Grouping Criteria and Boolean Expressions

You will often have to create a query that requires multiple selection criteria against one or more fields. When you have multiple conditions, you must use one of the Boolean operators to relate one criterion to another.

There are four types of Boolean operators available on the Criteria page: AND, OR, AND NOT, and OR NOT. The operators are used to show the relationship of one criteria row to another. Parentheses are used to further define the relationship and define the order in which the criteria are evaluated. If you do not use parentheses, the criteria are evaluated in the order listed.

This document discusses how to:

- Use AND and OR logical operators.
- Group criteria with parentheses.

Suppose you want to look for Biology classes in the 2010 Fall Term (1109) and 2011 Spring Term (1111).

1. Create a new query using these tables:
   a. CRSE_CATALOG_SRCH - Course Catalog Search
   b. CLASS_TBL - Class Table
2. The Criteria Page will appear as follows:

   ![Criteria Page Screenshot]

   - Query Name: WES_SFSIS_TRAIN_GRP_CRITERIA_1
   - Description: Group Criteria Example BEFORE

   ![Criteria Table]

   - Logical: AND
   - Expression 1: A_INSTITUTION - Academic Institution
   - Condition Type: equal to
   - Expression 2: B_INSTITUTION - Academic Institution
   - AND: A_SUBJECT - Subject Area
   - Equal to: B_SUBJECT - Subject Area
   - AND: A_CATALOG_nbr - Catalog Nbr
   - Equal to: B_CATALOG_nbr - Catalog Nbr
   - AND: B_SESSION_CODE - Session
   - Not Equal to: ONT
   - AND: A_CRSE_ID - Course ID
   - Equal to: B_CRSE_ID - Course ID
   - AND: A_TERM - Term
   - In List
   - AND: A_SUBJECT - Subject Area
   - Equal to: BIOL

3. If you want to add the Subject Area of MB&B to the criteria, you would use the Condition Type of in list which will result in 135 records being returned (as of the date of this writing).
4. But, suppose you want to see all Biology courses (Undergraduate and Graduate) but only MB&B Graduate courses, then you would need to group the criteria in this way:
   - All records where the ACAD_CAREER = UGRD AND SUBJECT = BIOL
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PeopleSoft Query Reference

PeopleSoft 8.9; Query 8.48

- **OR**
  - All records where the ACAD_CAREER = GRAD AND SUBJECT = BIOL OR SUBJECT = MB&B

5. In order to make this work properly, you will create each group separately, Undergraduate/Subject and Graduate/Subject and then group them together.

6. If you have the *in list* expression on the Criteria page, delete it.

7. Create the Undergrad criteria:
   - ACAD_CAREER equal to UGRD
   - SUBJECT equal to BIOL

8. Run the query. There should be 58 records, all Undergrads and all BIOL.

9. Now, in order to begin grouping the criteria, on the Criteria page, click on the yellow Group Criteria button to open the **Edit Criteria Grouping** page.

10. On the **Edit Criteria Grouping** page you will be grouping the Undergraduate related criteria by surrounding the two rows with parentheses.

11. The group will now appear as follows. Click OK to return to the Criteria page.

```
AND {} B.ACAD_CAREER - Academic Career equal to UGRD
AND {} B.SUBJECT - Subject Area equal to BIOL
```

12. Now add the three rows for the Graduate related portion of the Criteria on the **Criteria** page and click on the Group Criteria button.

13. At this point you will be adding parentheses for the Graduate/Subject group, first to group the Subjects together and then to group the Graduate career with the Subjects. **NOTE: When working with parentheses, start from the inside and work outward, e.g. surround the two Subject rows, and then surround the Graduate/Subject group.**

```
AND {} B.ACAD_CAREER - Academic Career equal to GRAD
AND {} B.SUBJECT - Subject Area equal to BIOL
AND {} B.SUBJECT - Subject Area equal to M&B
```

14. Next, surround both the Undergraduate/Subject Group with the Graduate/Subject group with parentheses, essentially making them into one group. **NOTE: there must be an equal number of**
parentheses on the right and left; otherwise, you will receive an error message. Once you have done so, the Edit Criteria Group page will appear as follows:

15. The final step is to change two of the Boolean operators from **AND** to **OR** on the Criteria page:
   a. the first between the Undergraduate/Subject group and the Graduate Subject group
   b. the second between the two Graduate Subjects

16. Click OK to return to the Criteria page. In the Logical column, change the **AND** to **OR** in the two places as shown below.

17. Save and run the query. There are now 87 records returned.