Basic Query Training

Overview

The PeopleSoft Query reporting tool enables users to create queries which can be viewed in a grid, Excel, and Crystal Reports.

This training will review the basic functions of Query and how to create a simple query: selecting a record and specific fields. We will review how to modify column headings and how to retrieve the short or long description for a translate value, rather than the code.

Once the basics are reviewed, we will review how to retrieve information based on criteria requirements such as equal to, greater than, in list, between and like. We will also review runtime prompts. Because PeopleSoft applications frequently use effective date on tables to add a historical perspective to the data, we will review how to specify criteria for effective-dated tables. Runtime prompts give the ability to enter specific values for a designated field. These values are then used as criteria for retrieving the information for a report.

In addition, we will review how to create a query based on multiple records, specifically using predefined joins.

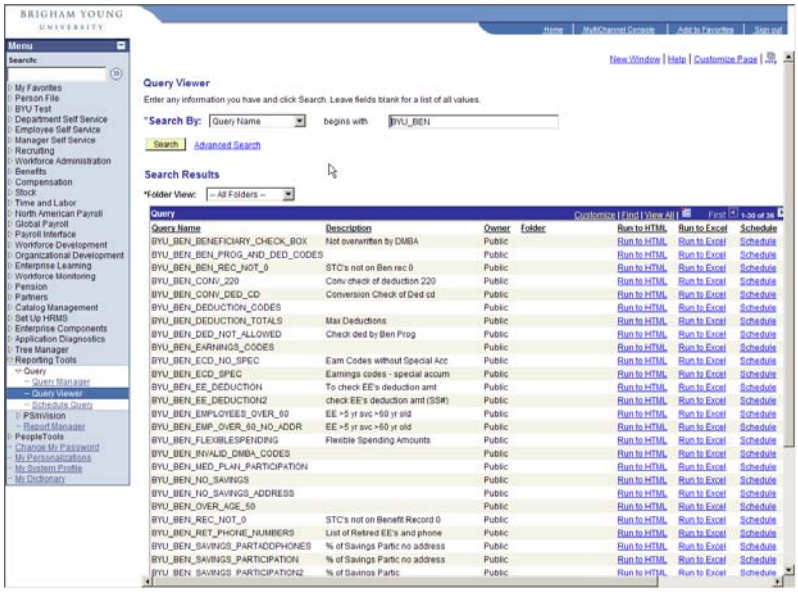
Running a Query: Browser

PS/Query provides powerful querying capabilities from within the PeopleSoft Internet Architecture. Through a browser, you can define and modify queries, run queries, and schedule queries to be run on a regular basis.

The query viewer is the primary place to run and view queries. Upon searching for a query, you can choose to run the query immediately in the browser or to schedule it to be run at a later time (or predefined schedule).

Navigation

- PeopleSoft Stage: http://brule.byu.edu:9080/psp/hrstg2/?cmd=login
- Reporting Tools
- Query
- Query Viewer
- Search By: BYU_BEN
- Search



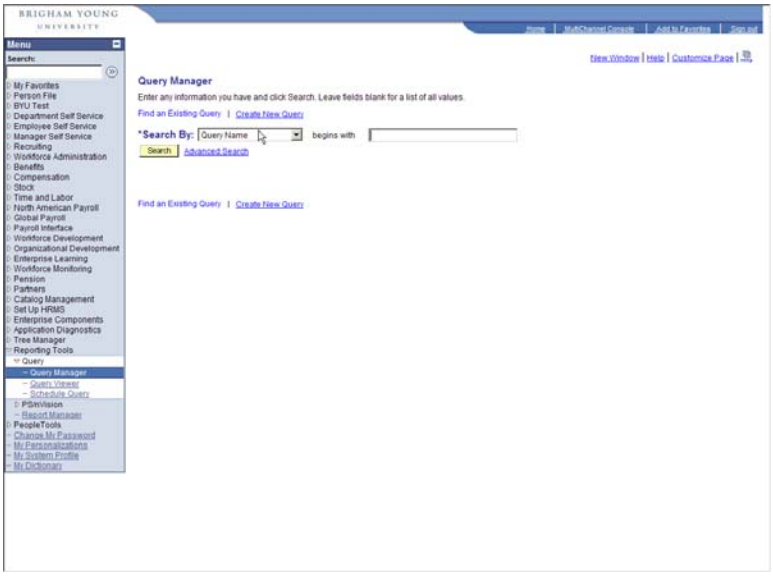
Query Manager

From the Query Manager you can:

- View, modify, or download an existing query
- Create a new query

Navigation

- Reporting tools
- Query
- Query Manager



From this page, you can either search for an existing query or create a new query. The Query Manager search page has a Create New Query link, which was not available on the Query Viewer search page.

Before we create a new query, we need to understand some of the terminology that goes along with it:

Record Definitions – the design specifications that determine the structure of your PeopleSoft application data tables and online processing for you applications.

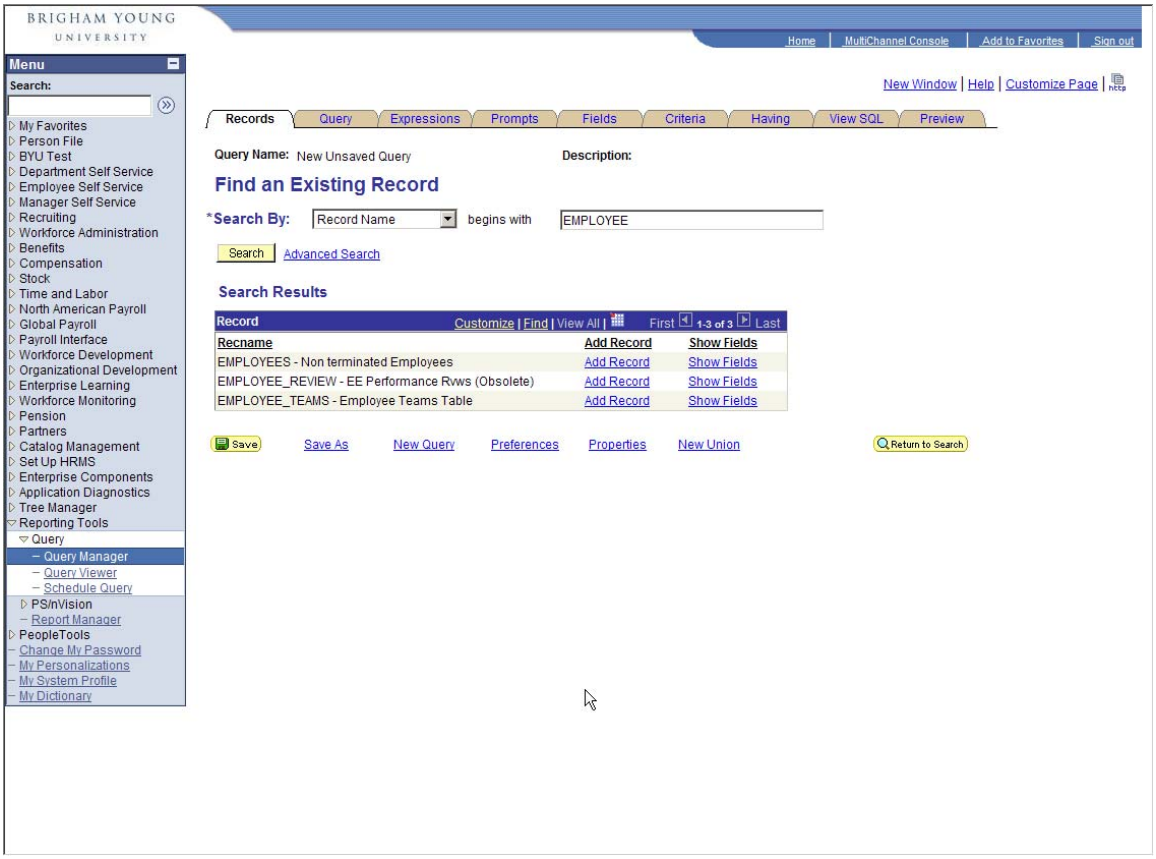
Tables – Much like a spreadsheet, each of these tables is made up of *columns* and *rows*. *Columns* define the structure of how data will be stored. *Rows* represent the actual data stored in the database.

