

WESLEYAN UNIVERSITY



Student/Faculty Information System

Introduction to PeopleSoft Query Part I – Basic Query Concepts and Query Viewer



Student/Faculty Information System Introduction to PeopleSoft Query

OVERVIEW

Purpose

- The objective of this introductory course is to consider the overall concepts of working with the Query tool in the **SFIS PeopleSoft Database**.
- **SFIS (Student Faculty Information System)** is the University's comprehensive system to support student service offices.
- The software for SFIS is PeopleSoft Campus Solutions.
- **SFIS** is the primary system for the Offices of the Registrar, Deans, Academic Affairs, Student Accounts, Graduate Liberal Studies, Public Safety, Residential Life, Wesleyan Station and Graduate Student Services.
- SFIS is one of three PeopleSoft Databases currently in use at Wesleyan. The three databases are:
 - SFIS (also called PeopleSoft Campus Solutions)
 - HRMS (Human Resources Management System)
 - WFS (Wesleyan Financial System)
 - Part I Basic Query Concepts and Query Viewer will familiarize you with the foundations of Query and the basics of selecting and running an existing query through Query Viewer.
 - Part II Query Manager Basics will present the fundamentals of building queries in PeopleSoft.
 - There is a separate module, Part III Query Advanced, which explores more complex Query usage topics.



Part I - Basic Database and Query Concepts and Query Viewer

Objectives: In this module you will learn about:

- Lesson 1: Understanding -
 - What a database is
 - The basics of PS Query
- Lesson 2: Overview of Query Viewer
- Lesson 3: Search methods
- Lesson 4: Running queries and using PeopleSoft Help
 - Downloading queries to Excel
 - Variations with browsers in downloading
 - PeopleBooks

What is a database? What is PeopleSoft Query?



- A database is a structured set of data held in a computer, especially one that is accessible in various ways
- PeopleSoft Query is a graphical tool that allows users to easily create requests (queries) about the data contained in the PeopleSoft database through Query Manager.
- The data can be viewed through Query Manager and through Query Viewer.



Understanding PeopleSoft Query

Lesson 1: Basic Query Concepts

A database is a collection of data (or information) arranged for ease and speed of search and retrieval.

There is a lot of very useful information in the SFIS PeopleSoft database. *Query is the tool that you can use to extract that information directly into reporting tools for more detailed analysis.* You can create your own queries or you can use Query to extract data from the database with existing queries.

- What Query Is:
 - A method to examine and report on data
 - Helpful to find trends/patterns in data
 - An excellent way to get raw data for further analysis
 - Very literal in how it processes your requests and what it returns
- What Query Is Not:
 - A data analysis tool
 - Computer programming
 - Well suited for summaries or encapsulated looks at data
 - Forgiving of a minor typo or logic error





In the <u>SFIS Blog</u> there is a <u>Glossary</u> of Query-related terminology that you might find useful.

Understanding Your Database

- Your database is where all PeopleSoft data is maintained.
- The type of database used by the PeopleSoft application is called a *relational database*. It is so named since the organization of the information is based on the *relationship* of the data.
 - In a relational database, the data is stored in *tables*. Note that PeopleSoft Query uses the term Record to mean Table.
 - A *relational database* is made up of multiple tables of information which are connected in some way *(Key Fields).* So, when you are looking at a Query in PeopleSoft, most of the time you are looking at data from two or more tables which are joined together.
 - Each table is made up of Rows and Fields (Columns).
 - A *Relation* is a two-dimensional array of *Rows* and *Fields*. Each cell in an array can have only one value, and no two rows may be identical.







Simple Table Example

| EMPLID | FIRST_NAME | LAST_NAME |
|--------|------------|-----------|
| 999999 | Mary | Smith |
| 123455 | Mark | Jones |
| 876543 | Terry | Smith |
| 456780 | Terry | Jones |

- 1. This is a **TABLE or RECORD** that contains information about students
- 2. The Table has three **FIELDS** or Columns (EMPLID, FIRST_NAME and LAST NAME)
- 3. There are four *ROWS*.
- 4. There is one **KEY** in this Table which is EMPLID. It is the element that makes each row unique.





