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SCHRUG Alliance 2016

Session Title:	PS Basic Query Writing
Session Number:	5143
Track:	General Interest Track
Session Type:	Pre Conference Workshop
Room Assignment:	Space City - Rm 214 => Thu, Jul 28, 2016 (01:00 PM - 02:30 PM)
Initial Submission:	May 06, 2016 05:44 AM America/Central
Status:	Approved and Accepted
Session Submitter:	Marie Coleman
Primary Presenter:	Marie Coleman University of Houston System Application Lead You are currently missing the following information from your user profile: Profile Picture. Please click here to update your profile information.
Co-Presenter:	[Unassigned]
Co-Presenter 2:	[Unassigned]

Vendors not allowed to download files?:	No
Last Update:	May 23, 2016 10:04 AM America/Central
Short Details:	Attendees will be exposed to the concepts of query writing and the functionality offered by the PeopleSoft Query toolset in developing basic queries. The PS Query toolset provides the easiest mechanism to create and generate simple reports from PeopleSoft.
Details:	This workshop guides users in learning the concepts and procedures related to the PeopleSoft Query toolset. The PS Query toolset provides the easiest mechanism to create and generate simple reports from PeopleSoft. While PS Queries cannot be used to produce highly formatted and graphical reports, it is very effective in extracting day-to-day inquiry queries that are of interest to employees, managers and administrators. Data extracted through the PS Query tool is also frequently used as the data source in other processes such as Pop-Select. Topics covered in the workshop include: - Understand the PeopleSoft Query tool and how to navigate it - Query Viewer vs Query Manager - Output Formats - Global Search Features - Searching for Queries - Running Queries - Scheduling Queries - Favorite Queries - Favorite Queries - Favorite Queries - Report Manager - General Query Methodology - Understand PeopleSoft Query Structural Process Flow - Query Manager Design Pages and Page Links - How to develop simple queries - Selecting data from a single table - Specify the column order - Specify the sort order - Specify criteria for retrieving data - Specify query properties
Additional Notes:	
Session Length:	Workshop (90-120 minutes)

SCHRUG Alliance 2016

PEOPLESOFT BASIC QUERY WRITING

Session 5143

July 28, 2016



PS Basic Query Writing

 Fundamental concepts for simple data extractions in PeopleSoft Query Manager



Your Presenter:

Marie Coleman
 Application Lead, University of Houston System
 8 years PeopleSoft experience in Higher Education



Overview

 Attendees will be exposed to the concepts of query writing and the functionality offered by the PeopleSoft Query toolset in developing basic queries. The PS Query toolset provides nontechnical/functional users the easiest mechanism to create and generate simple data reports from PeopleSoft.



Agenda/Contents

- Query Viewer vs Query Manager
- Searching, Running, Downloading, and Favorite Queries
- Scheduling Queries and Report Manager
- General Query Methodology and PS Query Structural Process Flow
- Navigating Query Manager
- Developing a Simple Query
 - Selecting data from a single table, Specifying column order, Specifying data sort order, Specifying criteria for retrieving a dataset

University of Houston System

- Established in 1927
- Serving 66,000~ students
- Staffed by 7,000~ employees
- UH System institutions:
 - UH Central
 - UH Clear Lake
 - UH Victoria
 - UH Downtown (conversion from Banner to PeopleSoft targeted for Fall 2018)





UH System & Oracle

Campus Solutions

- Application v. 9.0; Bundle 41
- PeopleTools v. 8.54

HRMS

- Application v. 9.2
- PeopleTools v. 8.54

Finance

- Application v. 9.1
- PeopleTools v. 8.54

Oracle Database 11g



Learning Objectives

- Learn the basics of query writing methodology
- Become familiar with the PS Query tool, its structural process flow, and how to navigate it
- Understand the fundamental functionality offered by the PS Query tool and know how to successfully apply the mechanics of writing a simple query in PS for any basic data extraction need