For example: A row of data in an EMPLOYEES table would consist on one or more *fields*- Employee ID, Name, Employee Class, etc. Each *field* represents a column from the table. In other words, a record is a row of related information about the employee.

Record Selection

The first step to creating a query is selecting a record. The record you select established the primary focus of the query. To create a query using general information about a current employee, select the EMPLOYEE record.

1. Click the Create New Query hyperlink
2. Enter EMPLOYEE in Search For field. Click Search
3. Select the Add Record hyperlink across from the EMPLOYEE – Non terminated employees record

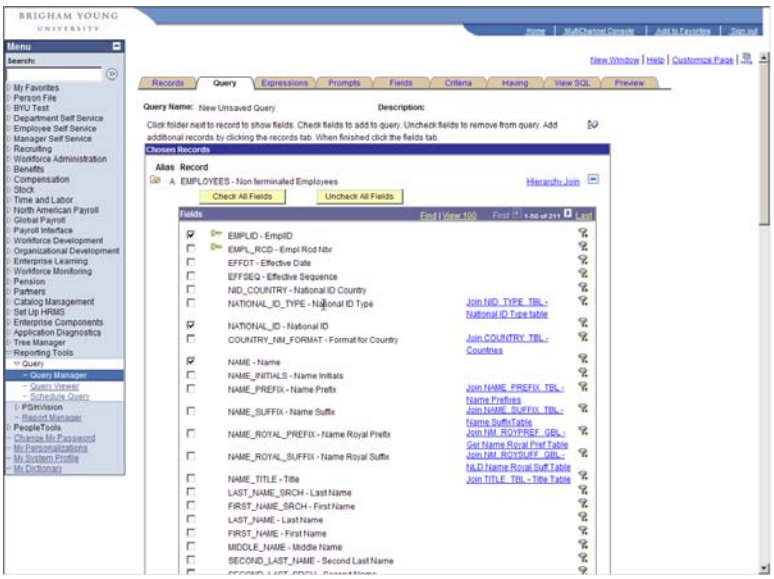


Field Selection

To select a field, check the box adjacent to the field name. After selecting the fields you want included in your query, click the *Fields* tab.

Navigation

- From the Query tab
- Select the following 4 fields
- *EMPLID*
- *NAME*
- *ADDRESS1*
- *SEX*



In the Fields tab you will only see the fields you have selected for your query. To deselect a field, you can either click the button associated with the field or return to the Query tab and deselect the field.

Navigation

- Fields tab

Now let's preview your query.

Navigation

- Preview tab

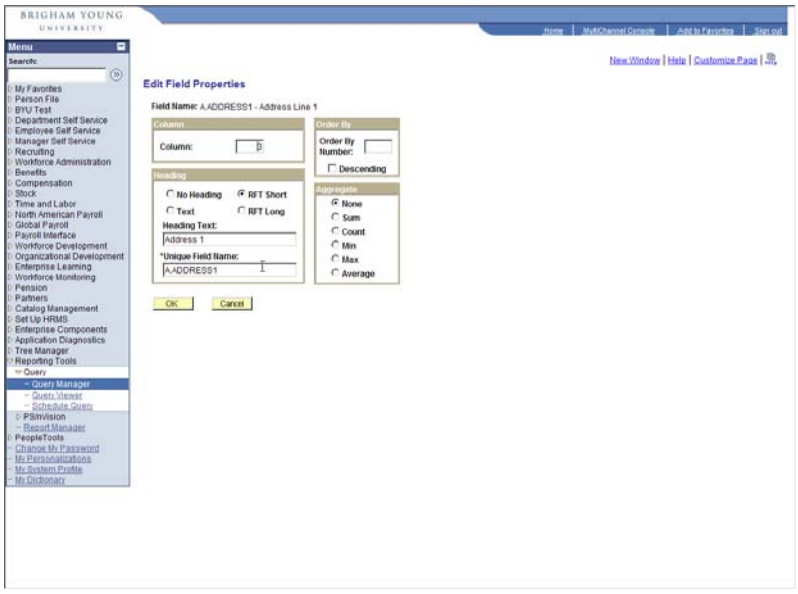
View All- Click this link to view all rows and use scroll bar to navigate
Rerun Query- Click this link to rerun your query preview
Download to Excel- Click this link to download the query to Excel

Editing Fields

The first step in editing fields within your query is to access the *Edit Field Properties* page. To navigate there return to the Fields tab to view the fields you selected for your query.

Navigation

- Fields tab
- Click the *Edit* button for the ADDRESS1 field



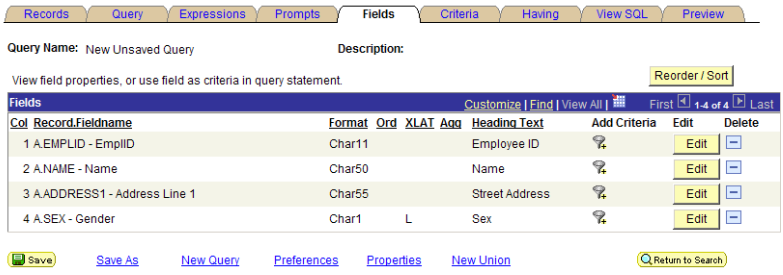
There are a series of group boxes within the *Edit Field Properties* page, each with different editing capabilities.

To modify the field heading, you will make you edits within the *Heading* group box.