Understanding Your Database

Relational Database Analogy

- Think of a Database as a file cabinet.
- The **Records (or Tables)** are **file folders.**
- Records (or Tables) are composed of Fields and Rows.
- The Rows contain specific information about a unique characteristic.
- Fields display the type of information contained within each Row.
- An individual Row, for example, might include information about a student named "John Smith." The corresponding Field might be "Name."
- With a Relational Database, Records (or Tables) are linked together (joined) using a common piece of data, such as an EmplID (Key).
- With a Relational Database, once something has been entered, you do not have to enter it again in a different row.



Following is additional terminology and equivalent terms with which you may be more familiar:

| PeopleSoft Query Terms | Equivalent Terms |
|---------------------------|--|
| Record | Table, File, Data Set |
| Field | ltem, Data Element, Attribute, Column |
| Row | Record, Occurrence, Entry, Field Data |

Access to data and use of results



Each user's access to data is based on their overall security access to PeopleSoft. Generally, you can only access data in Query that you can see on a PeopleSoft page/panel.

A public query is accessible when:

- You have been granted access to the public query; and
- You have access to all records used by the public query.
- There will be more specific information about working with public queries in Lesson 10.
- Data that is extracted from the databases should never be publicly shared without full review by the department that owns the data.
- Never download confidential information to the hard drive of a laptop; always save to a network drive.

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Lesson 2: Query Viewer

Query Viewer is essentially a read-only version of Query Manager. Since many of the fundamentals you'll use in Query Viewer are the same as those in Query Manager, it is important that you familiarize yourself with these features.

Note: All query examples in these lessons begin with **WES_SFIS**. They are actual queries which you can find in the Campus Solutions Test Database where you can create and experiment with your own queries.

Query Viewer enables you to:

- 1. Search for a query using the Basic or Advanced Search functions.
- 2. Run a query (which displays results in a new browser window).
- 3. Download the results to an Excel spreadsheet (or a CSV Text file).
- 4. Print a query, once you have run it to Excel.

Opening Query Viewer and searching for a Query by name:

Navigation: Main Menu > Reporting Tools > Query > Query Viewer

| WESLEYA | | | |
|----------------------|---------------------------------------|---|--|
| avorites Main Menu > | Reporting Tools > | Query > Query Viewer | |
| 12 | | | |
| | | | |
| uery Viewer | | | |
| N 1992 12.5 M | ave and click Search. I | Leave fields blank for a list of all values. | |
| N 1992 12.5 M | ave and click Search. I Query Name | Leave fields blank for a list of all values. ▼ begins with | |



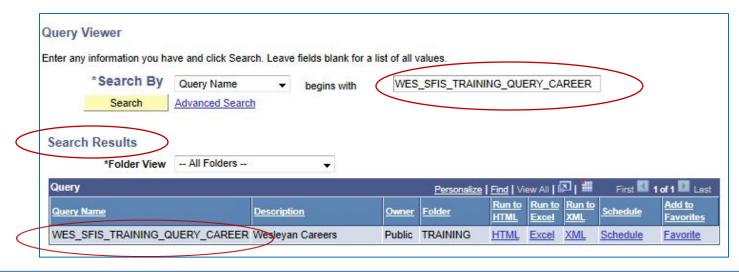




Query Viewer – Search by Query Name

If you know the name of the Query you would like to run, you can search by typing the entire name or the first few letters of the name into the box next to "**begins with**" and then click the yellow Search button.

- In this example, your search is for a query that lists the Academic Careers at Wesleyan. The full name of the query is **WES_SFIS_TRAINING_QUERY_CAREER.**
- Type the query name into the box next to "Search By Query Name begins with."
- Click on the **Search** button.
 - When you do a search in Query you can enter upper or lower case letters or a mixture.
 - In many cases in PeopleSoft, you can hit the Enter key rather than click on the buttons. That is true in the case of the Search button for example.
- The **Search Results** section opens further down the page.
- Since you typed the full name of the query and it is 30 characters long, there are no other queries that begin with those letters. So it is the only query that appears.



