Goals:

Practice Subqueries
Practice GROUP BY

Requirements and notes regarding all code deliverables:

- Use column aliases to give meaningful names to your aggregation columns.
- Group by any column that is not included in an aggregate function.
- You may alias your table names if you wish to do so.

Note: The following 3 queries ask approximately the same question. The technical specifications require different code for each deliverable. (Always double check your results, are they appropriate to the data, the intended query and the specification?)

1. Write a SELECT statement that returns all class data for classes that have too many students.

- Use a Subquery (**non**-correlated) **in a `JOIN` clause.**
- Use only the subquery and the `Class` table. (Do not join to any other table)
- **Hint:** in the subquery use an aggregation and return the value along with the `ClassID`, then use the subquery `ClassID` in the `ON` clause. If you write and test the subquery before putting it into the outer query it may help.

Deliverable 1: Send your code and the resultset

2. Write a SELECT statement that returns all class data for classes that have too many students.

- Use a Correlated Subquery **in a `WHERE` clause**. (Do not use a `JOIN` statement.)
- **Hint:** Compare to `MaximumStudents` using a (>) or (<)

Deliverable 2: Send your code and the resultset

3. Write a SELECT statement that returns all class data, and the number of students taking the class.

- Use a Correlated Subquery **in the `SELECT` clause**.(Do not use a `JOIN` statement.)
- Give the subquery a column alias in the output.
- **Question**: Can you reference the new column in the WHERE clause? Why/Why not?

Deliverable 3: Send your code and the resultset - *include answers to the questions above*.

4. Create one query with a `Join` and a `GROUP BY` clause (with aggregation functions) to return only the records of data that can be used to answer all of the following questions (do not use a subquery):

- Question: How many students have signed *in each class*?
- Question: What are the earliest and latest SignupDate per cass?
- Question: Are any students signed up twice?
- Hints and requirements:
  - Two tables are needed.
  - Please provide column aliases for aggregated columns
  - Include `Class.Code` in the result set as a non-aggregated data item.
  - (table aliases are acceptable)

Deliverable 4: send your code and your result set.

5. Deliverable 5: Call GetData() and send your results