1. In the Heading Text field, replace Address 1 with **Street Address.**
2. Select the Text radio button
3. Click OK
4. Change the heading of EMPLID to read Employee ID
5. You will see the heading you selected under the *Heading Text* column

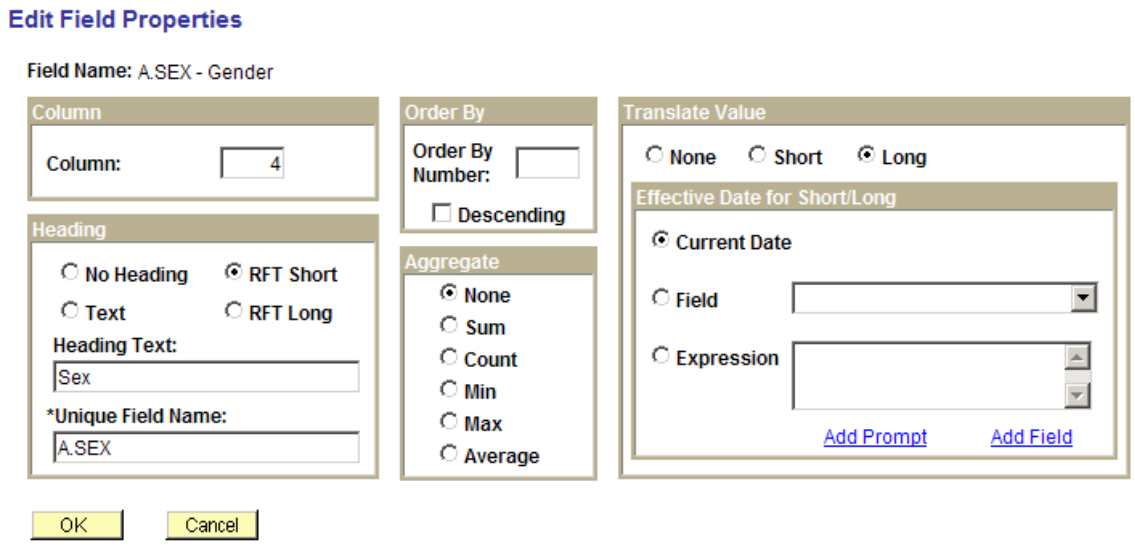
Translate Values

You can take advantage of translate values in your queries. If a field has an associated translate value, the *XLAT* column will contain on of these three values: N, S, or L.



To modify a translate values, you need to access the *Edit Field Properties* page. An additional group box is presented for translate value.

1. From the *Fields* tab, click the edit button for the SEX record
2. Select the *Long* radio button on the Translate Value group box
3. Click OK



The three options for translate values are:

None- Translate code
Short- 10 char Xlatshortname
Long- 30 char Xlatlongname

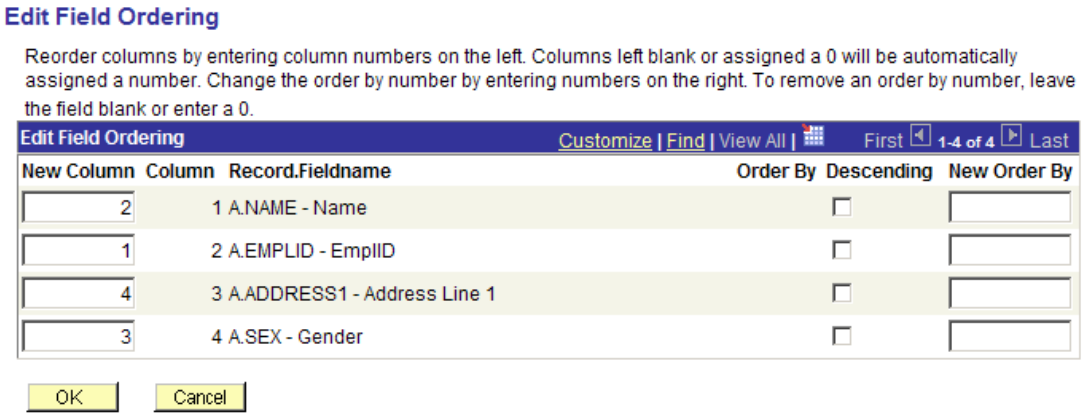
Changing Column Order

Often when creating a query, the first attempt does not produce the desired results. There are a couple of methods to change the field order for output.

1. Click the *Edit* button for the NAME field in the *Fields* tab
2. Replace the number 2 with a 1. Click OK

The system will automatically re-number the column numbers associated with each field. Another method is to click the *Reorder/Sort* button on the Fields tab. This will bring up the *Edit Fields Ordering* page. Renumber your columns under the *New Column* heading.

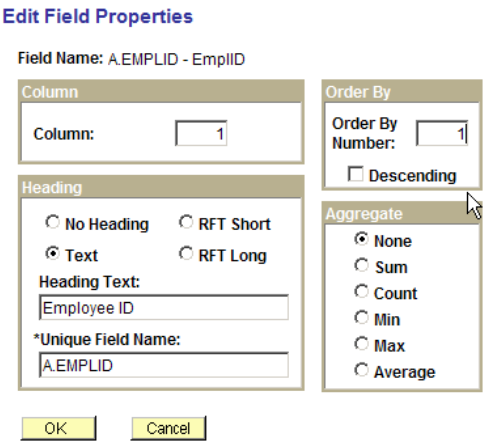
1. In the *Fields* tab, click the *Reorder/Sort* button
2. Renumber the fields as shown. Click OK



Changing Output Order

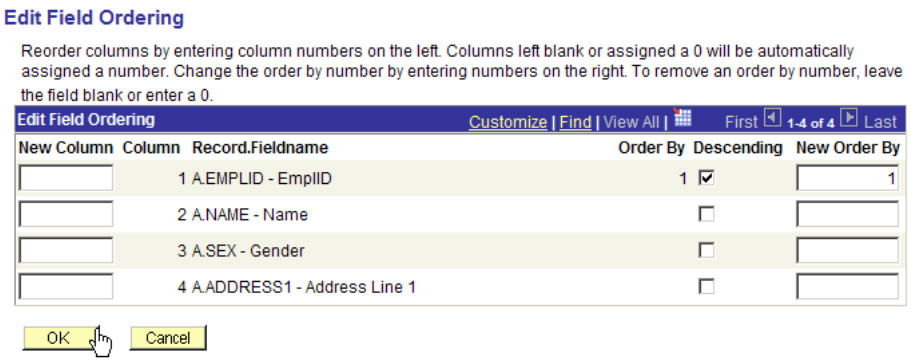
Query can sort your output for you. The numbers in the *Ord* column indicate which fields your query is sorted on and in what order. The number "1" represents the highest order of sort. Again, you can use either the *Edit Field Properties* button or the *Reorder/Sort* button to change output order.