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Query Viewer Search Results Overview

| Search Results | | | | | | | | |
|-----------------------------|-----------------------|--------------|---------------|---|-----------|---------------|-----------------|----------------------------|
| *Folder View All Fold | ers 🔻 | > | | | | | | |
| Query | | | Personalize | <u>Find</u> Vie | w All 🛛 🗳 | ۵ ۱ 🖩 | First 🚺 | 1 of 1 🛄 Last |
| Query Name | Description | <u>Owner</u> | <u>Folder</u> | and the second se | | Run to XML | <u>Schedule</u> | <u>Add to</u> Favorites |
| WES_SFIS_TRAINING_QUERY_CAP | REER Wesleyan Careers | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |

The **Search Results** section in **Query Viewer** has these main elements:

- Folder View dropdown Default is "—All Folders –"
- Query Name Displays all queries that meet the criteria you searched on.
- Description Brief description of the Query
- **Owner Public or Private**. Private queries are only accessible by the user who created them. Public queries are available to users with access to those tables/records.
- Folder Folders enable the user to organize queries to make them easier to locate (in this example, the query is in a Folder named "TRAINING."
- **Run to HTML** You can use this link to run the results of the query to an Excel file or a CSV text file. You can use this link to view within the Query tool before running to Excel.
- **Run to Excel** To copy the results to an Excel file for further analysis and printing.
- **Run to XML** and **Schedule** You would not normally use these options.
- Add to Favorites To list queries you run on a regular basis. When selected, the query is automatically added to your favorite queries list. Thereafter, when you open Query Viewer it appears at the bottom of the page under the heading My Favorite Queries

Query Viewer – Partial Name Search

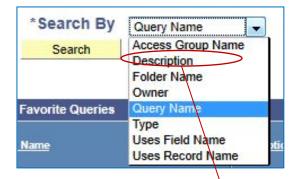
If you don't know the full name of the query, but do know the first few letters, you can type them in the "begins with" box.

- To start a new search, if needed, in the "begins with" box, delete everything
- Type **wes_sfis_train**. Note that you can type in lower case or upper case letters.
- When you click on **Search** (or Enter), a page similar to the following opens.
- All Public Queries that start with WES_SFIS_TRAIN are displayed.
- The query **WES_SFIS_TRAINING_QUERY_CAREER** is part of the list.

| Query | Personalize Find View All 🖾 🛗 First 🖾 1-18 of 18 🖾 Last | | | | | | | |
|--------------------------------|---|--------|---------------|----------------|-----------------|---------------|----------|---------------------|
| Query Name | Description | Owner | <u>Folder</u> | Run to HTML | Run to Excel | Run to XML | Schedule | Add to Favorites |
| WES_SFIS_TRAINING_GROUP_CRITER | Group Criteria Example | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_1 | UGRD acad plans currently used | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_1A | Extracts UGRD acad plan-Prompt | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_2 | Engl Maj Class 2010 Term 1101 | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_2A | Same as Query 2 Dbl Eng Majors | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_2MULTI | query with multiple variables | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_3 | Same as 2 w prompt & wild card | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_3A | Similar to 2 w/ term & career | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAINING_QUERY_CAREER | Wesleyan Careers | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAIN_DATE_FORMATS | Date Formats, Concatenation | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAIN_DATE_FORMATS_2 | Date Formats, Concatenation | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAIN_EXPRESSION_EXPL | | Public | TRAINING | <u>HTML</u> | <u>Excel</u> | <u>XML</u> | Schedule | <u>Favorite</u> |



Lesson 3: Query Viewer – Other Search Methods (Search By)



In addition to using the Search By box to look up by Query Name, there are a few other selections you can choose in the dropdown box.



- An example of using Search By for all or part of the Description would be to select Description from the list and type wesleyan careers (upper, lower or mixed case). You could also type wesleyan car
- If there were only one query that had that **Description**, only one query would show up:

| Query | | | Personalize | Find Vi | ew All 🕯 | םן וווו | First 🚺 | 1 of 1 🚺 Last |
|--------------------------------|------------------|--------|-------------|----------------|-----------------|----------------------|-----------------|----------------------------|
| Query Name | Pescripton | Owner | Folder | Run to HTML | Run to Excel | <u>Run to</u> XML | <u>Schedule</u> | <u>Add to</u> Favorites |
| WES_SFIS_TRAINING_QUERY_CAREER | Wesleyan Careers | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |

Note: You can use wildcards when searching (see Advanced Search, Slide 14):

A percent sign (%) in the place of a one or more characters.