PeopleSoft Query Writing: Basic

Query Viewer vs Query Manager



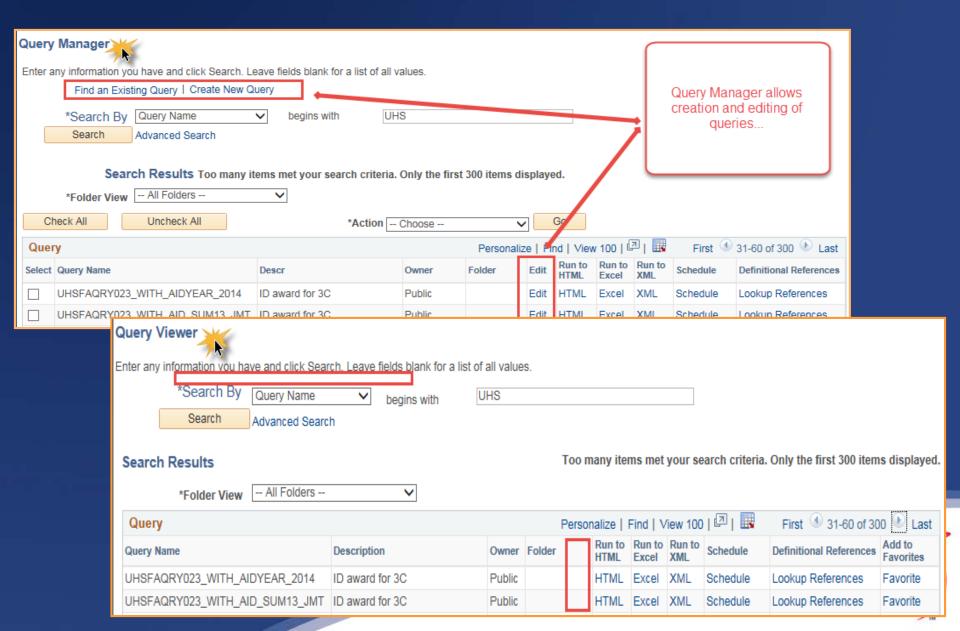
Query Viewer vs Query Manager

 Within its toolset, PeopleSoft offers the components Query Viewer and Query Manager for accessing queries. Query Viewer is a read-only version of Query Manager.

	Functionality	Available in Query Viewer	Available in Query Manager
\checkmark	Search for a query (basic and advanced searches)	Yes	Yes
\checkmark	Run/Execute queries	Yes	Yes
√	Download query results	Yes	Yes
√	Schedule a query	Yes	Yes
√	Create/Edit queries	No	Yes



Query Viewer vs Query Manager



PeopleSoft Query Writing: Basic

Searching, Running, Downloading, and Favorite Queries



- Both the Query Manager page and Query
 Viewer page enable a user to search for and run existing queries.
- There are multiple options available for users to search queries; the most common are by query name, description, folder name, and owner (public vs private). In addition, you can find a query if you know a record or field used by the existing query.



- Both the Query Manager page and Query Viewer page enable a user to search for and run existing queries.
- Navigating to the components:
 - To get to Query Manager, click Main Menu > Reporting Tools > Query > Query Manager
 - To get to Query Viewer, click Main Menu > Reporting Tools > Query > Query Viewer



 Queries can be searched using the following Search By parameters: Access Group Name, Description, Folder Name, Owner, Query Name, Type, Uses Field Name, and Uses Record Name.

*Search By Search	Query Name Access Group Name Description Folder Name Owner	begins with				
▼ My Favorite Que	Query Name				F	Personali
1	Uses Field Name					
Query Name	Uses Record Name		Owner	Folder	Edit	Run to HTML



- Both basic searches and advanced searches can be performed.
 - The <u>Basic Search</u> allows you to search using the "begins with" condition.
 - The <u>Advanced Search</u> allows you to perform a progressively narrower search by using multiple search criteria and selecting from a broad choice of conditions.
- Operators and Wildcards can be used to facilitate searching for queries.

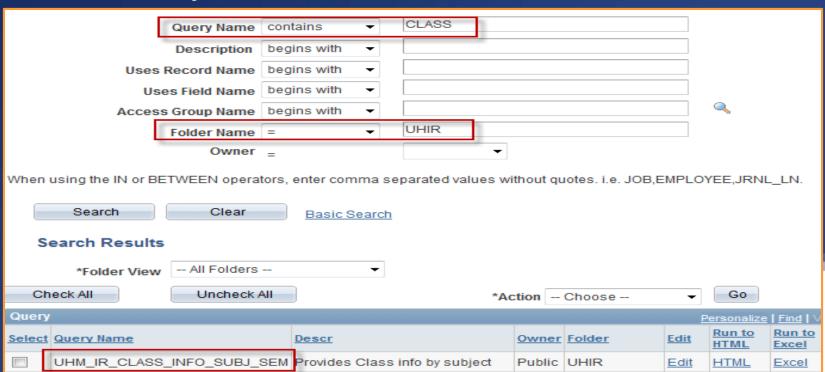


Using Operators

- When performing an Advanced Search, you can use a variety of Operators to narrow your searches.
- A comma is used to separate parameter search values when using conditions Between and In.



- Using Operators
 - You can use an operator for more than one field to make your search even more specific.
 - For example, you could narrow your search for queries where Folder Name = UHIR and where the Query Name contains CLASS.



