MINI COURSE IN PEOPLESOFT QUERY

By Gregory Patterson

Subqueries and Unions

Subqueries

A subquery is literally a query within a query. The subquery is run, then that information can be used as part of the main, or Parent, query criteria.

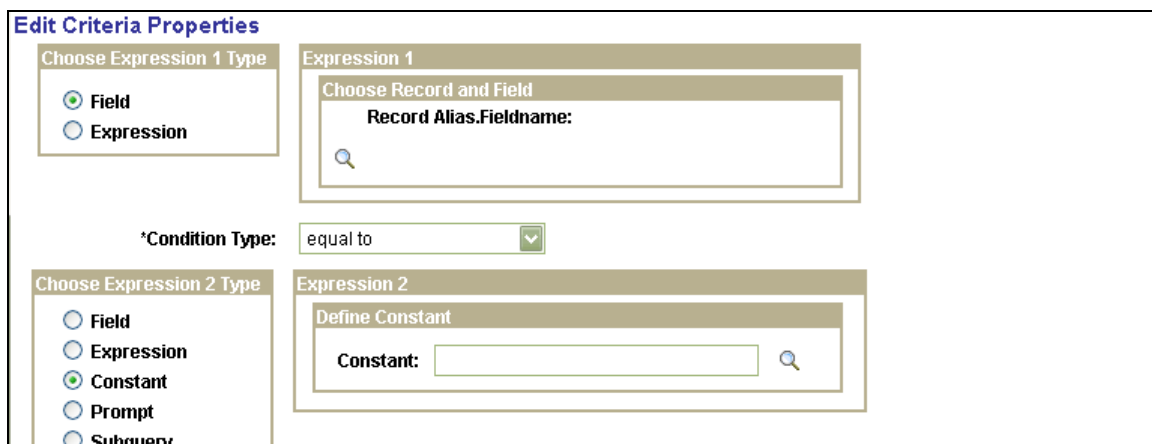There are two general ways to use a subquery.

1. Test for existence or non-existence

In this situation you have a subquery that selects rows based on a set of criteria. Then, in your Parent query, you have one criterion that specifies to select a row that exists in that subquery result set or does not exist in the subquery result set. Examples:

Parent Query	Operator	Subquery
Selects all prospects where…	…a record for that prospect exists in the subquery, which…	…selects all prospects who have submitted test scores.
Selects all prospects where…	…a record for that prospect exists in the subquery, which…	…selects all prospect who have a certain Academic Interest.
Selects all applicants where…	…a record for that applicant does not exist in the subquery, which…	…selects Immunization data for the applicant.

To test for existence or non-existence:
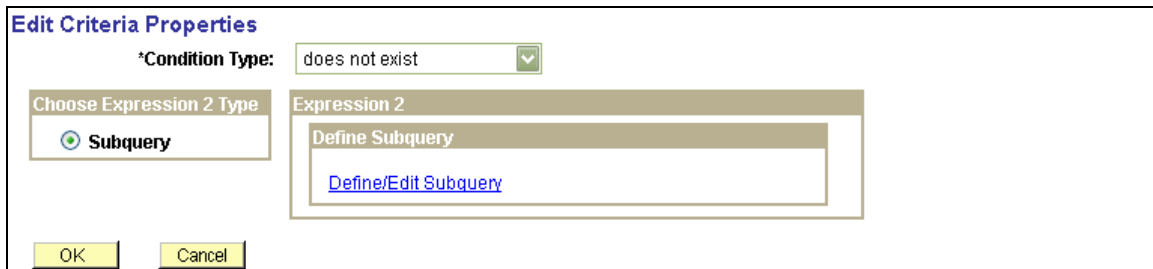
1)   Add a new line to your criteria tab

2)   Select a condition type of either "exists" or "does not exist". The page changes:

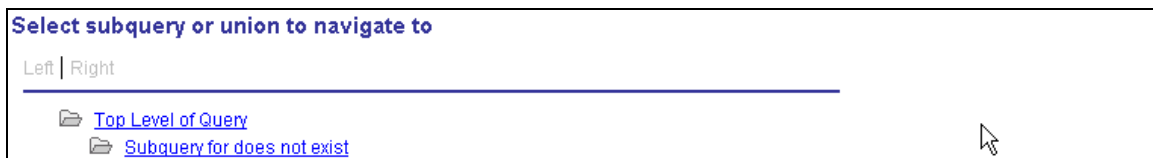# MINI COURSE IN PEOPLESOFT QUERY

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3)   Click the **Define/Edit Subquery** link within the Expressions 2 box.

4)   From here, build a query following the regular steps of adding a table or tables, joining the tables and specifying criteria with these exceptions:

a)   select no fields for the field listing;

b)   one of the tables used in the subquery must be joined to one of the tables in the parent query

5)   The Subquery/Union Navigation link lets you move back and forth between the two queries.

2. Compare a field to a list

In this situation you have a subquery that again selects rows based on a set of criteria. In this case, however, the subquery returns a list of values for one field. Then, in the parent query, you have one criterion that compares a field or expression to the subquery to determine if there is (or is not) a matching value in the subquery list. Examples:
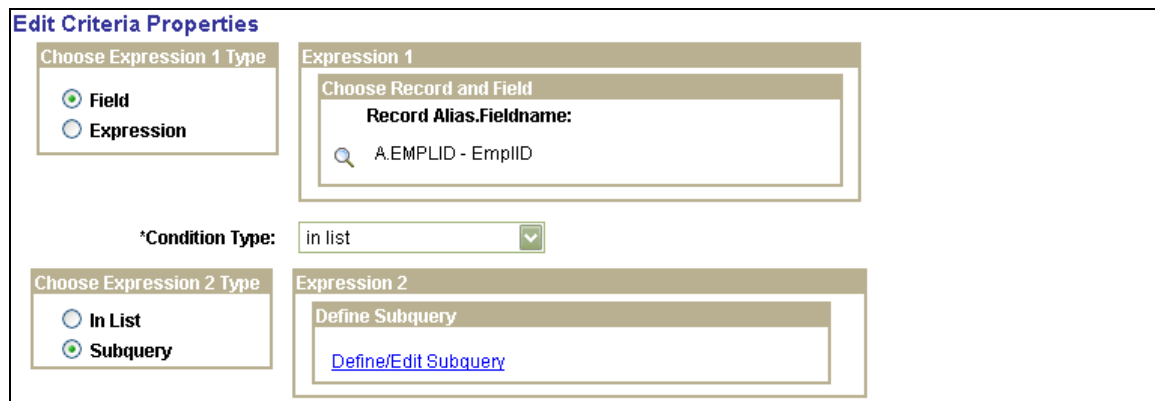
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Parent Query	Operator	Subquery
Selects all prospects where EMPLID…	… is in the list of EMPLIDs returned by the subquery, which…	…selects the EMPLID of all prospects who have submitted test scores.
Selects all prospects where EMPLID…	… is in the list of EMPLIDs returned by the subquery, which…	…selects the EMPLID of all prospect who have a certain Academic Interest.
Selects all applicants where EMPLID…	… is not in the list of EMPLIDs returned by the subquery, which…	…selects the EMPLID of all applicants with Immunization data.

To compare a field to a list returned by a subquery:

1) Add a new line to your criteria tab
2) Select a field for Expression 1 to compare with the subquery
3) Select a condition type of either "in list" or "not in list".

4) Click the Define/Edit Subquery link within the Expressions 2 box.
5) From here, build a query following the regular steps of adding a table or tables, joining the tables and specifiying criteria with these exceptions:
a) Select only one field or expression for the field listing – that field or expression must be comparable to the field used for comparison in the parent query
b) Be certain that no join is created between any tables in the subquery and parent query

Unions

The query "Union" functions provides the capability of combining the result sets of two or more completely separate queries. You can only create a union of multiple queries when the queries have the following common elements:

- The same number of selected fields

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- The same data types for all fields
- The same display order for the columns

> **Note:** Translate values, long or short description, cannot be displayed in a union query. Only the code for the field can be selected for output display.

Suppose you want to see a list of both prospects and applicants, with their programs and plans, in the same list. Write and test one of the queries first. In this example, we extracted a list of prospects first:

Chosen Records

Alias	Record		
A	ADM_PRSPCT_CAR - Admission Prospect Career	Hierarchy Join	
B	ADM_PRSPCT_PROG - Admission Prospect Program joined with A	Hierarchy Join	
C	ADM_PRSPCT_PLAN - Admission Prospect Plan joined with B	Hierarchy Join	
D	PERSON_NAME - Current Primary Name View	Hierarchy Join	

Fields

Customize | Find | View All | First 1-6 of 6 Last

Col	Record.Fieldname	Format	Ord	XLAT	Agg	Heading Text	Add Criteria	Edit	Delete
1	A.EMPLID - EmplID	Char11				ID		Edit	
2	A.ADMIT_TERM - Admit Term	Char4				Admit Term		Edit	
3	A.ADMIT_TYPE - Admit Type	Char3				Admit Type		Edit	
4	B.ACAD_PROG - Academic Program	Char5				Acad Prog		Edit	
5	C.ACAD_PLAN - Academic Plan	Char10				Acad Plan		Edit	
6	D.NAME - Name	Char50				Name		Edit	

Criteria

Customize | Find | First 1-3 of 3 Last

Logical	Expression1	Condition Type	Expression 2	Edit	Delete
	A.ACAD_CAREER - Academic Career	equal to	UGRD	Edit	
AND	A.ADMIT_TERM - Admit Term	equal to	0450	Edit	
AND	A.EMPLID - EmplID	equal to	D.EMPLID - EmplID	Edit	

View All | Rerun Query | Download to Excel   First 1-53 of 53 Last

	ID	Admit Term	Admit Type	Acad Prog	Acad Plan	Name
1	AA0037	0450	FYR	FAU	ART	Ronald Greene
2	AD5022	0450	FYR	LAU	BIOLBS	Doug Smith
3	AD5023	0450	FYR	FAU	ART	Jane Smith
4	AD5024	0450	FYR	LAU	BIOLBS	John Smith
5	AD5025	0450	FYR	FAU	ART	Amy Smith
6	AD5026	0450	FYR	LAU	BIOLBS	Kim Smith
7	AD5027	0450	FYR	FAU	ART	Tom Smith

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Click the New Union link found at the bottom of most of the pages. You will be presented with the Records page to begin adding new tables to a query. Write the second query.

Notice how the record aliases start with higher letters. You won't have access to the records in the first query for compares or joins.

After selecting your fields, make sure they are in the same column order as the first query. Adjust by clicking the Column Order button.

Even though it appears that you can set the sort order on any section of the query, it only takes effect when set on the top level of the query. Also, the column headings are taken from the top level query.

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Edit Field Sort Order

Change sort order by entering sort numbers on the right. Columns left blank or assigned a 0 will not be sorted.

Edit Field Sort Order	Customize | Find | View All | 🔲 First ◀ 1-6 of 6 ▶ Last		
Record.Fieldname		**Sort Order**	**Direction**
A.EMPLID - EmplID		1	Ascending ▾
A.ADMIT_TERM - Admit Term			▾
A.ADMIT_TYPE - Admit Type			▾

When you run the query now, it will include both prospect and applicant data.

View All \| Rerun Query \| Download to Excel — First ◀ 1-65 of 65 ▶ Last

	ID	Admit Term	Admit Type	Acad Prog	Acad Plan	Name
1	AA0037	0450	FYR	FAU	ART	Ronald Greene
2	AD5022	0450	FYR	LAU	BIOLBS	Doug Smith
3	AD5023	0450	FYR	FAU	ART	Jane Smith
4	AD5024	0450	FYR	LAU	BIOLBS	John Smith
5	AD5025	0450	FYR	FAU	ART	Amy Smith
6	AD5025	0450	FYR	LAU	BIOLBS	Amy Smith
7	AD5026	0450	FYR	LAU	BIOLBS	Kim Smith
8	AD5027	0450	FYR	FAU	ART	Tom Smith
9	AD5028	0450	FYR	FAU	ART	Alex Smith
10	AD5029	0450	FYR	FAU	ART	Sam Smith
11	AD5029	0450	FYR	LAU	BIOLBS	Sam Smith

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