1. Click the Edit button for EMPLID
2. Enter the number "1" in the Order By Number field
3. Click OK
4. This will sort your query by EMPLID



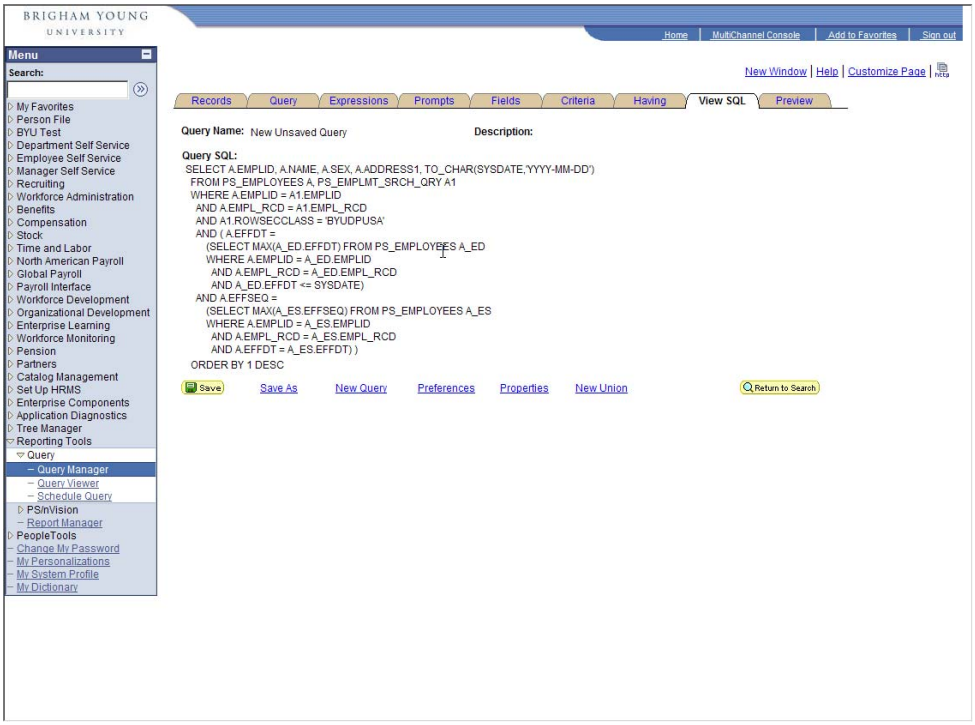
The ordering defaults to ascending. You can select descending with a checkbox. Now change the order using the *Reorder/Sort* button.

1. From the *Fields* tab, click the *Reorder/Sort* button
2. Turn on the Descending checkbox for EMPLID



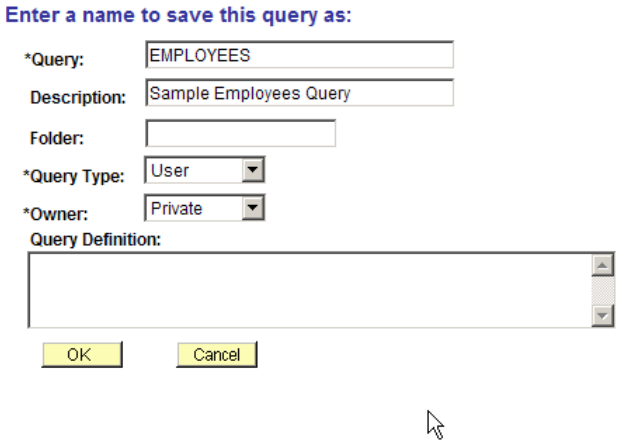
Viewing SQL Statements

If you wish to view the SQL (Structured Query Language) that the system produces, you can do this at any point in the query process by clicking the *View SQL* tab. If you are familiar with SQL this may be helpful to you.



Saving Your Query

Once you have generated a query, you may want to save it to use it later. You can save a query at any time after you have selected one record and at least on field for your query. Save queries from any Query Manager page (except for the Records page) by clicking wither the Save or Save As link.



Query Names- Query names are upper case and can be up to 30 characters. You cannot have spaces or any special characters (other than an underscore). The basic guideline for query names at BYU is BYU_XXX_YYYYYYY where XXX is the three letter department code (ex. BEN, STD, STF, FIN, INT, PAY) and YYYYYYY is the rest of the descriptive query name.

Description- You can add a description for your query up to 30 characters, mixed case with special characters.

Type- User, Reporting, Process, Role

Owner
Private- Only the operator ID that created the query has access to it
Public- Any user who has access to the records in the query may run. Modify or delete it.

Criteria Tab

Often you do not want to retrieve every row of data in a record. By defining criteria, you can limit the data that is returned.

First, create a new query using the EMPLOYEES record. Select the EMPLID, NAME, and COUNTRY. Output the order by NAME.

Possible Criteria
Field- Select if you want to base the selection criteria on a field's value. Usually a field in another record component. When you select this option, you must go on to select a condition type.

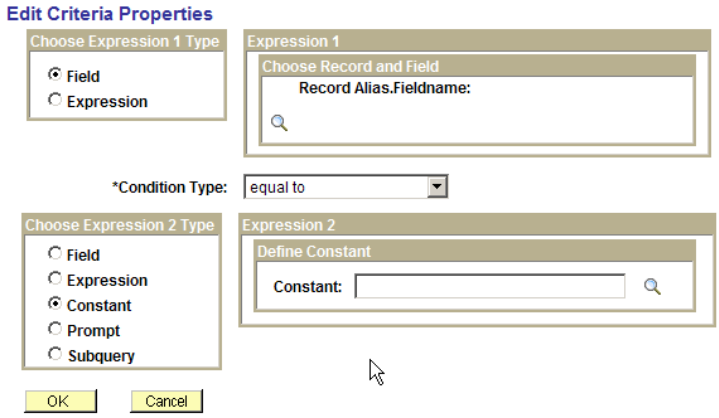
Condition Type- This determines how Query Manager compares the values of the first expression to the second expression.

Expression- Select if you want PeopleSoft to compare your first value to an expression you specify. Will be covered in advanced query training.

Equal To

Add criteria for the COUNTRY field so that only employees listing Canada as their country appear in our query.

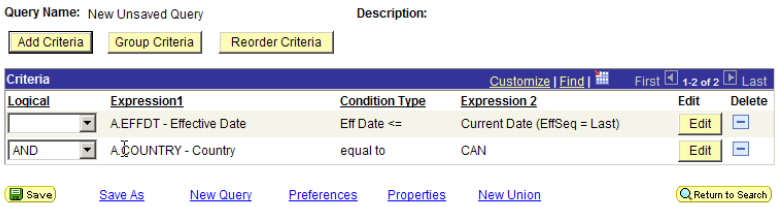
1. Select the *Criteria* tab
2. Click the *Add Criteria* button



3. Select COUNTRY for Field
4. Select the Constant radio button in the Expression 2 type
5. Click the prompt button in the *Define Constant* box
6. Type CAN into the *Enter Search String* box

7. Press the Search button and select the *Select Constant* link next to Canada
8. Press OK

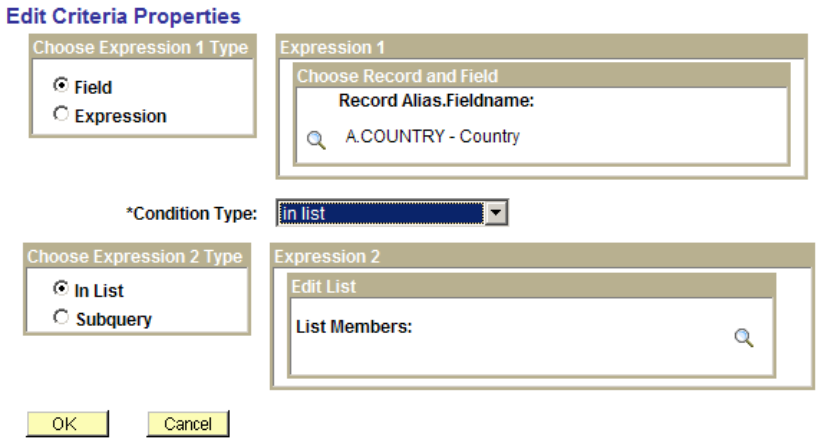
Your criteria will now look like this:



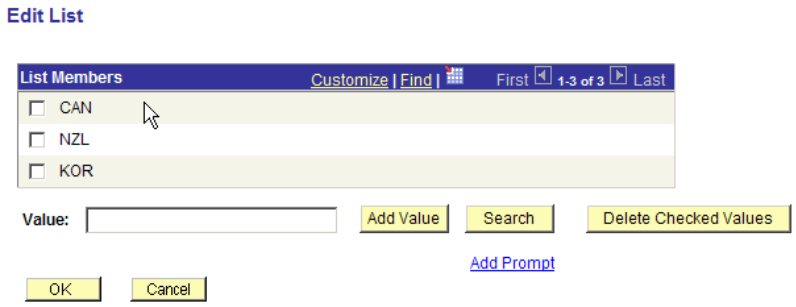
In List

The In List operator allows you to match a value against a list of values that you define. With this option you are prompted to create a list with the Edit List group box. Modify your current criteria so that we include employees from CAN, NZL, and KOR. You will need to change the Condition Type to *In List*.

1. Click the *Edit* button for the criteria
2. Select the condition type *In List.* Notice the change in options
3. Click the prompt button in the *Edit List* box



Add the following values: CAN, NZL, KOR

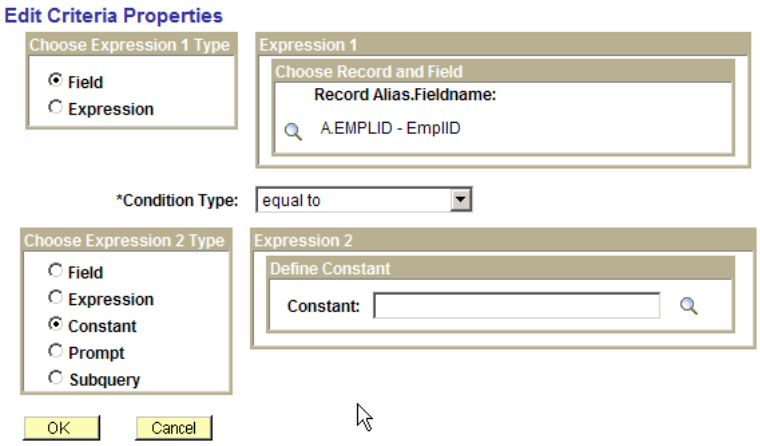


4. Preview the Query

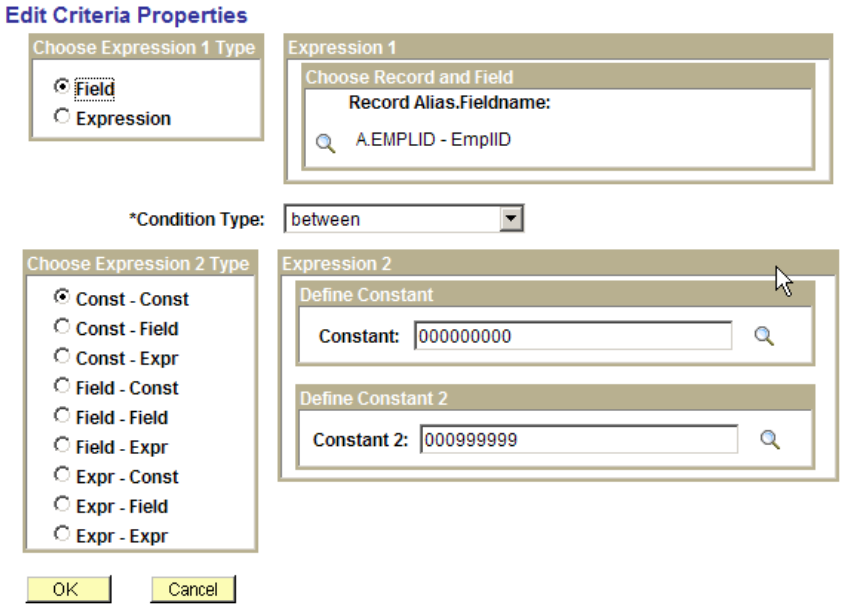
Between

The Between operator selects fields whose values are between two values that are specified. This is an inclusive search where the upper and lower values are included in the search. Modify the query so it returns only employees whose EMPLID is between 000000000 and 000999999.

1. Select *Criteria* tab
2. Click the *Add Criteria* button
3. Select the *Field* radio button
4. Click the prompt button
5. Select EMPLID



6. Change the *Condition Type* to Between
7. In the *Choose Expression 2 Type* box: Select *Const-Const*
8. Enter 000000000 for the first value and 000999999 for the second value
9. Click OK and preview the query



Like

The Like operator retrieves data containing fields that match specified portions of a character string.

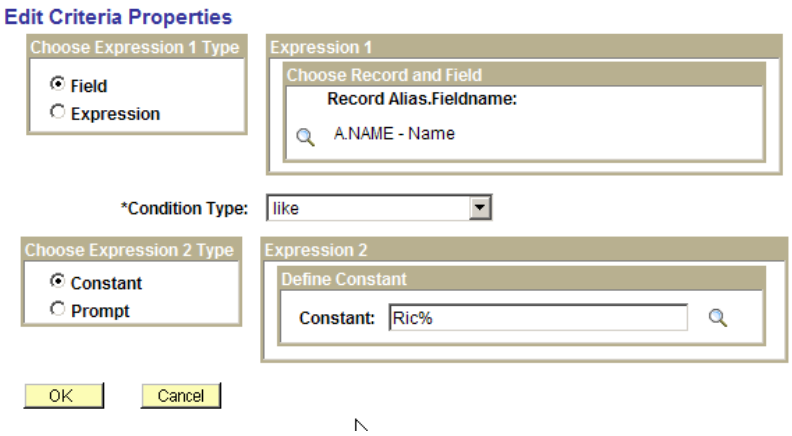
The Like operator is case-sensitive and uses wildcard characters to search for data:

% - Any string of 0 or more characters. For example, C% finds any string beginning with the letter C.

_ - The _ character matches any single character. For example, _ones will find any string of five characters ending in “ones” such as Jones or Cones.

Remove the criteria on the EMPLID and COUNTRY and add criteria to find all employees with last names that start with “Ric”.

1. Select the button next to the EMPLID criteria
2. Remove the criteria on COUNTRY
3. Add Criteria
4. Choose the field Name
5. For expression 2, type Ric%
6. Click OK and preview your query



Is Null

When you use is null, you are searching for fields having no value. Null fields are not the same as zeroes or blanks. Null fields have no data, whereas zeroes and blanks are considered data. There is also an expression type *is not null*.

The only field types that PeopleTools supports that may contain null values are non-required Long Character, Image, Date, Time, and Datetime fields.