- Using Operators
 - Example Variations Using Search Operators:

Search Operator	Operator Description	Sample Input Parameter	Sample Output Values Retrieved
begins with	Begins with value	"Smith"	"Smith, Smithee, Smithwick"
contains	Contains value	"Smith"	"Goldsmith, Smith, Smithee, Smithwick"
=	Equals value	"Smith"	"Smith"
not =	is Not Equal to value	"Smith"	All possible values excluding "Smith"
<	is Less Than; Comes Before	"Smith"	"Albert, Jones, Goldsmith, Nordstrom, Rainier"
<=	is Less Than or Equal to	"Smith"	"Albert, Jones, Goldsmith, Nordstrom, Rainier, Smith"
>	is Greater Than, Comes After	"Smith"	"Smithee, Smithwick, Turner, Urtz, Young"
>=	is Greater Than or Equal to	"Smith"	"Smith, Smithee, Smithwick, Turner, Urtz, Young"
between	is Between values	"Rainier" and "Smithwick"	"Rainier, Smith, Smithee, Smithwick"
in	is Included in the following list	"Jones, Smith, White"	"Jones, Smith, White"



- Using Wildcards
 - Wildcard characters can be used to help find data
 - Note: wildcard characters only work with the "begins with" and "contains" operators



- Using Wildcards
 - PeopleSoft Query recognizes the % (percent) and _ (underscore) wildcards
 - % (percent) matches any string of zero or more characters. For example, 'C%' matches any string starting with C, including C alone
 - _ (underscore) matches any single character. For example, '_ones' matches any five-character string ending with 'ones', such as Jones or Cones

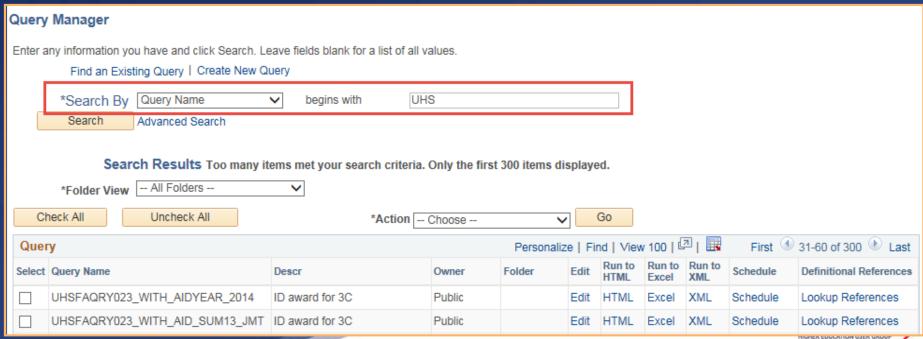


- Using Wildcards
 - To use one of the wildcard characters as a literal character (for example, to include a % in your string), precede the character with a \ (backward slash) (for example, '\%'). The backward slash tells PeopleSoft to not treat the next character as a wildcard.

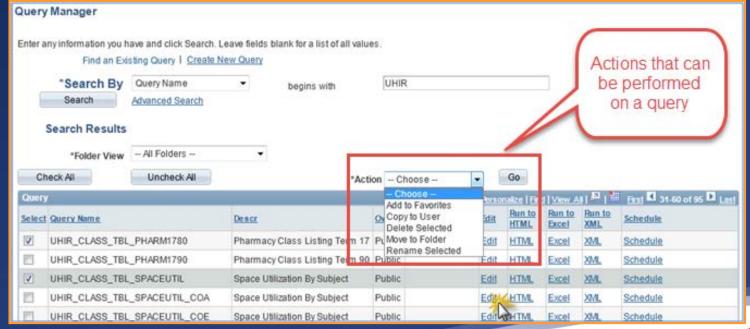
Query Viewer								
Enter any information you have and click Search. Leave fields blank for a list of all values.								
	Query Name	begins with ▼	%TSI					
L	Description	contains -	\%					
Uses F	Record Name	begins with ▼						
Use	s Field Name	begins with ▼						
Access	Group Name	begins with ▼						
	Folder Name	begins with ▼					_	
	Owner	=		•	•			
When using the IN or BE	TWEEN operat	ors, enter comma	separate	d values	without quotes.	i.e. JOB,E	MPLOYE	
Search	С	lear <u>Basi</u> c	Search					
Search Results								
*Folder Vi	ew All Fol	ders	•					
Query					<u>Pers</u>	onalize Fir	ıd View /	
Query Name	Descri	otion		<u>Owner</u>	<u>Folder</u>	Run to HTML	Run to	
CS_UHV_AD_TSI	5%-10	% of accepted TSI	scores	Public		HTML	Excel 2	
UHV_AD_TSI	5%-10	% of accepted TSI	scores	Public		HTML	Excel 2	



• To perform a Basic Search, simply select an option from the Search By drop down list and then type in the text string to be searched. If you do not know the entire string (such as whole query name) simply enter the beginning characters of the text string as a partial string search; wildcards can be used in generating the search.



