Join Record rather than Add Record to the right of all listed record names.

If you have the Enable Auto Join preference selected in the Query Preferences page, Web Query automatically attempts to join the new record to the existing record by looking for matching columns on the two records. To navigate to the Query Preferences dialog, click the Preferences link.

Auto Join first checks for a parent-child relationship between the base and join record. If one exists, a hierarchical join will be done. If no parent-child relationship exists, the Auto Join then attempts to join on all matching key fields (excluding EFFDT and EFFSEQ).

Note: This does not always produce a correct join.
To create an Any Record Join:

1. Add your primary record, select your fields and add any criteria.
2. Go to the Records tab.
3. Locate and select the record you want to join to your primary one by clicking the Join Record link. The Select Join Type page appears.

4. Verify the Join to filter and get additional fields (Standard Join) radio button is selected in the Join Type group box.
5. Click the record link in the Join Record group box. The Auto Join Criteria page displays.

6. Once you select the table to join to, PeopleSoft provides you with automatic join criteria. Most of the time, you will always select the criteria provided. These automatic criteria elements are based upon key fields in each table that is needed to appropriately join the tables. There may be times when the automatic join criteria are not correct or may not produce a correct join. For example, look at the criteria in the picture below. The first join criteria A.BUSINESS_UNIT = D.BUSINESS_UNIT does not make sense because BUSINESS_UNIT is not a key field on the VENDOR record. You may want to delete this criteria.

7. Click the Add Criteria button. This takes you back to the Query page.

8. Select the fields and add any additional criteria for record you just joined.
9. The criteria to establish the join can be further modified on the Criteria page. As stated in step 6, we will delete the join on BUSINESS_UNIT.

10. View the SQL.
ORACLE

Query Name: New Unsaved Query

Query SQL:
```
SELECT B.VOUCHER_LINE_NUM, B.PO_ID, B.MERCHANDISE_AMT, C.DESCRIPTION, D.NAME1, D.VENDOR_CLASS
FROM PS_VOUCHER A, PS_VOUCHER_LINE B, PS_UNITS_TBL C, PS_VENDOR D
WHERE A.VOUCHER_ID = B.VOUCHER_ID
AND A.VOUCHER_ID = C.VOUCHER_ID
AND C.VOUCHER_ID = D.VOUCHER_ID
AND (D.VENDOR_ID = A.VENDOR_ID)
```

Save
Save As
New Query
Preferences
Properties
Publish as Feed
New Union

Return To Search
**Creating Left Outer Joins**

Web Query enables you to easily create a left outer join. In a left outer join, all rows of the first (left) record are present in the result set, even if no matches are in the joining record.

For example, if you want to see a list of all departments that have SpeedTypes. When performing a standard join of the DEPT_TBL and the SPEEDTYP_TBL, all departments without a SpeedType will be removed from the query results. When performing a Left Outer Join, all departments will be listed; if the department does not have a SpeedType, those fields will simply be blank.

**To create a Left Outer Join:**

1. Add your primary record, select your fields and add any criteria.
2. Go to the Records tab.
3. Locate and select the record you want to join to your primary one by clicking the Join Record link. The Select Join Type page appears.
4. Verify the Join to get additional fields only (Left outer Join) radio button is selected in the Join Type group box.

5. Click the record link in the Join Record group box. The Auto Join Criteria page displays.

6. Once you select the table to join to, PeopleSoft provides you with automatic join criteria.
7. Click the Add Criteria button. This takes you back to the Query page.
8. Select the fields and add any additional criteria for record you just joined.

9. View the SQL.
Activity 6 – Create Query with Multiple Tables

Activity 6A
1. Create a query joining PO_HDR (A) to PO_LINE (B) to PO_LINE_SHIP (C) to PO_LINE_DISTRIB (D) to show all PO line distributions not dispatched where you Department is on the PO_LINE_DISTRIB.
2. Use a Hierarchical Join to join PO_HDR to PO_LINE. Use Any Join to join PO_LINE to PO_LINE_SHIP and PO_LINE_SHIP to PO_LINE_DISTRIB. Add all join criteria recommended by PS Web Query.
4. Add select criteria on A.PO_STATUS not equal to ‘D’. Edit field properties to show the long translate value.
5. Add select criteria for your Department(s)
6. Save Query as XXX_PO_NOT_DISPATCHED (XXX = your initials) – Private.
7. View the SQL.
8. Run the query.