Boolean Expressions

Boolean expressions are used to further define your criteria rows. The Boolean expressions used in Query include AND, OR, NOT, and parentheses

By default, an AND Boolean is added each time you add a new criteria. You can change this type by selecting the desired value out of the drop down box in the *Logical* column for the row you wish to change.

Effective Date

Effective-dated rows are those records that contain the field EFFDT. The effective date field is used throughout PeopleSoft applications to give data a historical perspective and allows for the viewing of data changes over time. EFFDT enables rows of data to be classified in one of three categories:

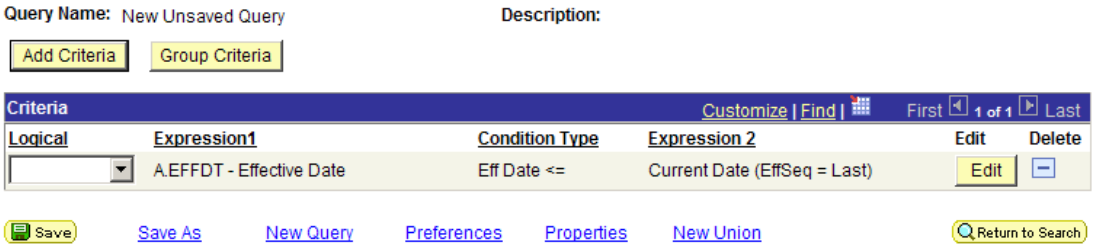
History- Rows of data where the effective date is less than the effective date of the current row.

Current- The row of data with the highest effective date that is less than or equal to today's date (or the system date on the server). There can only be one row of current data.

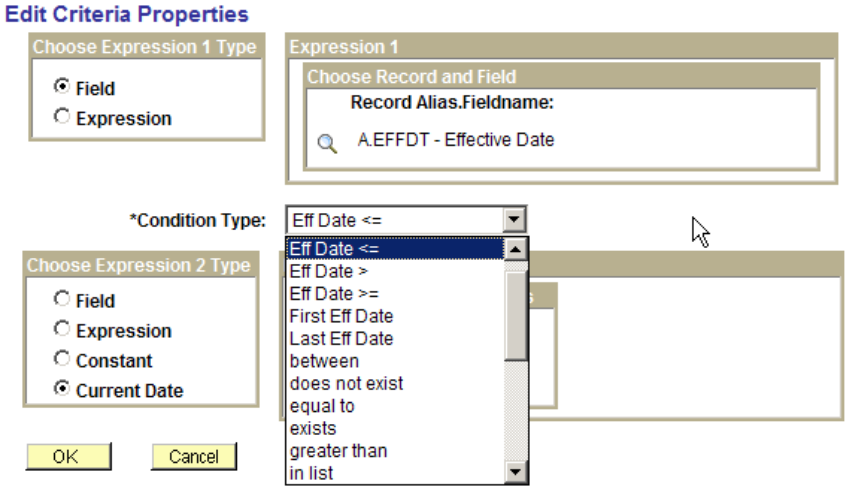
Future- Rows of data whose EFFDT is greater than today's date.

Effective dates can be used in your query as criteria. When you start a new query and select an effective-dated record, Query will default to use the current row of data.

1. Create a new query
2. Select the EMPLOYEES record
3. A message appears stating that an effective date criteria has been added
4. Select the criteria tab



5. Click the *Edit* button
6. Click the drop down box to see the additional edit options



If you choose one of the 4 effective-date comparisons, you will return one effective-dated row of information per item, and you must choose with what you want the effective date compared.

Or, you may choose to select an alternative option"

First Effective Date- Returns the row that contains the lowest (oldest) effective date value

Last Effective Date- Returns the row that contains the highest effective date (could be future dated)

No Effective Date Option- Does not use any effective date logic, therefore returns all rows of effective-dated information

Runtime Prompts

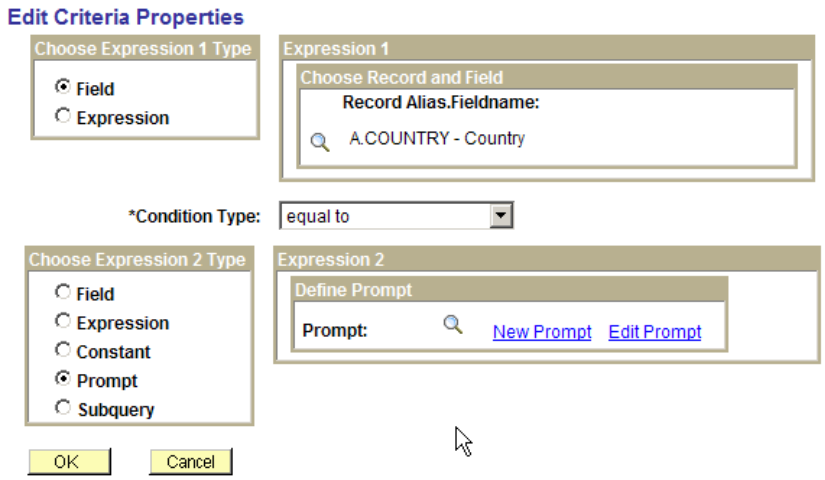
A runtime prompt allows you to enter a value for a specified field at the time the query is run. The query will display only those rows of information that match the value entered in at the prompt.

Create a new query that retrieves employee information (EMPLOYEES) and has a prompt for the country.

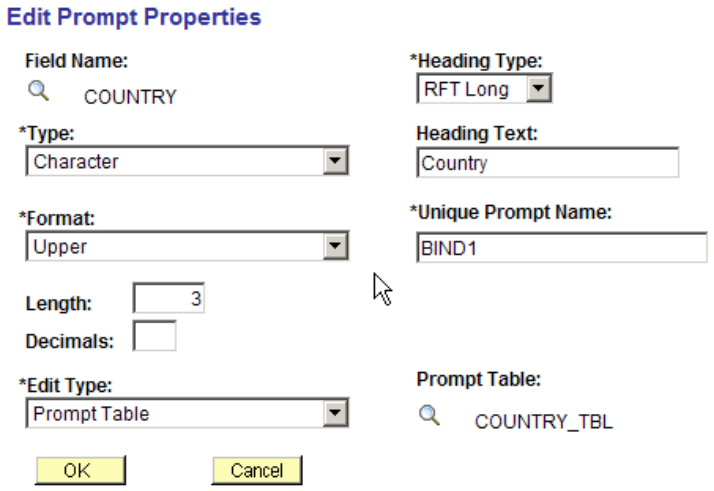
1. Select the following fields: EMPLID, NAME, ADDRESS1, COUNTRY
2. Order the output by EMPLID

Now set up a prompt on COUNTRY. A prompt is simply a type of criteria.

1. Add a row of criteria for COUNTRY (in addition to the EFFDT criteria that already exists)
2. Expression 2 type should be set at *Prompt*



3. Select the *New Prompt* link
4. Choose RFT Long for Heading Type



The first time you define a prompt in a query, you are presented with the *Edit Prompt Properties* page. Verify that the parameters are what you want.