- 'Query Manager' Search Page Actions
 - PeopleSoft enables users to perform several query related actions by simply clicking on the Select checkbox next to one-to-many queries and selecting an option from the Action drop down list and clicking





'Query Manager' Search Page Actions

<u>Action</u>	How Used
Add to Favorites	Adds the selected query to My Favorite Queries for easy access
Copy to User	Copies a private query to another user. You can copy only nonpublic queries to another user's list of queries. If the target user does not have permission to access all of the records in a copied query, that query does not appear in the target user's list of queries. When permission has been granted, the query appears in the list.
Delete Selected	Deletes the query.
Move to Folder	Organizing queries in folders can help you more easily access the queries. This action moves selected queries to a folder.
Rename Selected	Allows the user to rename the query.



Seeing it in Action... Searching for Queries



- You can download your query to a Microsoft Excel spreadsheet, XML file, or CSV text file.
- If you download your query from the Run page, the query has a different default filename than if you download your query after clicking the HTML or Excel links. These default filenames are different because:
 - (a) using the Run page to run queries, queries are run using the application server, and
 - (b) using the HTML or Excel links, queries are run using a query service.



- To download your query results, select one of the following:
 - Excel: Click this link on the Query Manager or Query Viewer search results page
 - Download to Excel: Click this link on the Query Manager or Query Viewer Run page.
 - Excel SpreadSheet: This option is available after you have clicked the HTML link on the Query Manager or Query Viewer search results page. However, you can also click the Download to Excel or Excel links without downloading the query to HTML. You can configure your environment to open the Microsoft Excel file in a separate window or save it as a file on your local hard drive by modifying the File Type Option settings for Microsoft Excel Worksheets.

- To download your query results, select one of the following:
 - CSV Text File: This option is available after you have clicked the HTML link. If you click this option, the File Download page appears, at which point you can open the file in your browser or save it to disk.
 - XML File: This option is available from the Search page as well as Run page.



Q	Query Viewer										
Enter any information you have and click Search. Leave fields blank for a list of all values.											
	*Search By Query Name begins with UHIR UHIR										
	Search	Advanced Search									
	Search Results *Folder View										
ı	Query					<u>Personaliz</u>	e <u>Find </u>	View All		First 1 61-90	of 95 Last
	Query Name		Description	1	<u>Owner</u>	<u>Folder</u>	Run to HTML	Run to Excel	Run to XML	<u>Schedule</u>	Add to Favorites
UHIR_MAJORS_ROSTER_BY_ECE_GRAD Majors Roster of ECE MSDRs Public ADVISOR HTML Excelled Schedule Favority							<u>Favorite</u>				
UHIR_MAJORS_ROSTER_BY_IE_GRAD Majors Roster of INDE MSDRs			Public	ADVISOR	HTML	Excel	XML	<u>Schedule</u>	<u>Favorite</u>		
	UHIR_MAJORS_ROSTER_O	FFICIAL	Majors Ros	ter by College	Public	ADVISOR	HTML	<u>Excel</u>	<u>XML</u>	<u>Schedule</u>	<u>Favorite</u>

UHIR_ROSTER_BY_ACAD_PLAN - Majors Roster by College									
Institution: 00730 A Acad Plan: BIOBA View Results									
Download results in : Excel SpreadSheet CSVTextFile XML File (334 kb) View All									
ID	Name	<i>J</i> ₀	EnrolledCurrent	Acad Plan					

Records Query Expressions Prompts Fields Criteria Having	View SQL Run
User = 0897289	
View All Rerun Query Download to Excel Download to XML	
OprID Name	Email ID



Seeing it in Action... Downloading Queries



PeopleSoft Query Writing: Basic

Scheduling Queries and Report Manager



Scheduling Queries

- Query Viewer and Query Manager interact with PeopleSoft Process Scheduler to enable you to schedule queries to <u>run at a later time</u>; or to schedule queries with <u>large results</u> to run over the server instead of the web client that has limits on the retrieval of large results
- You can schedule queries to run at predefined times or on recurring schedules (allowing the user to run the same query at regular intervals). The results of scheduled queries are retrieved in PeopleSoft Report Manager and/or Process Monitor