An underscore (_) for just one character.

Query Viewer – Other Search Methods (Advanced Search)

• Another search method is to click on the **Advanced Search** link next to the Search button.

| er any information you have and click Search. Leave fie | elds blank for a list of all values. | | begins with |
|---|--------------------------------------|----------------------------------|---------------------|
| Query Name begins with | | | 4 |
| Description begins with - | | | <= |
| | | | = |
| Uses Record Name begins with - | | | > |
| Uses Field Name begins with 👻 | | | >= |
| Access Group Name begins with 🚽 | | Q | begins with |
| Folder Name begins with | | | between |
| *Query Type = | User 👻 | | contains |
| State of the second second second | | | in |
| Owner = | | | not = |
| hen using the IN or BETWEEN operators, enter comma | a separated values without quote | es. i.e. JOB, EMPLOYEE, JRNL_LN. | And a second second |

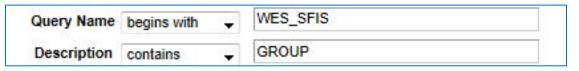
- The options available under **Advanced Search** are the same as those found in the **Search By** box. However, in addition, each has a dropdown that gives you the opportunity to further refine the search.
- Advanced Search introduces *Conditions* which are used with search criteria to limit the results you want to see when searching for a query.
 - In **Advanced Search** there are many more conditions besides the "begins with" condition to which you are limited in **Basic Search**.
 - Each of the conditions, except for **Owner**, has the same dropdown list. The **Owner** dropdown list contains two entries: **Public** and **Private**.
 - For the descriptions of these options, see <u>Slide 15</u>.

Query Viewer – Other Search Methods (Advanced Search)



Note regarding Advanced Search Conditions: Of the Conditions available in the dropdown list, the most useful are probably "*contains*" and "*begins with*."

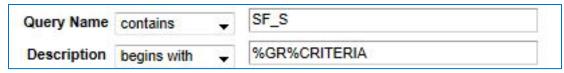
• The conditions under **Advanced Search** can be used alone or in combination.



• For example, the above combination results in three queries being displayed:

| Query | 1. 1. | Perso | nalize Find View | | i ii | First 🚺 1 | -3 of 3 🚺 Last | |
|--------------------------------|-------------------------------|--------|----------------------|--------|-------|----------------------|-----------------|----------------------------|
| Query Name | Description | | Folder | Run to | | <u>Run to</u> XML | <u>Schedule</u> | <u>Add to</u> Favorites |
| WES_SFIS_TRAINING_GROUP_CRITER | Group Criteria Example | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAIN_GRP_CRITERIA_1 | Group Criteria Example BEFORE | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |
| WES_SFIS_TRAIN_GRP_CRITERIA_2 | Group Criteria Example AFTER | Public | TRAINING | HTML | Excel | XML | Schedule | Favorite |

- Wildcards: As noted above, you can use wildcards to assist with searching.
 - A percent sign (%) in the place of a one or more characters .
 - An underscore (_) for just one character.
- So in order to see the same result as shown above, you could use this combination:



Query Viewer – Other Search Methods (Advanced Search)

Briefly, the meanings of the items in the <u>Advanced Search</u> dropdown lists are as follows:



| < | Results are less than the criteria entered. |
|-------------|---|
| <= | Results are less than or equal to the criteria entered. |
| = | Results are exactly equal to the criteria entered. |
| > | Results are greater than the criteria entered. |
| >= | Results are greater than or equal to the criteria entered. |
| Begins with | Results begin with the criteria entered. |
| Between | Results fall within and include the range entered. Separate range with commas. |
| Contains | Results contain some form of the criteria entered. Entering train would return any query that contained TRAIN, TRAINING, TRAINS, etc. |
| In | Results presented have one or more of the criteria entered. Separate criteria with commas. |
| Not = | Results do not include the criteria entered. |

Running Queries to Excel -

- For a query to be run to Excel, the popup blocker should be turned off.
 - There are different ways to <u>turn off the popup blocker</u>, depending upon which browser you use.
- In **Query Viewer** you may either first take a look at the query results and then run to Excel or you may simply run it to Excel after searching for it.

