

Instructions

Read these instructions all the way through before you start.

Download the answer document. Be sure to put your name at the top of the answer document where that's indicated. Answer the questions below in that document and when you are done, upload it into Blackboard.

Overview

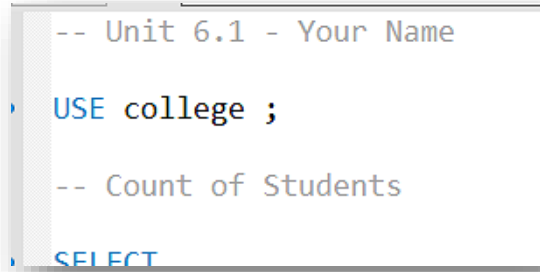
This focuses on aggregating data – using SQL's built-in capabilities for counting, summing, averaging, etc. over groups of records. You can find reference information here:

<http://dev.mysql.com/doc/refman/5.7/en/group-by-functions.html>

Preparing your SQL

Be sure to follow these points in writing your queries.

- Make sure you include the comment and USE statement at the top of your SQL



```
-- Unit 6.1 - Your Name  
  
USE college ;  
  
-- Count of Students  
  
SELECT
```

- Beautify your SQL.
- In your screen shots of the Result Grid you need to snip only first 6-10 rows. If you're not sure about this, see Unit 02 instruction for details on how to snip.

Note: Your data may be different than the data in the rows of the examples show below. The data itself may be different and you may get more or fewer rows that shown in the examples.

Steps

In each of these queries you're shown the columns to display in your result. Make your column headers look exactly like the examples shown, including capitalization. Note that the data you get may be different than any data shown in the examples below. E.g. your database may have more or fewer than 20 sections.

1. [3] Write a query that displays the count of Section records in the database. This query returns a single row with a single column.

Sections
20

2. [4] Write a query that results in one row, no matter how many faculty members are in the Faculty table. You'll need a separate aggregate function for each column. Format all the salary values to two decimals with thousands commas.

Faculty Members	Average Salary	Lowest Salary	Highest Salary
25	99,724.07	77,000.37	122,642.33

3. [4] Write a query that results in one row for each Major in the system. For each major show the number of students in that major (show Null if there are no students in the major) and the three statistics below. Format all the scholarship values to two decimals with thousands commas. You'll need to join two tables for this. Sort on major name.

Major	Students	Average Scholarship	Lowest Scholarship	Highest Scholarship
Biology	10	2,550.00	0.00	4,000.00

4. [4] Create a query that results in one row for each faculty member who is teaching at least 15 students. E.g. a faculty member who has more than 15 students registered across all the sections the faculty member teaches. Round average grade to 1 decimal place. Sort on last name. You'll need to join three tables. You'll need to use the CONCAT function to display the faculty member's name as shown below.

Faculty	Students	Average grade
Banks, Andrew	41	2.8

5. [6] Write a query that list all students on the Dean's List. These are students whose average grade (GPA) is at least 3.5. You'll need to use the CONCAT function to display the student's name as shown below. Sort on Student Name.

Student	Major	GPA
Alvarez, Kenneth	Nursing	3.63

6. [5] Write a query that lists each club that has members, the number of numbers in the club and the date that the first member joined the club. Sort on the club name.

Club	Number of Members	Earliest Member
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7. [6] Write a DIY query of your own design for the College database that joins at least three tables and uses GROUP BY and calculates at least two aggregate statistics. One of the tables must be the Semester table. This must not be a query from elsewhere in the course and the query must have some meaningful purpose. Give the columns good names and sort the results as appropriate.

Write a one sentence explanation of the query. In your explanation tell me the purpose of the query, not how it works. i.e. don't tell me "I joined A to B and B to C..." I can see that by looking at it.