Scheduling Queries

 You can initiate scheduling of a query by clicking on the Schedule link from the Search Page of Query Viewer and Query Manager which takes you to the Schedule Query page; you can also initiate scheduling through navigation Main Menu > Reporting Tools > Query > Schedule Query

Query Viewer										
Enter any information you have and click Search. Leave fields blank for a list of all values.										
*Search By	Query Name	▼	begins with	UHIR						
Search	Advanced Sear	<u>rch</u>	_							
Search Results										
*Folder View	All Folders -	-	▼							
Query						Personaliz	e <u>Find</u> '	View All	🖪 🛗	First 1 31-6
Query Name		Description		<u>Owner</u>	<u>Folder</u>		Run to HTML	Run to Excel	Run to XML	<u>Schedule</u>
UHIR_CLASS_TBL_PHARM1	1780	Pharmacy Cla	ass Listing Term 17	Public			<u>HTML</u>	<u>Excel</u>	XML	Schedul
										100

Scheduling Queries

• Queries are scheduled through submitting a Process Request. A process request enables you to submit a job or process to run. The Schedule Query page submits a process request and brings up the Process Request page, 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

Favorites Main Menu > Reporting Tools > Query	> Query Viewer
Scheduled Query	
Find an Existing Value Add a New Value	
	Favorites Main Menu > Reporting Tools > Query > Schedule Query
Query Name: UHIR_ENROLLED_MAIN Run Control ID: Sched_Enrolled_Main	Schedule Query
Add T	Find an Existing Value Add a New Value
	Run Control ID: Sched_Enrolled_Main2
	Add



Scheduling Queries

- If initiated from menu navigation Schedule Query, select the query for which you want to schedule; if initiated through Query Viewer/ Manager the query is already selected for you but you need to update the description field
- Update any prompt parameters by clicking on the Update Parameters link; Note: if the query does not have any prompts, the Update Parameters link does not appear
- To save changes and remain on the page, click the seed button if initiated through menu navigation Schedule Query...click the button if initiated through Query Viewer/ Manager

Scheduling Queries

Favorites Main Menu > Reporting Tools > Query > Schedule Query						
Schedule Query						
Run Control ID:	Sched_Enrolled_Mai	in2	Report Manager Process Monitor Run			
Query Name: *Description:	UHIR_ENROLLED_N Students Enrolled-Ma		Search			
Save		Favorites Main M	1enu > Reporting Tools > Query > Query	/ Viewer		
		Schedule Run Control ID:	Query Sched_Enrolled_Main	Report Manager	Process Monitor	
		Query Name: *Description: OK C	UHIR_ENROLLED_MAIN Students Enrolled-Main Campus cancel Apply			



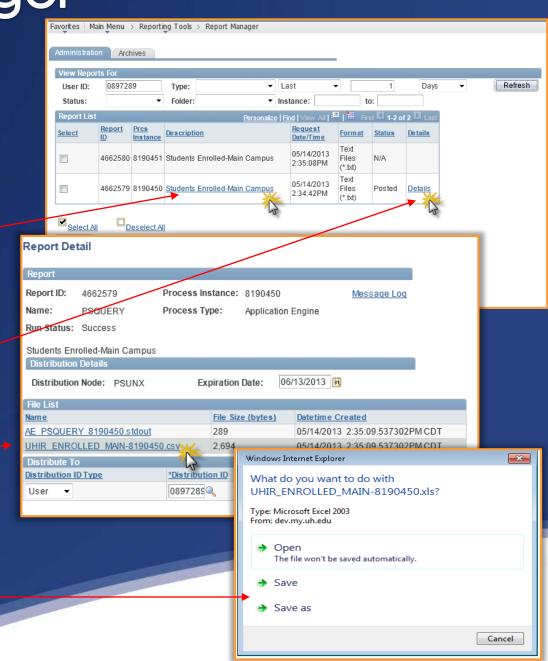
Report Manager

- The results of scheduled queries can be retrieved in PeopleSoft Report Manager. Report Manager is like your own personal inbox of reports and process output.
- To access the Report Manager navigate menu
 Reporting Tools > Report Manager, or click the Report
 Manager link on the Schedule Query page



Report Manager

- To run the report from the Report Manager page, click on the report item's hyperlinked Description.
- To run the report from the Report Detail subpage click on the Details link and then the file output link
- You can then open the file or save it to a desired location



Seeing it in Action... Scheduling Queries and Report Manager



PeopleSoft Query Writing: Basic

General Query Methodology and PS Query Structural Process Flow



- When creating queries, endeavor to follow a methodology similar to the following list:
 - Identify What Information is Really Needed
 - Determine Criteria Logic
 - Use Appropriate Records, Tables, and Fields, Column Ordering, Field Sorting
 - Perform Table Dumps to Learn Tables
 - Identification of Key Fields
 - Development of Criteria appropriate for the Table
 - Identify Example/Sample Data to get a feel for the data



- When creating queries, endeavor to follow a methodology similar to the following list:
 - Map out Table/Record Joins that may be required
 - Identify what join type is needed
 - > Inner/Standard Join
 - Outer Join
 - Run query after each new table join to compare what has changed – add/lost rows/data.
 - Verify Data Set
 - Is this the data you want to use?