Heading Types
RFT Long- The long field name from the record definition
RFT Short- The short field name from the record definition
Text- User defined text label

Edit Types
No Table Edit- Value entered in prompt dialog box is not validated

Prompt Table- Will be picked as the default if one is defined on the record definition. Allows validation against the prompt table, which enables lookup capabilities in the prompt dialog box

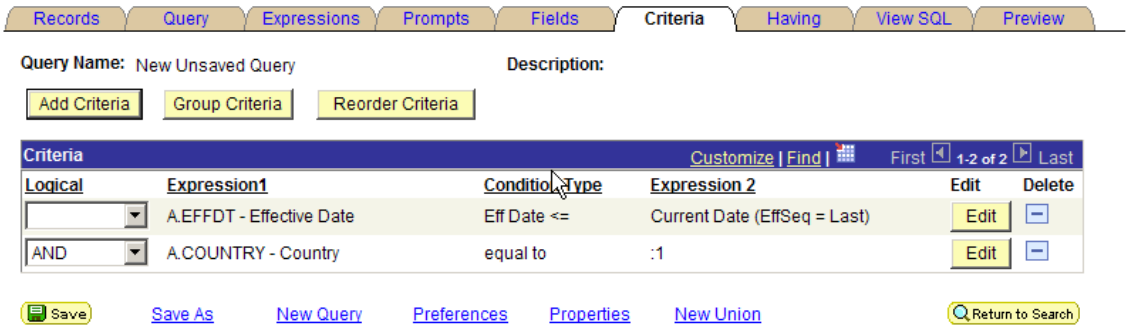
Translate Table- Will be picked if the field is validated against the translate table. Enables lookup capabilities in the prompt dialog box

Yes/No- Standard validation for fields represented as check boxes on pages

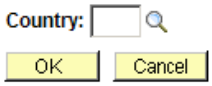
If the edit type is Prompt Table, make sure the Prompt Table field contains the correct record you want the user to prompt against.

Type, format, and length all default from the field definition of the database.

Your prompt is represented on the criteria page as a bind variable.



When you run the query, you will now be prompted to choose a country.

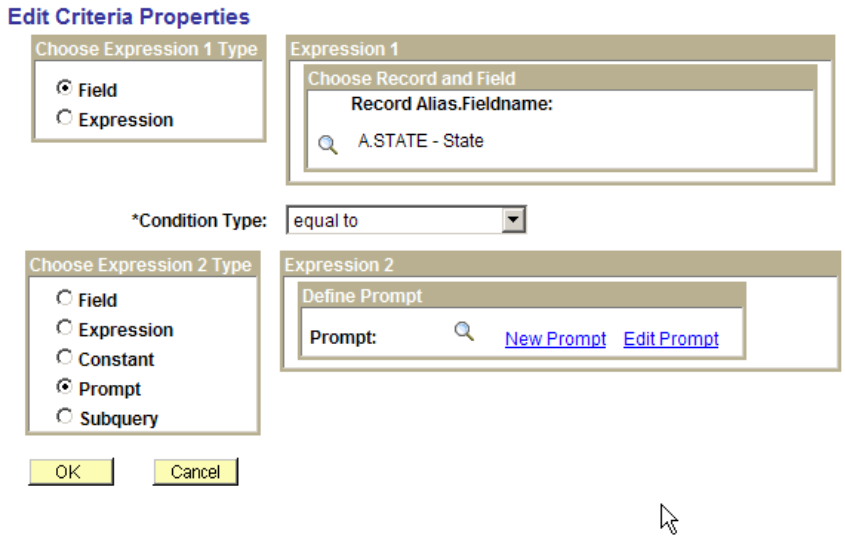


Multiple Prompts

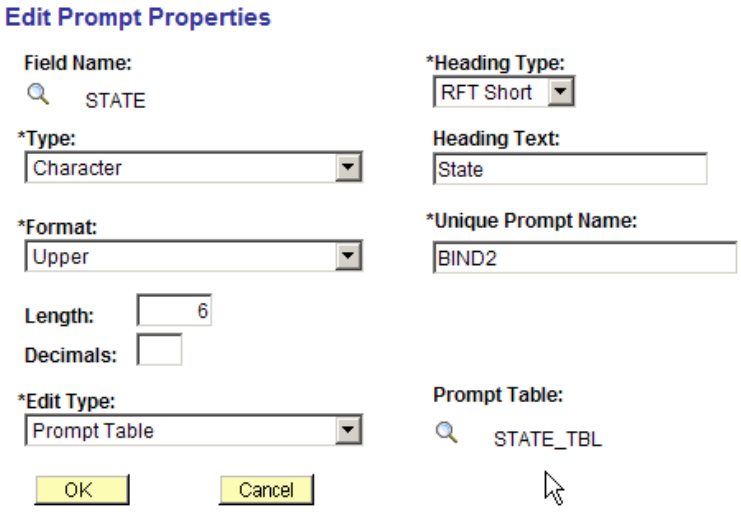
To add a prompt for an additional field you must add another row of criteria. If you have more than one prompt in a query, you define subsequent prompts through an *Edit Prompts Properties* page that manages all the prompt definitions.

From the Criteria tab:

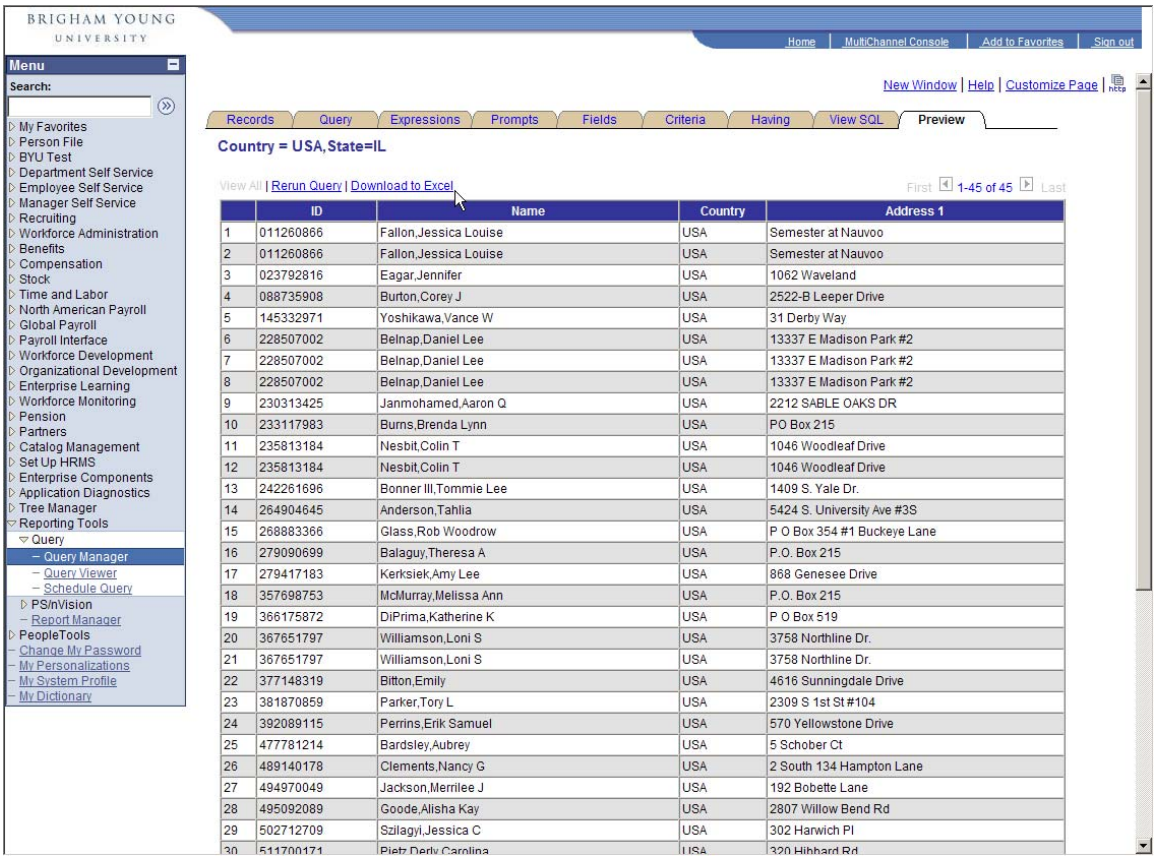
1. Add criteria for STATE
2. For expression type 2, select Prompt
3. Select the *New Prompt* link