VIEWING, THEN RUNNING TO EXCEL:

- To first view the query WES_SFIS_TRAINING_QUERY_CAREER, you need to open the query.
- Using the previous instructions, search for the query. When it appears under Search Results, click on HTML link under the Run to HTML label to the right.

| Query | | | Personalizy | Find | w All Í | تة _ا ه | First 🚺 | 1 of 1 🚺 Last |
|--------------------------------|------------------|--|---------------|----------------|-----------|----------------------|----------|----------------------------|
| Query Name | Description | and the second sec | <u>Folder</u> | Run to HTML | Run to | <u>Run to</u> XML | | <u>Add to</u> Favorites |
| WES_SFIS_TRAINING_QUERY_CAREER | Wesleyan Careers | Public | | HTML | Excel | XML | Schedule | Favorite |

When the page opens, click on the Run Tab.



• VIEWING, THEN RUNNING TO EXCEL (continued)

 The results will be displayed. In this query there are five Rows returned, which are numbered. There is only one **Field (Column)** in this particular query which is **Career**. The appearance will vary somewhat depending upon the browser.

| | WES_SFIS_ | RAINING_QUERY_CAREER- Wesleyan Careers |
|-----------|-----------|---|
| \langle | Download | esults in : Excel SpreadSheet CSV Text File XML File (1 kb) |
| | View All | First 🖪 1-5 of 5 📦 Last |
| | | Career |
| | 1 | DCST |
| | 2 | GRAD |
| | 3 | GLSP |
| | 4 | HONR |
| | 5 | UGRD |

- You will notice there are three options for downloading. In most instances, you will want to use Excel.
- So, once you have looked at the query, you may copy it to Excel by clicking on the link
 Excel SpreadSheet.
- Depending upon your browser and your settings, a menu will appear with options for opening or saving the Excel file.

• VIEWING, THEN RUNNING TO EXCEL (continued)

– If you open the Excel, the results appear in the file as follows (this example is in Firefox):

| | A | В |
|---|------------------|---|
| 1 | Wesleyan Careers | 5 |
| 2 | Career | |
| 3 | DCST | |
| 4 | GRAD | |
| 5 | GLSP | |
| 6 | HONR | |
| 7 | UGRD | |
| 8 | | |

- In order to utilize this as an Excel file, you will need to save it with an xlsx extension. You can either:
 - Save the Excel file (which is somewhat slower); or
 - You can copy the contents of this file into a blank Excel sheet (doing so is quicker). You can use the name supplied, but it is best to choose your own name.

TO RUN THE QUERY DIRECTLY TO EXCEL:

Search for the query and when it appears under Search Results, click on the Excel link under the heading Run to Excel.



- As described above, depending upon your browser and your settings, a menu will appear with options for opening or saving the Excel file.

• RUNNING A PROMPTED QUERY TO EXCEL:

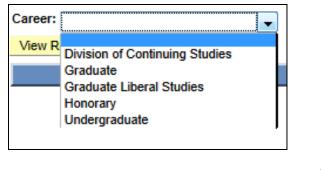
- Some queries are designed to prompt you for information when you run them. When you
 enter specific data, the results of your query are narrowed down to only the information you
 entered, instead of returning all the data from the query.
- Sometimes the prompt will offer you choices while other prompts require your input.
 - In the first instance, to help you select the correct values, you perform a search using the dropdown menu or lookup button that appears on the screen.
 - However, in the second instance, there will not necessarily be a dropdown box. In that case, you will type in the criterion.
- Example of a prompted query with a dropdown list of criteria:
 - In the following example, you will be running the prompted query named *WES_SFIS_TRAINING_QUERY_1A*. This query lists Academic Plans and has a prompt to limit the plans by Career.
 - As with any other query, you can either first view it or send it directly to Excel.
 - In either case, once you select the HTML link or the Excel link, the following page opens:

| WES_SFIS_TRAININ | G_QUERY_1A - Extracts UGRD acad plan-Prompt | |
|------------------|---|--|
| Career: | ▼ | |
| View Results | | |
| | Acad Plan | |
| | | |

Click the down arrow to see the list of choices.