- When creating queries, endeavor to follow a methodology similar to the following list:
 - Map out Use of Advanced Functionality
 - Using Expressions
 - Identify Data Type: Numbers, Characters, Date, Drilling URL
 - Identify Needed Manipulation: Data Type Conversion, Totals, Grouping, If-Then Logic
 - Using Subqueries
 - What table(s) and criteria in the subquery are needed?
 - What single field/expression of output needs to be returned?
 - Using Unions
 - What separate query results do you want to merge into a single result set?
 - Can the separate queries be merged to have the same number of fields, same data types, and same display order?

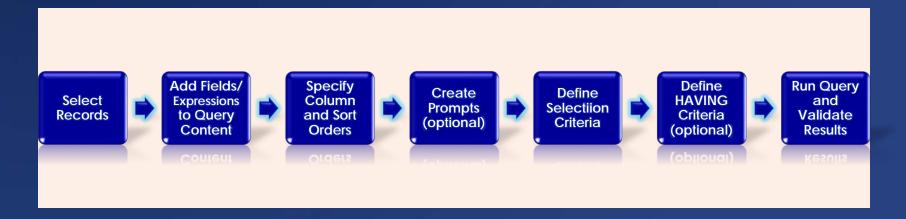


- When creating queries, endeavor to follow a methodology similar to the following list:
 - Build & Test in Increments ****
 - Using/Viewing SQL statement if troubleshooting is needed
 - What's really going on in the background?



PS Query Structural Process Flow

 The below process flow illustrates the basic steps in constructing a PeopleSoft Query:





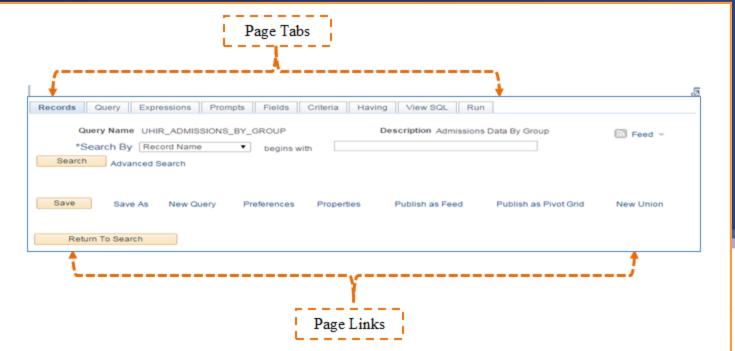
PeopleSoft Query Writing: Basic

Navigating Query Manager



Navigating Query Manager

 Several pages are used in constructing PeopleSoft Queries. Some pages are accessed via tabs located at the top of Query Manager and some are accessed via links, icons, or buttons nested within other pages.





Navigating Query Manager

• Summary Page Descriptions:

	-	
Page/Page Link	How Used	
Records	Select the records upon which to base the query.	
Query	Add fields to the query content and navigate to Criteria page. You can also add additional records by performing 'Hierarchical' and 'Related Records' joins. When you first access this page, if you have selected the record for an effective-dated table, a page informs you that an effective date criteria has been automatically added for this record. Click OK to close the page.	
Expressions	Expressions are calculations that PeopleSoft Query performs as part of a query. Use them when you must calculate a value that PeopleSoft Query does not provide by default—for example, to add the values from two fields together or to multiply a field value by a constant. You can work with an expression as if it were a field in the query: select it for output, change its column heading, or choose it as an "order by" column. In Query Manager, you can use expressions in two ways: • As comparison values in selection criteria. • As columns in the query output.	
Prompts	Add or edit variables used at run-time.	
Fields	View how fields are selected for output; view the properties of each field; change headings and aggregate values; delete fields from output; navigate to Edit Field Ordering page, Edit Field Properties page, and Criteria page	



