Goals:

>Read about aggregate functions
>Understand SQL injection
>Build a Java application and test it

1. Assigned Reading and research
- Read about Aggregation functions
    - Specifically, read about COUNT, MIN, MAX, SUM. The link below will reference some technical pages on these data types, reference these to help you test and answer the questions below. (Click on the links to additional material.)

https://dev.mysql.com/doc/refman/5.7/en/group-by-functions.html
- Read about sql injection.

https://en.wikipedia.org/wiki/SQL_injection

2. Create and run a java application to output the first result set from GetData()
- Write a java method to call GetData() (*from Homework 4*).
- Include a "usage" example.
- Compile then:
    - Run the command to show the usage
    - Run the command to output the GetData resultset.

Use this instruction sheet. There is a link to the code to get you started, at the top:
Java example setup instructions and code

>>*Optional reference material*: MySQL **and Java Setup**
>>DB code for in-class Java Test

Deliverable 1: send usage and the GetData as displayed in onyx.

Just for fun: https://xkcd.com/327/
(Note: Procedures help to "sanitize input" when running applications that use databases.)

Additional Deliverables :
- **First:** Run the following statement to create variation on the signup dates in ClassStudent. (no deliverable)

```
Update ClassStudent
SET SignUpDate = date_add(SignUpDate ,Interval ID HOUR ) Where ID >0;
```

2: Write a query to display "how many" people are in all of the classes. (Use an outer join not a subquery.) Show the Class Code and the number. Send your result set and code.

3: Which aggregate function would show you the "first" ClassStudent.SignUpDate for each class. Show some *code.* Send your result set and code.

4: Name 3 things might you do -as a developer of data applications- to minimize the risk of sql injection attacks in your applications that use data. (refer to specific things you learn about mitigation in the reading assignment.) Answer in a few short sentences.

5. Write a Query that includes a *correlated* subquery in the SELECT statement to answer this question: How many students are signed up for each class? Send your result set and code.

6. Which constraint would return an error if data is not provided for a required column value? <mark>Answer with the name of the constraint</mark>