Data Surfing With BrioQuery - Exercise 6

QUERIES THAT COUNT, SUM OR AVERAGE DATA

In the previous exercises, you retrieved individual records from the TRAINING database tables. BrioQuery also has the capability to ask the server to count, sum, or average data fields and send you the counts, sums, or averages. Be warned however..... it is not a good idea to count, sum, or average data that you have not looked at first! In this exercise, we will modify the first query you made so it will count students by College, by Minority Status Code.

Tool Objectives

1. Modify a query to count, sum, or average data elements.
2. Remove the count, sum or average from a query.
3. Understand how BY groups work on the Request Line when counting, summing or averaging.

Data Objectives

1. Know what data element to count to get numbers of students.
2. Realize that you should never count, sum, or average records without looking at the individual records first.

COOKBOOK

What You Do		*Comments/Questions*
1. Open the **totstu2.bqy** file.		Do you remember how to open it – first double click on the Training Query, then on the Menu Bar click File/Open… This query has no limits. It asks to see the Affiliate ID, Last Name, First Name, College or Division Code, Ethnic Code, Minority Status Code, and Citizenship Code for all the records in the TDB_STUDENT_CURRENTLY_ENROLLED table.

2. Remove all the data elements on the Request line except **Affiliate ID** and **Minority Status Code**.		Remember how to Remove? Click the data element on the Request line to highlight it, then right click and left click Remove (or the keyboard delete key works too!).
3. Click **File** on the menu bar, then click **Save As**		
4. Change to the floppy drive if necessary and save the query as **mincnt**		
5. Click **Process.**		
6. Observe the Results		Make sure you have 513 records as you had before. Its important to verify that you have the right records before you start counting them. It is easy to forget and leave a limit on when you don't mean to. You need to spot mistakes before you count or you will have the wrong numbers.
7. Click on the **Query** Section.		
8. Click on **Affiliate ID** on the Request Line (NOT in the table!)		To highlight it.
9. Right click on **Affiliate ID** on the Request Line. Then Left click **Data Function** and Left Click **Count.**		Notice on the Request Line now it shows COUNT(Affiliate ID). By the way, if you ever try this and the Count and Count Distinct functions are missing - it means you are not logged on to the server. These functions are server specific.
10. Click **Process.**		Click File/Save first if you are cautious.

11. Observe the Results.		What happened to all the Affiliate ID's?_____ How many Native Americans (N) are currently enrolled?_____ (Answer: 8)
12. Click the **Affiliate ID** column in the Results Section.		To highlight the whole column.
13. Click the sum  button on the Tool Bar in the Results Section.		To sum the counts. The sum will appear on the last line of the Results. What is the total? _____
14. Click the **Query** Section**.**		To return to the query.
15. Drag the **College or Division Code** to the Request Line in front of the **Minority Status Code**.		
16. Click **File**, click **Save.**		To save **mincnt.bqy**
17. Click **Process.**		
18. Observe the Results.		We now have counts by College, by Minority Status. Any data element that you put on the Request line with the counted item becomes a BY group. Students are counted BY college, BY minority status. Note: you can still move the columns around so the count is the last column. Who has more Native American's - Liberal Arts or Business?_____ Who has more foreign students? _____
19. Click on the **Query** Section		To return to the query.

20. Click <u>once</u> on **Affiliate ID** on the Request line (NOT in the table!).		To highlight Affiliate ID.
21. Right click on **Affiliate ID** on the Request Line. Then Left click **Data Function** and Left Click **None.**		This will take the count off Affiliate ID. You don't need to save or process this query. We just did this to see how to remove a count. Leave this query here and work on it in the On Your Own Section below.

ON YOUR OWN

1. Using the same query you have open above, change it so you are counting students by college, by gender.

2. Add Cumulative GPA to the Request Line and use the Average Data Function to find the average cumulative GPA for each group of students.

   Can you tell which college has the higher GPA? _____
   Change the query so you can tell easily.

   Did you look at the individual records for GPA's??? There might be some problems. What would happen if students who are attending for the first time this semester have no GPA yet? _____

3. Save your query as **gencnt.bqy.**

4. Exit BrioQuery.

5. Review the objectives covered on your crib sheet. Jot down a short note for each objective to remember how to do each task.