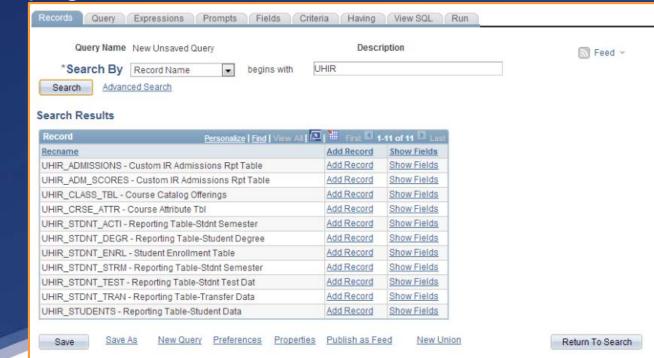
Seeing it in Action... Navigating Query Manager



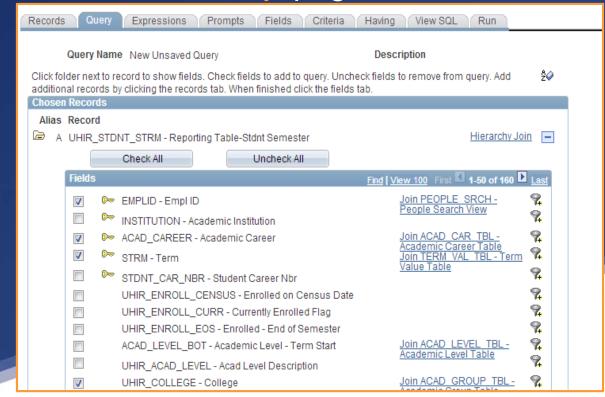
PeopleSoft Query Writing: Basic



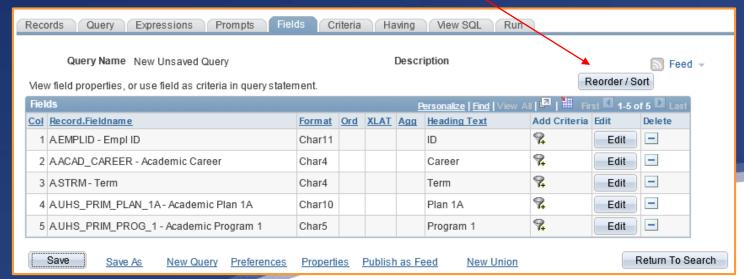
- (1) Search and select the Primary record. The first step in building your PS basic query is searching for the primary record to add to your query definition
- The selected record establishes the primary focus of the query. Records are added to the query definition using the 'Records' page



- (2) Select the Fields that are desired to be displayed on the Report when run by placing a checkmark in the checkbox next to the field
- The fields within the primary record added to the query definition are displayed under the 'Query' page

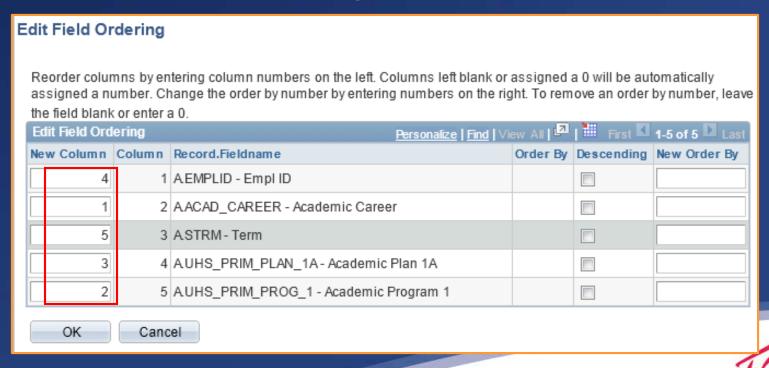


- (3) Customize the fields of output. Click on the Fields tab after selecting the fields. You will notice that the fields displayed are the fields that were previously selected on the Query tab
 - (3a) Specify Column Ordering. The column order is displayed in the column title Col. The order in which fields are selected is the order in which the column headings will be displayed in the output/report. Click on the Reorder/Sort button to change the column order on the report

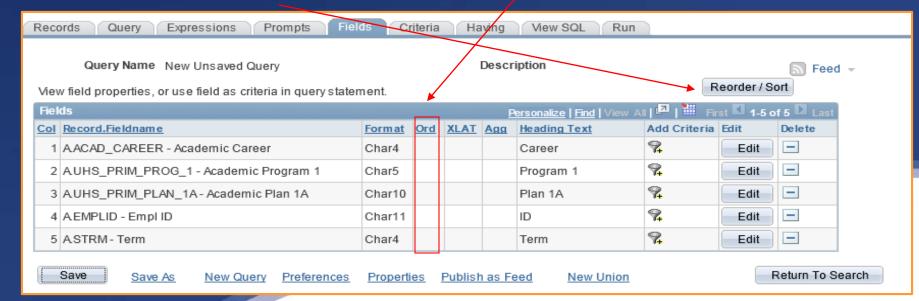




- (3) Customize the fields of output. Click on the Fields tab after selecting the fields. You will notice that the fields displayed are the fields that were previously selected on the Query tab
 - (3a) Specify Column Ordering...