• RUNNING A PROMPTED QUERY TO EXCEL (continued)

- A dropdown list appears. This list shows only the values for **Career**.
- Once you've made your selection, click on the View Results button. The query will either show you the results (if you clicked HTML) or you will see the menu choices for sending to Excel (if you clicked Excel).
- **Query Viewer** is in a separate page from this prompt page, so you can return to it at any time.



• A few additional points regarding prompts and wildcards:

- There may be more than one prompt. Enter the desired criteria in all boxes.
- Wildcards: If a phrase like "(% to see all)" is part of a prompt, you can enter a % sign to see all Rows in that Field. Any field with the phrase "(% to see all)" must have at least the % filled in.
- To narrow down the selection in a prompt with a wildcard:
 - You may enter the entire name.
 - Or you may use the wild card (%) in conjunction with the first few letters of the name, for example, ABC%
- Do <u>not</u> leave any prompts with a wildcard blank; they will not return any results. At a minimum, any field with the phrase "(% to see all)" must have the % filled in.

PeopleBooks Help for Query Viewer

When you are working in PeopleSoft, there is context-sensitive help available in PeopleBooks if you click on the **Help** link in the upper right of many pages.

The Help link is available on the **Query Viewer** page. A new browser tab will open. You can search by clicking on the **Search** tab in the **Reference Pane** (the listing on the left with Contents, Index and Search). For example, a search for *Query Viewer* results in this section appearing:

| ORACLE | Hide Reference Pane Show Graphics Pr |
|--|--|
| PeopleTools 8.52: PeopleSoft Que Home > PeopleBooks > PeopleTools 8.52: Peop | IeSoft Query > Creating and Running Simple Queries First 🚺 3 of 10 🕨 L |
| Contents Index Search | Using Query Viewer 🖪 |
| Synchronize Expand All Collapse All Keep table of contents synchronized with focument | Query Viewer is a read-only version of Query Manager. It enables security administrators to limit some users to read-only access for all queries, so they can only view or print queries. |
| PeopleTools 8.52: PeopleSoft Query PeopleSoft Query Preface Getting Started with PeopleSoft Query Creating and Running Simple Queries Understanding Query Types Understanding Dirty Reads in PeopleS Creating New Queries Creating Queries Saving Queries Running Queries | This example shows the Query Viewer page: Image: Query Viewer page Query Viewer enables you to: • Search for a query using the basic or advanced search functions. |
| | Both search types allow you to select the following <i>search by</i> criteria: access group name, description, folder name, owner, query name, type, uses field name, and uses record name. The basic search enables you to search using only the <i>begins with</i> condition. The advanced search enables you to perform a progressively narrower search by using one or more <i>search by</i> criteria and selecting from a choice of conditions for each <i>search by</i> criterion. |
| Adding Queries to the Internet Explorer | Run a query (which displays results in a new browser window). |
| Downloading Queries Performing Lookups Printing Query Results Using Query Viewer | To run a query, click the HTML, Excel, or XML link to the right of the query on the Search Results page. Note. After you click the HTML link, you have an option to view the XMLP formatted result in a new browser by clicking the Download to XML File link on the HTML result page. |

If the Reference Pane does not appear on the left, click on the **Show Reference Pane** link in the upper right and the Reference Pane will open.

Review of Part I - Introduction to PeopleSoft Query

SFIS (Student Faculty Information System) – based on PeopleSoft Campus Solutions - is Wesleyan's database that supports student offices across campus.

- A database is a collection of data (or information) arranged for ease and speed of search and retrieval. It is helpful to have an understanding of essential database concepts in order to use Query effectively.
- Query is the tool that you can use to extract information directly into reporting tools for more detailed analysis.
- You can create your own queries with Query Manager and you can view data through Query Viewer or Query Manager.
- Query Viewer is fundamentally a read-only version of Query Manager.
- There are a number of basic and advanced search methods to enable the user to find the correct query in Query Viewer, including the use of wildcards.
- While you can view the results in Query Viewer, for further analysis and reporting purposes, you can run the Query to Excel. There may be differences in downloading depending upon which browser is used.
- While working in PeopleSoft, you can click on the Help button on many pages to observe contextsensitive help from PeopleBooks.

Remember you can also search for solutions and tips on the **SFIS Blog**.



[End of Part I]