PEOPLESOFT QUERIES

Delane Swank

LOS RIOS COMMUNITY COLLEGE DISTRICT | TRAINING AND DEVELOPMENT

Agenda

- Welcome/Introductions
- Today's Schedule
  - What is a Database?
  - Why do we Query?
  - Query Basics
  - PS Query Tab-By-Tab
  - Tips & Tricks
  - Example Queries
  - Questions

PeopleSoft Queries

Delane Swank, IT Business/Tech Analyst

What is a database

da·ta·base
noun: **database**; plural noun: **databases**

A structured set of data held in a computer, especially one that is accessible in various ways.

What is a database

- Databases provide an efficient way to store, retrieve and analyze data.
- Relational Databases are structured to recognize relations among stored items of information.
- Before Databases, all data was stored in tab limited flat file. Multiple pieces of information called fields were grouped together into a record. Hard to search for content, create reports with only a few fields.

What is a database

- Databases contain a series of tables organized by key fields and unique IDs.
- Relational databases are created using a special computer language, Structured Query Language (SQL).
- Through SQL logic tables are joined to make a single database using Primary Keys, Foreign Keys, Super Keys, Composite Keys, and Compound Keys.

Key Structure in a Table

Class ID (🗝)	Term (🗝)	Subject	Catalog Number	Classroom
7854	2158	ENG	105	MB102
6543	2158	BIL	112	MM207
3982	2158	MTH	101	MM115
2098	2158	CHM	345	SCB453
7854	2159	ENG	105	MB102

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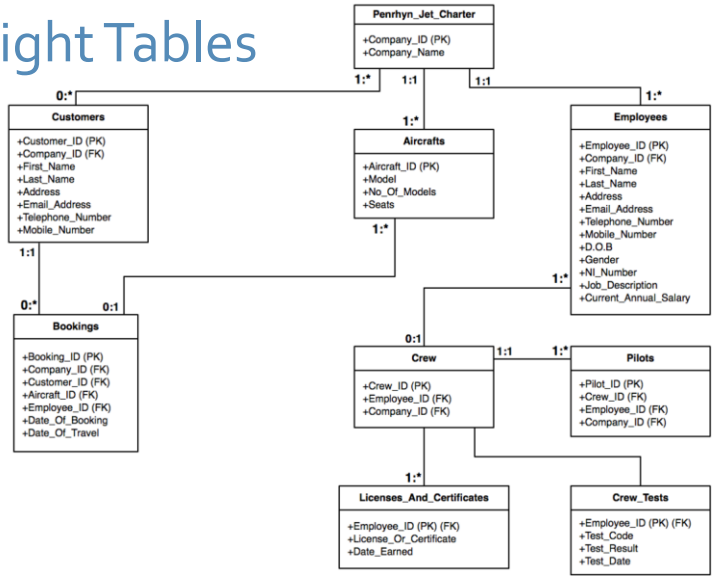
Why do we Query?

- PeopleSoft is a set of thousands of tables interconnected by PeopleCode (Peoplesoft's proprietary coding language)
- We query in order to store, retrieve, and analyze the data housed in these thousands of tables.

Finding the Right Tables



Finding the Right Tables

- Campus Solutions
  - http://peoplesoft.wikidot.com/campus-solutions-tables
- HRMS (Foundational Tables):
  - https://www.sbctc.edu/resources/documents/colleges-staff/data-services/peoplesoft-ctclink/hcm-common-tables-for-reporting.pdf
- FSCM (Foundational Tables):
  - http://finance.fiu.edu/controller/Docs/Commonly_Used_Tables.pdf
- ELM
  - https://peoplesofttutorial.com/complete-list-of-peoplesoft-elm-9-1-tables/
- Query Manager PeopleBooks
  - https://docs.oracle.com/cd/E55244_01/psft/acrobat/pt854tpsq-b0714.pdf

Queries – The Basics

Querying tools

- Most querying tools allow us to **create, retrieve and manipulate** data in tables
- Functional users, usually don't need to (and should never!) **change** (insert, delete or update) database without using the user interface.
- Querying should be done by functional users for **reporting purposes only.**
- To that end, you have access to the Peoplesoft Query tool - PSQuery

PSQuery

- Gives us an easy platform for finding the **right** tables
- Provides us with important information on each table – and a nice search tool to find them
- Makes it easy to make the **basic query statement**
- Organizes our data for us, and provides **output** options
- Helps us with dependencies and field names

The Basic Query Statement

The Basic Query Statement

Select [field(s)]
From [table(s)]
Where [criteria]

The Basic Query Statement

- Step 1 - know what **fields** you want (**Select**)
- Step 2 - find out what **tables** you need (**From**)
- Step 3 – define your criteria (**Where**)

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The Basic Query Statement

- **SELECT** your columns – DISTINCT
  FROM table names
  JOIN table names – Inner Join, Outer Join, Full Join
  WHERE condition
  GROUP BY your columns – COUNT, SUM, AVG, MIN, MAX
  HAVING aggregate column condition
  ORDER BY your columns – ASC, DESC
- Do it all over in a Sub Query?

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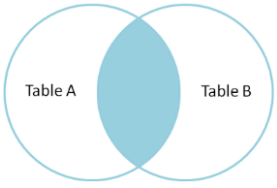
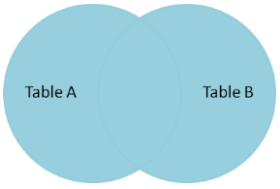
The Basics of SQL JOIN

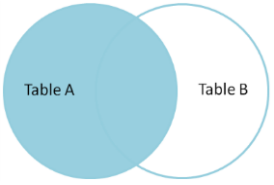
Inner Join



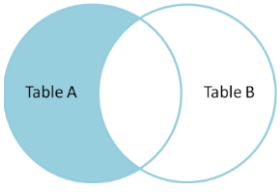
Full Outer Join



Left Outer Join



Left Outer Join (Exclude B with Where)



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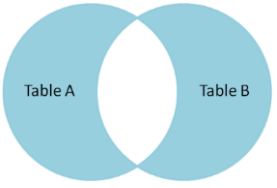

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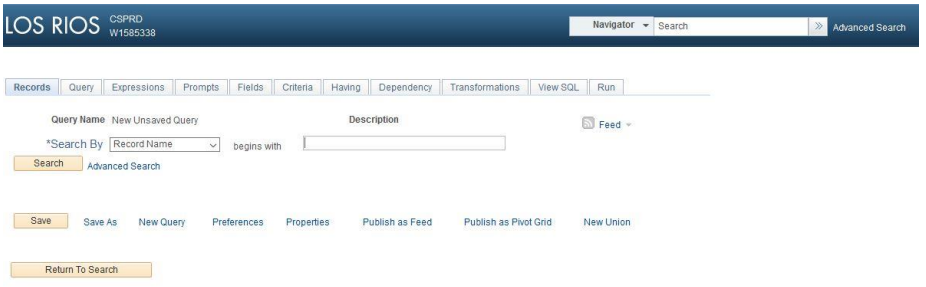
Where do I begin?

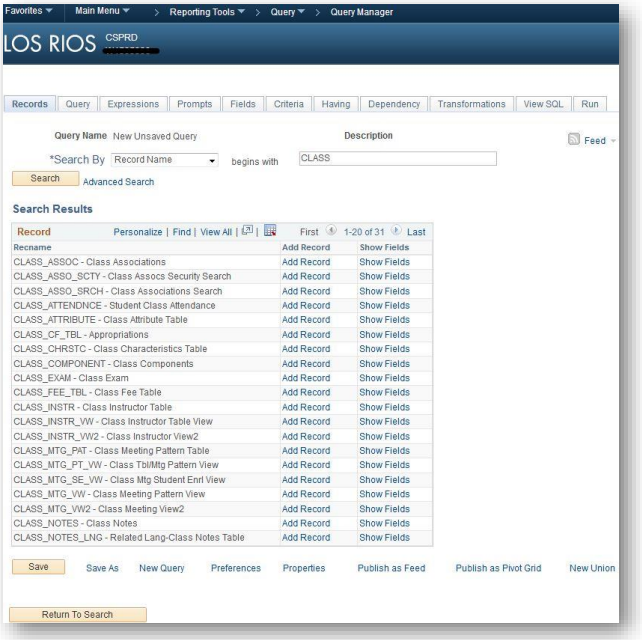
- Begin with a whiteboard, or a pen and paper
- Define your SQL statements
- Think about your fields, criteria, and prompts
- When you're learning, start fresh **every time,** eventually, you will know the data well enough to build a basic query very quickly!

PSQUERY – Tab-By-tab



Records Tab

- Use the Search feature to find your records (tables)
- Bring in tables one at a time. Know your criteria, and then join
- Always go with the most basic tables you can find
- I would suggest avoiding views – Unless you know what is in it?



Records Tab

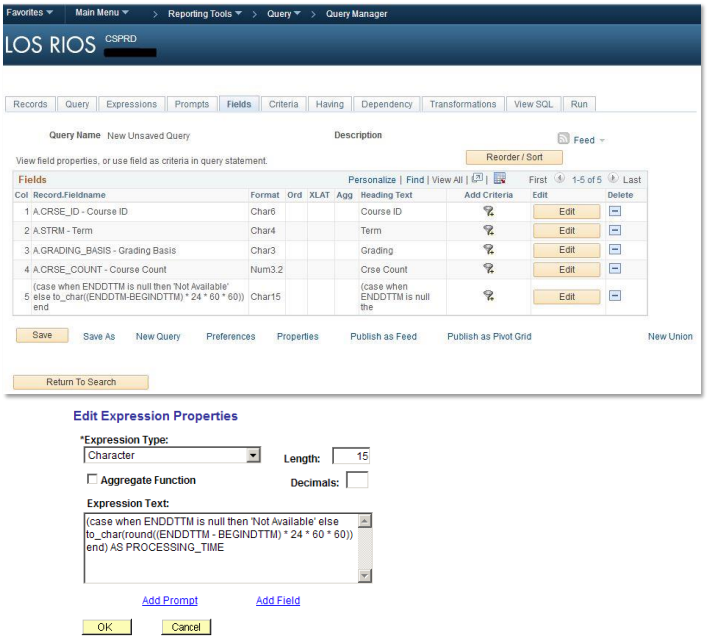
- Click on Show fields to get to this page – examine what is in it
- Click on Add record to create a query with that record.
- Search and add more to create joins
- Keys are marked with a Y in front – Example has a composite key with 6 fields

Query Tab

- Don't be too eager to select too many fields
- You can define criteria here, or on the criteria page (when starting out, use the criteria page
- Always check to make sure your table makes sense before joining it in

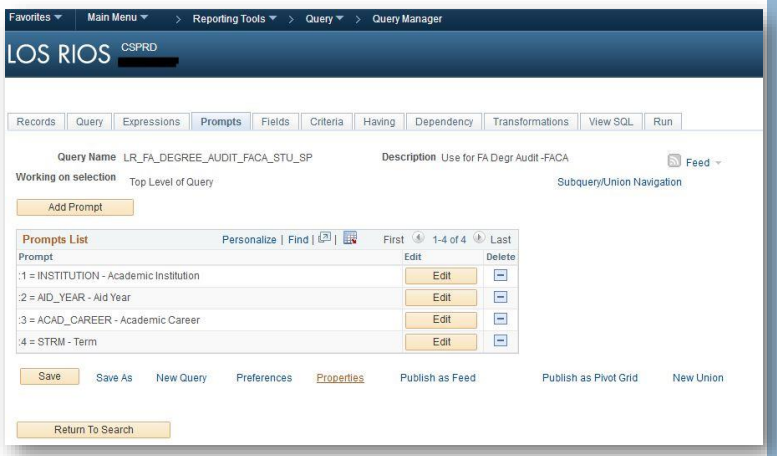
Expressions Tab

- A means of defining your SQL statement – usually used in Select & Where statements
- For now, we will only define expressions on the criteria page
- Anything that can be used in an Oracle database* can be used in an expression
- The internet is a great resource to find expressions

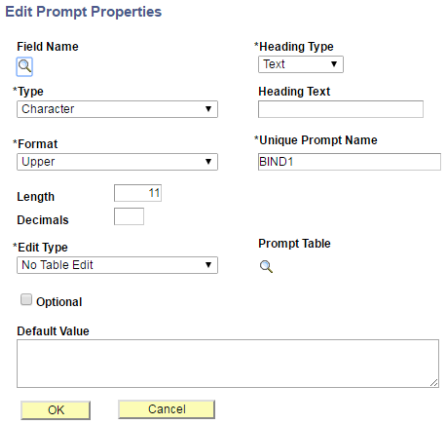


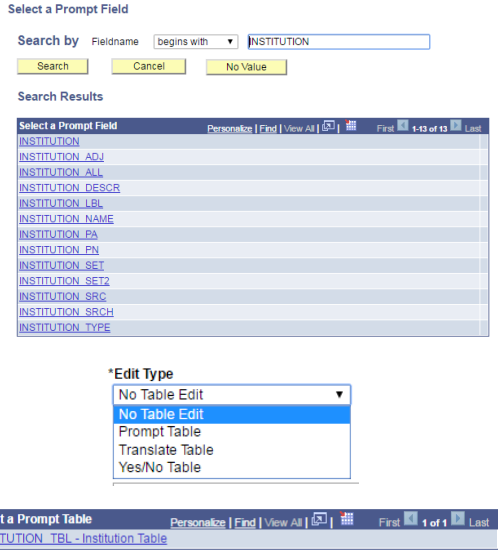
Prompts Tab

- Prompts are also known as bind variables
- Prompts are completely user configurable – you can decide the length, the format, the edit type*, and specify a default value



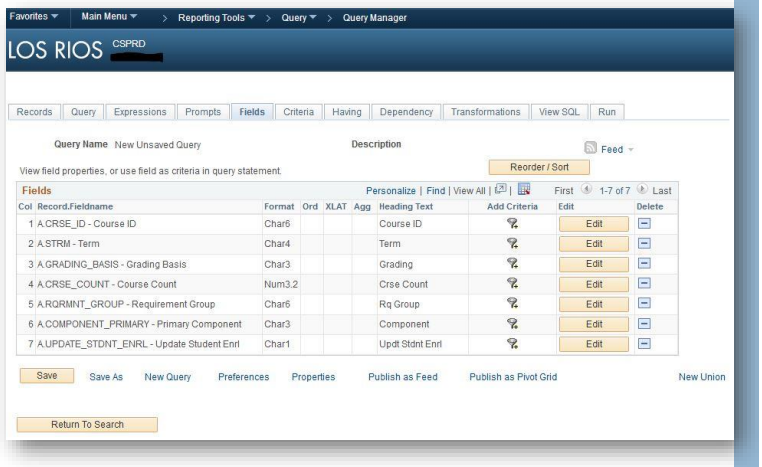
Prompts Tab





Fields Tab

- You can use the field tab to define the **display information** for your fields. Based on the tables you choose, these will be defined for you – however (as with everything else) they are **configurable**
- You can always change the field header
- Keep an eye out for **translate values** that can display several different sets of values based on your choice



Fields Tab

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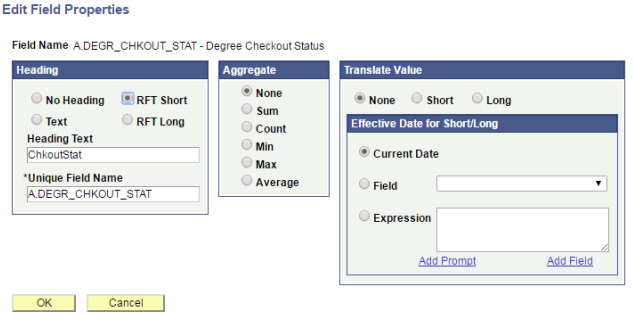
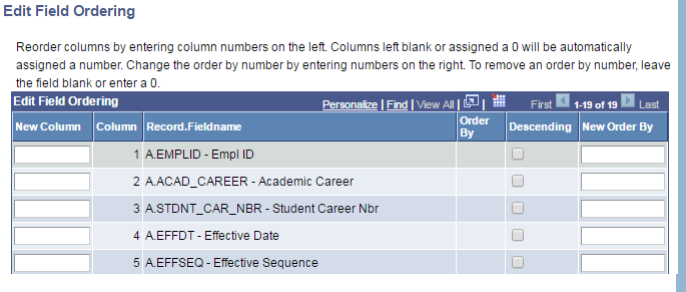
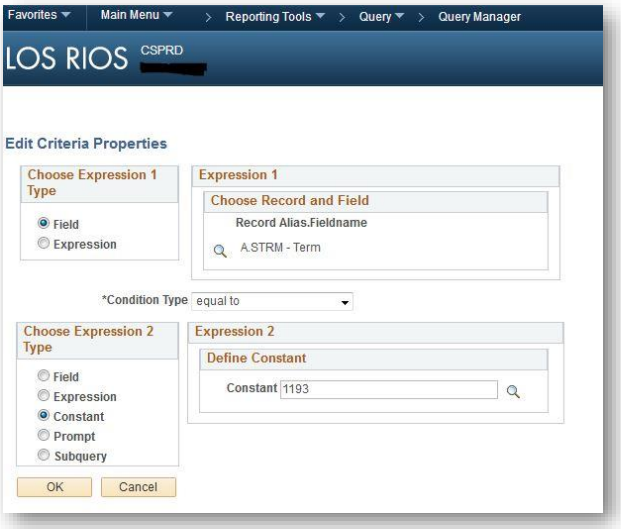




Criteria Tab

- Define your fields
- Choose your **Operand** (and, or, >, <, >=, <=, between, in list, like, equal to, not equal to, not in list, not like)
- **Be smart with your Operand!**



Criteria Tab

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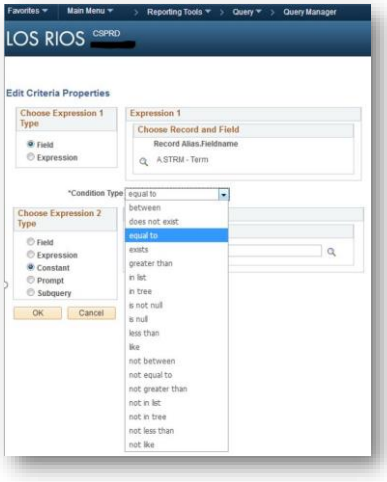
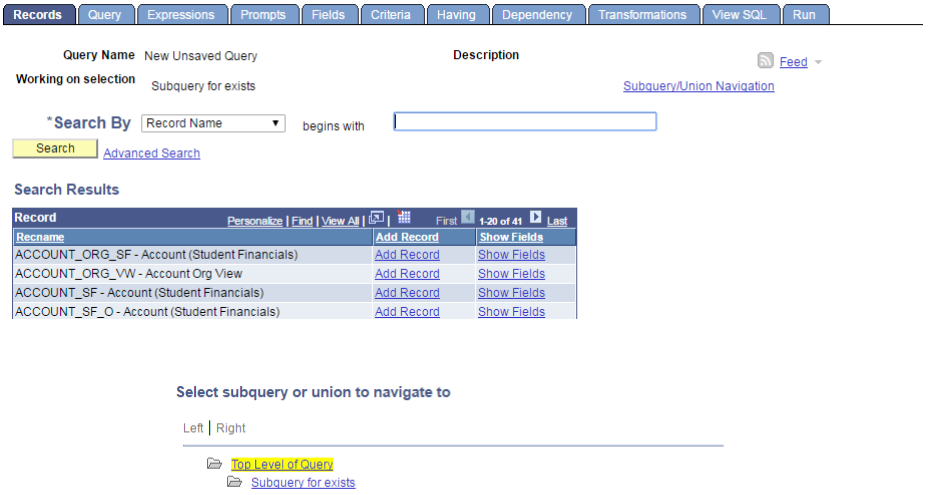
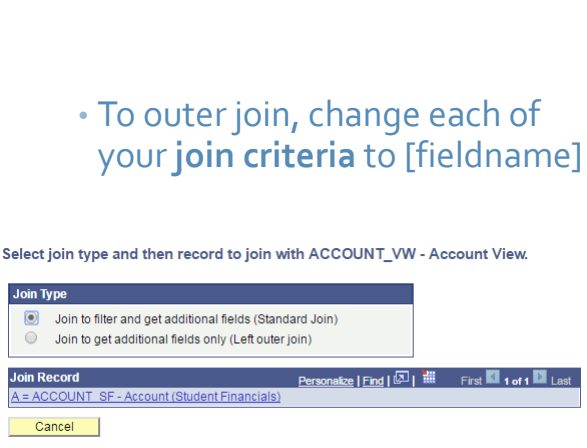


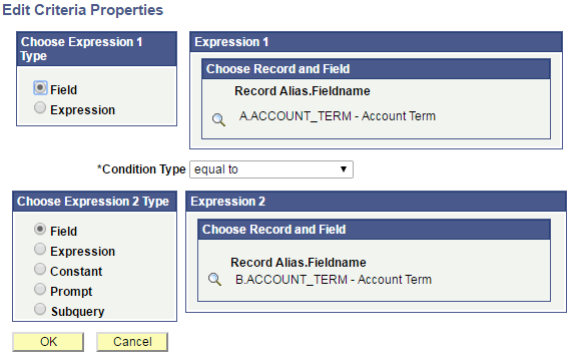
Criteria Tab



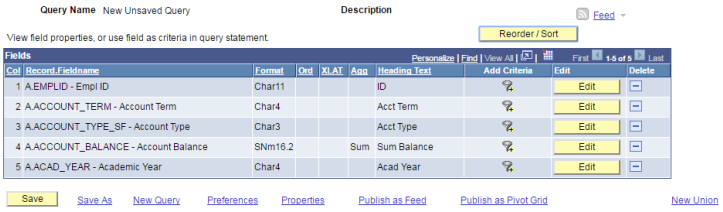
Outer Join vs Inner Join

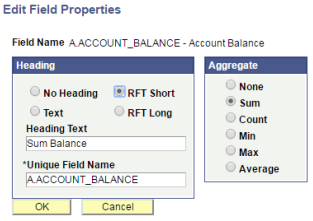
- To outer join, change each of your **join criteria** to [fieldname]

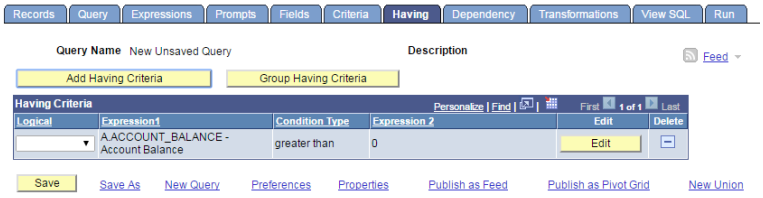




Having (and aggregate functions)

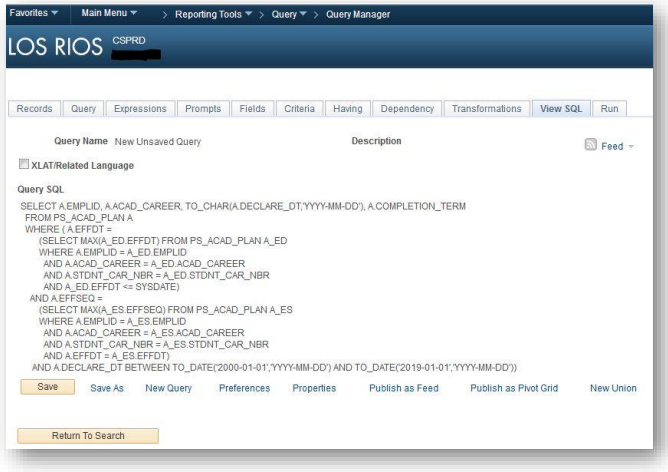


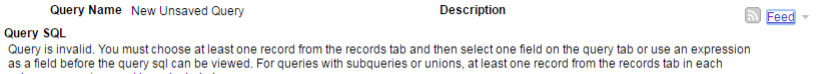




View SQL Tab

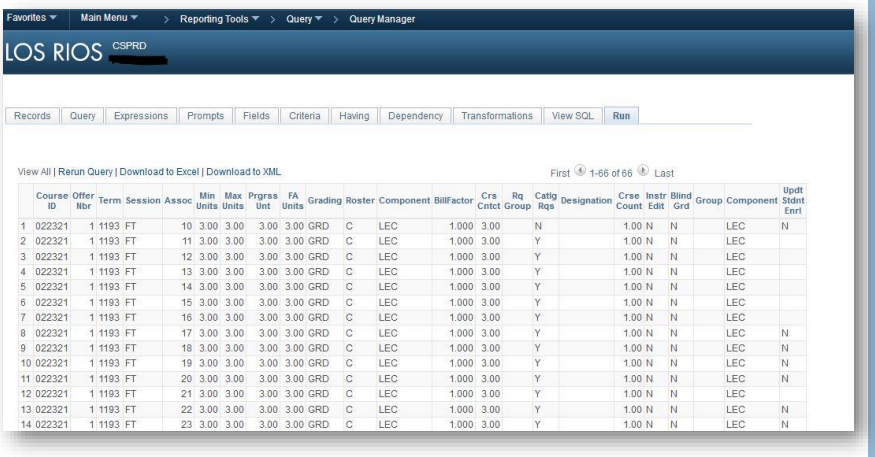
- Check your work!!
- Always come back to this tab to see how the criteria you add factor into the SQL statement.





Run Tab

- Once you run the query, you can download the output to excel
- Rerun your query to enter new bind variables (prompts values)



	Course ID	Offer Nbr	Term	Session	Assoc	Min Units	Max Units	Prgrss Unt	FA Units	Grading	Roster	Component	BillFactor	Crs Cntct	Rq Group	Catlg Rqs	Designation	Crse Count	Instr Edit	Blind Grd	Group	Component	Updt Stdnt Enrl
1	022321	1	1193	FT	10	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		N		1.00	N	N		LEC	N
2	022321	1	1193	FT	11	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	
3	022321	1	1193	FT	12	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	
4	022321	1	1193	FT	13	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	
5	022321	1	1193	FT	14	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	
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7	022321	1	1193	FT	16	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	
8	022321	1	1193	FT	17	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	N
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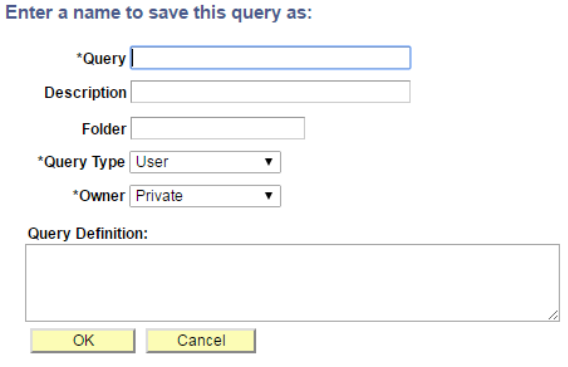
13	022321	1	1193	FT	22	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	N
14	022321	1	1193	FT	23	3.00	3.00	3.00	3.00	GRD	C	LEC	1.000	3.00		Y		1.00	N	N		LEC	N

SAVE your work!

- Save your query for future use
- Query Type: Archive, Process, Role, User (preferred)
- Owner: Public Vs Private Queries



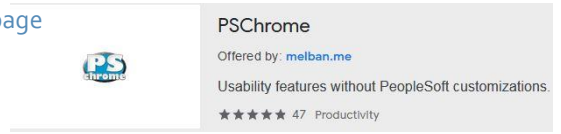
Things to Remember
Some Tips & Tricks

Some Caveats

- Always define some criteria first (you don't want to try and retrieve 100K rows of data
- Limit your results with criteria/prompts when you are testing.
- Check your work early and often
- Have good joining practices (don't automatically go with what PSQuery gives you, double check)
- **Think** about what you are asking the database to provide you with
- Look at your SQL statement – understanding how the criteria factor into the query is the key

Some Caveats

- Be smart, know more about your pages
  - Talk to programmers about records (fields) on a page (Application Designer)
  - Hit Ctrl+J (or J+Ctrl) – Provide Page, Component, Menu details
  - Watch out for work records – used in PeopleSoft for presenting data
  - Use Plugins to identify records, manage links and features (Free ones exist for Google Chrome)
  - View Page Source and get some information
    - Watch out for Page Source Vs Frame Source



Example Queries

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&
A