- (3) Customize the fields of output. Click on the Fields tab after selecting the fields. You will notice that the fields displayed are the fields that were previously selected on the Query tab
 - (3b) Specify Data Sort Ordering. The report sort order is displayed in the column title Ord. If the Ord value is blank, then the rows will be displayed in the order the rows were entered in the source records instead. To change the report sort order, click on the Reorder/Sort button

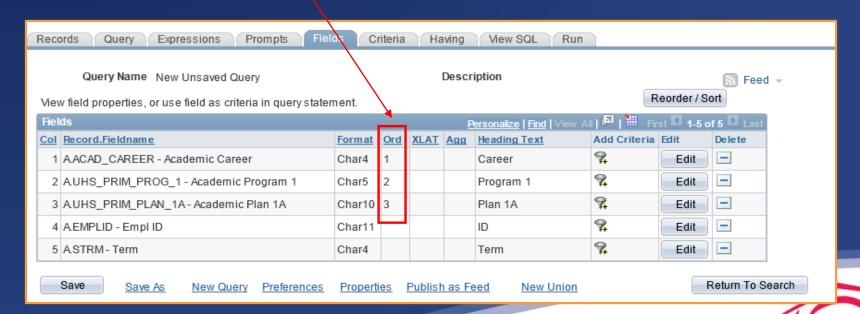


- (3) Customize the fields of output. Click on the Fields tab after selecting the fields. You will notice that the fields displayed are the fields that were previously selected on the Query tab
 - (3b) Specify Data Sort Ordering...The Edit Field Ordering page will be displayed

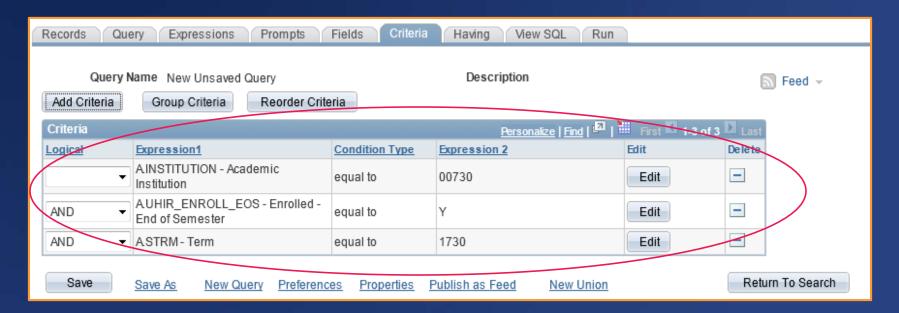
Edit Field Ordering Reorder columns by entering column numbers on the left. Columns left blank or assigned a 0 will be automatically assigned a number. Change the order by number by entering numbers on the right. To remove an order by number, leave the field blank or enter a 0. First 1-5 of 5 Edit Field Ordering Personalize | Find | View All | [2] New Column | Column | Record, Fieldname Order By Descending New Order By 1 A.ACAD_CAREER - Academic Career 2 AUHS PRIM PROG 1 - Academic Program 1 3 AUHS_PRIM_PLAN_1A - Academic Plan 1A 4 AEMPLID - Empl ID 5 ASTRM - Term OK Cancel



- (3) Customize the fields of output. Click on the Fields tab after selecting the fields. You will notice that the fields displayed are the fields that were previously selected on the Query tab
 - (3b) Specify Data Sort Ordering...The updated sort order is displayed in the Ord column



o (4) Add criteria...





- (5) Save your query definition. Query names are uppercase and can be up to 30 characters. No spaces or any special characters (other than an underscore) are allowed.
 - A description for the query can be given, which can be up to 30 characters, mixed case, with special characters.
 - Queries can be saved for public use or private use.
 - Users are also provided an option to save their query definition to specific folders.
 Enter a name to save this query:

Enter a name to save this query:		
*Query:	UHIR_TRAINING_QRY1_UHTRN01	
Description:	Training Query 1	
Folder:	UIHIR_TRAINING	
*Query Type:	User 💙	
*Owner:	Private ~	
Query Definition:		
2014-11 (MC): Type a more detailed description of your query here		
ОК	Cancel	



Seeing it in Action... Creating a Simple Query



Questions?



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This presentation is available for download from the Conference site at https://www.heug.org/page/us-alliance-conference-files

Note: Sessions from previous HEUG conferences are also available.