4. Click OK and OK again on the *Edit Criteria Properties* page



Your criteria should now show two runtime prompts. Preview the query using USA as the country and IL as the State.



Queries with Multiple Records

When writing queries, it is very simple to retrieve information from one record. In many cases, you want to retrieve data from more than one record or specify criteria in your query from another record. In these cases, you need to link at least two records in one query. Working with multiple records is almost as easy as working with one.

Tables and Views

A record listed in your Directory Tree may be either a table or a view. A table physically stores specific data. A view is a logical representation of data and may consist of data from multiple tables depending on how the record was defined in Application Designer. Additionally, views may already have criteria associated with them. Therefore, it may be easier for application users to create a query from a view rather than a table. If an appropriate view of the required tables is not provided and the user requires data from multiple tables, the application user must know on which tables the data he or she requires is stored, and how to join those tables.

A simple solution is for the application user to submit a request to developers to create a view for them. Then within query, the user will only have to access one record (a view) for the report and not have to worry about accessing multiple tables and specifying additional criteria.

Joins

A join enables you to retrieve information 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 common fields.

In Query, predefined joins can be generated as a Record Hierarchy join or a Related Record join. Since these types of joins are predefined, you do not have to add any criteria to link the records manually.

Record Hierarchy- A hierarchical join uses records that are parents or children of each other. The hierarchical relationship is defined by the *Parent Record* in the Application Designer

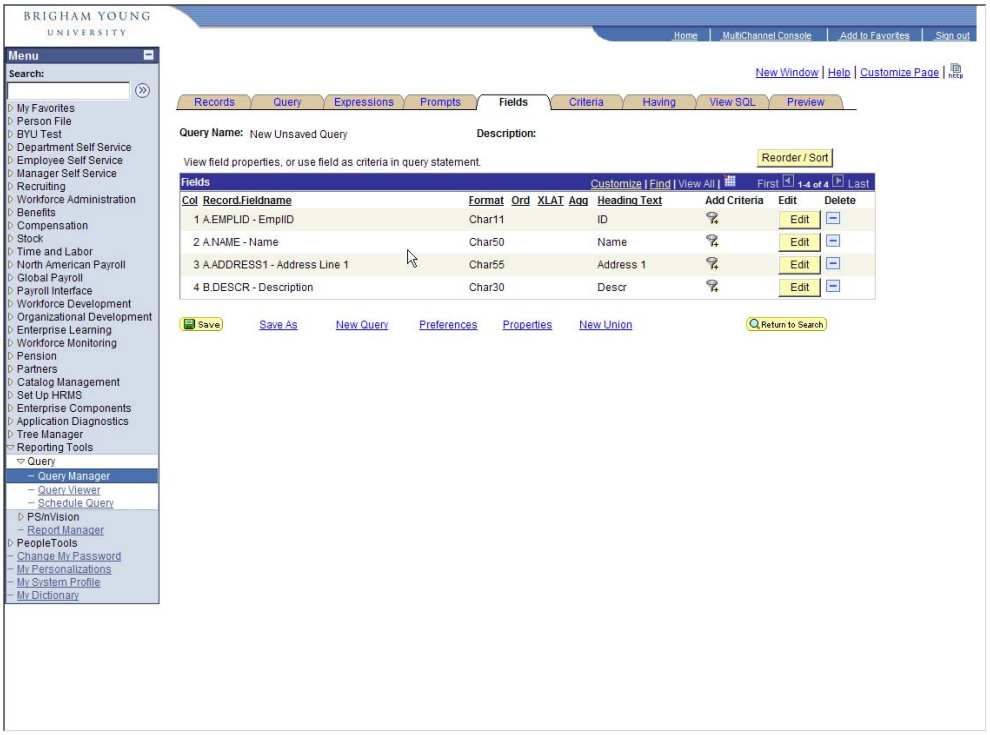
Related Record- Related Record joins use records from non-hierarchical records that are related by common fields. For example, description tables for common codes are related records. This relationship is determined by the Prompt Table edit defined for a field in the Application Designer.

Related Record Join

The related records are specific to a field in the current record. If a field has a related record, you will see it listed as a link across from the field name.

1. Create a new query using employee data (EMPLOYEES)
2. Select the EMPLID, NAME, and ADDRESS1
3. Click the Join STATE_TBL link

4. Choose *Join to get additional fields only*, Press OK
5. Select DESCR
6. Add a criteria to show only employees from Illinios (IL)
7. Preview the query


BRIGHAM YOUNG UNIVERSITY
Home | MultiChannel Console | Add to Favorites | Sign out
Menu
Search:
My Favorites
Person File
BYU Test
Department Self Service
Employee Self Service
Manager Self Service
Recruiting
Workforce Administration
Benefits
Compensation
Stock
Time and Labor
North American Payroll
Global Payroll
Payroll Interface
Workforce Development
Organizational Development
Enterprise Learning
Workforce Monitoring
Pension
Partners
Catalog Management
Set Up HRMS
Enterprise Components
Application Diagnostics
Tree Manager
Reporting Tools
Query
Query Manager
Query Viewer
Schedule Query
PS/nVision
Report Manager
PeopleTools
Change My Password
My Personalizations
My System Profile
My Dictionary
New Window | Help | Customize Page
Records | Query | Expressions | Prompts | Fields | Criteria | Having | View SQL | Preview
Query Name: New Unsaved Query
Description:
View field properties, or use field as criteria in query statement.
Reorder / Sort
Fields
Customize | Find | View All | First 1-4 of 4 Last
Col Record.Fieldname Format Ord XLAT Agg Heading Text Add Criteria Edit Delete
1 A.EMPLID - EmplID Char11 ID Edit
2 A.NAME - Name Char50 Name Edit
3 A.ADDRESS1 - Address Line 1 Char55 Address 1 Edit
4 B.DESCR - Description Char30 Descr Edit
Save
Save As
New Query
Preferences
Properties
New Union
Return to Search