Activity 6B
1. Create a query joining DISTRIB_LINE (A) to PYMNT_VCHR_XREF (B) to PAYMENT_TBL (C) to show all payment information for voucher line distributions with your Department (whether your vouchers have been paid or not).
2. Use Any Join to join DISTRIB to PYMNT_VCHR_XREF and use Left Outer Join to join PYMNT_VCHR_XREF to PAYMENT_TBL. Add all join criteria recommended by PS Web Query.
4. Edit field properties to show the long translate value on PYMNT_SELCT_STATUS and PYMNT_STAUS
5. Add select criteria for your Department(s)
6. Save Query as XXX_DEPT_VCHR_PYMNTS (XXX = your initials) – Private.
7. View the SQL.
8. Run the query.
Activity 6C
1. Create a query joining JRNL_HEADER (A) to JRNL_LN (B) to show all journal lines with your Department that have not been posted.
2. Use Hierarchical Join to join JRNL_HEADER to JRNL_LN. Add all join criteria recommended by PS Web Query.
3. Select the following fields and order to columns as follows: A.JOURNAL_ID, B.JOURNAL_LINE, A.JRNL_HDR_STATUS, A.BUDGET_HDR_STATUS, B.ACCOUNT, B.DEPTID, B.FUND_CODE, B.CLASS_FLD, B.PROGRAM_CODE, B.BUDGET_REF, B.BUSINESS_UNIT_PC, B.PROJECT_ID, B.ACTIVITY_ID, B.MONETARY_AMOUNT.
4. Sort by JOURNAL_ID then JOURNAL_LINE.
5. Add select criteria on JRNL_HDR_STATUS not equal to ‘P’.
6. Add select criteria for your Department(s).
7. Save Query as XXX_DEPT_JRNL_NO_POST (XXX = your initials) – Private.
8. View the SQL.
9. Run the query.

Activity 6D
1. Create ad hoc queries with class (if time permits).
Finding Data in PSFIN v9.2

Now that you know how to query for information, let’s discuss where your information resides in PeopleSoft Financials.

Key Records in PSFIN v902

Remember, there are over 3,000 records in your PeopleSoft Financials Database. Below is a table with the most common key records you will use, categorized by module.

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<tr>
<th>Module</th>
<th>Key Records Used</th>
<th>Description</th>
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<td>VOUCHER_LINE</td>
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<td>Voucher Line Withhold Record</td>
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<td>Voucher Scheduled Payment</td>
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<td>PYMNT_VCHR_WTHD</td>
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### Spectrum 9.2

#### Query Training

#### End User Training Guide

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#### Commitment Control

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<td>KK Budget Activity Record</td>
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<td>KK_TRANS_LOG</td>
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<td>KK_LIQUIDATION</td>
<td>KK Liquidation Table</td>
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<tr>
<td>KKREFERENCED</td>
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<td>KK_EXCPTN_TBL</td>
<td>KK Transaction Exceptions</td>
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<td>KK OVERRIDE_TBL</td>
<td>Document/Budget Overrides</td>
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<tr>
<td>KK_BUDGET_HDR</td>
<td>KK Budget Journal Header</td>
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<td>KK Budget Journal Line</td>
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<tr>
<td>KK SOURCE_TRAN</td>
<td>KK Source Transaction Definition</td>
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#### General Ledger

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#### Purchasing

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<td>Receiving Line Asset Data</td>
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</table>

Public Query Listing All GSU.xxx queries available:

- **GSU_SPEC_QUERY LISTING_GSU**
Entity Relationship Diagrams (ERDs)
An ERD is often used as a way to visualize a relational database: each entity represents a database table, and the relationship lines represent the keys in one table that point to specific keys in related tables. PeopleSoft has broken these out by application module, and by process within that module. The type of line and symbol indicate the particulars of a relationship like one to one, one to many, and many to many. PeopleSoft denotes the keys to each table above the brown line in each table box.

As a relationship line is followed from one table to another, symbols can appear near each table. A circle indicates that the relationship is optional. The minimum number of relationships between each instance of the first table and instances of the related table is zero. One can think of the circle as a zero, or a letter “O” for optional. A stroke (|) indicates that the relationship is mandatory. The minimum number of relationships between each instance of the first table and instances of the related table is one. A “crows-foot” indicates that many such relationships between instances of the related tables might exist.

Below are links to the PeopleSoft Financials ERDs by module:


