



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

To test for existence or non-existence:

1) Add a new line to your criteria tab

Edit Criteria Properties	
Choose Expression 1 Type	Expression 1
 Field Expression 	Choose Record and Field Record Alias.Fieldname:
*Condition Type:	equal to
Choose Expression 2 Type	Expression 2
🔘 Field	Define Constant
 Expression Constant 	Constant:
O Prompt	
Subquery	

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





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Edit Criteria Properties	
*Condition Type:	does not exist
Choose Expression 2 Type	Expression 2
Subquery	Define Subquery
	Define/Edit Subquery
OK Cancel	

3) Click the <u>Define/Edit Subquery</u> link within the Expressions 2 box.

Records Query Express	ions / Prompts /	Fields	Criteria / Hav	ing Y	View SQL	Run
Query Name: GJP_APPLICANTS	ſ	Description:				
Working on selection: Subquery for do	es not exist				Subquery/U	nion Navigation
Find an Existing Record	t de la companya de la					
*Search By: Record Name	begins with]	
Search Advanced Search						
Search Results						
Record	Customize [Find V	(iew All 🛄 🛛 F	First 🛃 1-3 of 3 🕒 La	st		
Recname	-	Add Record	Show Fields			
IMMUNIZATIONS - Immunizations		Add Record	Show Fields			

- 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.

Select subquery or union to navigate to				
Left Right				
Top Level of Query <u>Subquery for does not exist</u>	}			

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	is in the list of EMPLIDs	selects the EMPLID of all
EMPLID	returned by the subquery,	prospects who have submitted
	which	test scores.
Selects all prospects where	is in the list of EMPLIDs	selects the EMPLID of all
EMPLID	returned by the subquery,	prospect who have a certain
	which	Academic Interest.
Selects all applicants where	is not in the list of EMPLIDs	selects the EMPLID of all
EMPLID	returned by the subquery,	applicants with Immunization
	which	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".

Eslié Oniéquia Duon ontina			
Edit Criteria Properties			
Choose Expression 1 Type	Expression 1		
Field	Choose Record and Field		
	Record Alias.Fieldname:		
O Expression	Q A.EMPLID - EmplID		
*Condition Type:	in list		
Choose Expression 2 Type	Expression 2		
🔘 In List	Define Subquery		
Subquery	Define/Edit Subquery		

- 4) Click the <u>Define/Edit Subquery</u> 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 Viev	w All J 🛄 🛛 Fin	st 🛃 1-6 of 6 🕑 Last
Col Record.Fieldname	<u>Format</u> <u>Ord</u> <u>XLAT Agg</u>		Add Criteria	Edit Delete
1 A.EMPLID - EmplID	Char11	ID	%	Edit 📃
2 A.ADMIT_TERM - Admit Term	Char4	Admit Term	9.	Edit 📃
3 A.ADMIT_TYPE - Admit Type	Char3	Admit Type	94	Edit 🖃
4 B.ACAD_PROG - Academic Program	Char5	Acad Prog	9	Edit 🖃
5 C.ACAD_PLAN - Academic Plan	Char10	Acad Plan	94	Edit 🖃
6 D.NAME - Name	Char50	Name	9	Edit 📃

Criteria			Customize Find 🏙	First 🗹 1-3 of 3 🕩 Last
<u>Logical</u>	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 🖃

Viev	View All Rerun Query Download to Excel						
	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 <u>New Union</u> 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.

Chosen Records					
Alias Record					
E ADM_APPL_DATA - Admission Application Data	Hierarchy Join 📃				
F ADM_APPL_PROG - Admission Applicant Program joined with E	Hierarchy Join 📃				
G ADM_APPL_PLAN - Admission Applicant Plan joined with F	Hierarchy Join 📃				
💼 H PERSON_NAME - Current Primary Name View	Hierarchy Join 🖃				

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.

Norking on selection: Union 1	Subquery/Union Navigation				
View field properties, or use field as criteria in query s	tatement.			Column Order	Sort Order
Fields		<u>(</u>	Customize Find \	/iew All 📒 🛛 Fir	st 🛃 1-6 of 6 🕑 Last
Col Record.Fieldname	<u>Format</u> <u>Ord</u> <u>XL</u>	<u>.AT Agg</u>	<u>Heading Text</u>	Add Criteria	Edit Delete
1 E.EMPLID - EmpIID	Char11		ID	94	Edit 📃
2 F.ADMIT_TERM - Admit Term	Char4		Admit Term	%	Edit 📃
3 E.ADMIT_TYPE - Admit Type	Char3		Admit Type	%	Edit 🖃
4 F.ACAD_PROG - Academic Program	Char5		Acad Prog	%	Edit 🖃
5 G.ACAD_PLAN - Academic Plan	Char10		Acad Plan	9	Edit 🖃
6 H.NAME - Name	Char50		Name	9	Edit 📃

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

Edit Field Column Order			
call Field Column Order			
Change column order by entering co	-	s left blank or assigned a zero	
will be automatically assigned a num	nber.		
Edit Field Column Order	Customize Find View All 🏪	First 🗹 1-6 of 6 🕨 Last	
Record.Fieldname		Column Order	
E.EMPLID - EmpIID		1	R
F.ADMIT_TERM - Admit Term		2	
E.ADMIT_TYPE - Admit Type		3	
F.ACAD_PROG - Academic Program		4	
G.ACAD_PLAN - Academic Plan		5	
H.NAME - Name		6	

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 b sorted.							
Edit Field Sort Order	Customize Find View All 🏙 👘	Firs	t 🖪 1-6 of 6 🕨 La	st			
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	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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