# MINI 2 DUE Monday, March 25, 2019 BY 10:00PM to your Canvas “MINI 2” Assignment

# Will Boland — A290 SQL — 3/24/2019

### For EACH of these 3, please write up the following and have it ready to submit by the assigned deadline:

1. **List the 3 URIs you used as a result of your search.**

* Question 1 URI’s
  + <https://www.quora.com/What-is-the-difference-between-an-SQL-statement-and-a-query-in-SQL>
  + <https://www.tutorialspoint.com/sql/sql-expressions.htm>
  + <https://searchsqlserver.techtarget.com/definition/query>
* Question 2 URI’s
  + <https://www.red-gate.com/simple-talk/sql/database-administration/five-simple-database-design-errors-you-should-avoid/>
  + <https://www.sqa.org.uk/e-learning/SDM03CD/page_37.htm>
  + <https://www.dataversity.net/more-database-design-errors-confusion-with-many-to-many-relationships/>
  + <https://support.airtable.com/hc/en-us/articles/218734758-A-beginner-s-guide-to-many-to-many-relationships>
* Question 3 URI’s
  + <https://www.makeuseof.com/tag/important-sql-commands-programmer-know/>
  + <https://beginner-sql-tutorial.com/sql-commands.htm>
  + <https://www.techonthenet.com/sql/where.php>
  + <https://www.w3schools.com/sql/sql_groupby.asp>
  + <https://www.tutorialspoint.com/sql/sql-having-clause.htm>

**2. Offer a 1 or 2 paragraph précis of the topic. Summarize what was said in what you read. Condense and clarify what was said in what you read, using the words and phrases of the author(s) in a very limited way, if needed. You are trying to state what the author(s) discussed in your own words. What did the author say or try to show was important?**

Topic (Question) 1 Précis

SQL statements are is any string that follows the rules in ISO/IEC 9075. This includes keywords such as SELECT, INSERT, DELETE, etc. A statement can also be defined as any string that the DBMS can recognize. An SQL query is any statement(s) that retrieve a result. One such example is what is returned from using SELECT (some table name). An SQL expression is any operators or functions that can evaluate a result. Each one of these three share important features. They all form the larger majority of what SQL is capable of doing. Each one describes parts of both others. Each is distinct as they all describe different purposes.

Topic (Question) 2 Précis

They key issues regarding one-to-many relationships is that if the one table (not the many) gets corrupted or removed, it can have devastating consequences on the database. Another such issue facing all relations is the orphan table. The key issue facing Many-to-Many relationships is that it conceals a hidden entity. This can cause issues for human understanding. Another key issue with many-to-many relationship is that it can be hard for understanding and that altering records or adding to the tables can cause some unforeseen issues to arise. Lastly, in some instances for many-to-many you’ll need to create a third table (junction table).

Topic (Question) 3 Précis

SELECT is the most common keyword used and is used to “select” or retrieve data from a database table(s). It is important due to allowing us to actually retrieve the data stored on the database. The simplest usage would be SELECT \* FROM table; FROM keyword is used to list tables and joins. It is used in conjunction with the SELECT keyword. The WHERE keyword allows conditions to the query, such as WHERE age > 10. The GROUP BY keyword is used to group data by column. This allows a better order. The HAVING keyword allows filtering of groups from the GROUP BY command.

**3.**  **Offer, again in your own words, a summary explanation of what you think the two or three most important points were in what you read.**

Topic (Question) 1 Summary

SQL statements are anything that can fall under the ISO/IEC 9075 guidelines. Expressions are operators that can return a result while queries are any statements that can return results (usually tables or data from tables). The authors brought some attention to the distinction but were used usually interchangeably. Each is slightly different in that they all defined differently but the authors seemed to emphasize that when using this in a commercial setting the terms were used in replacement for one-another. Some important features in common that the authors brought up were that each one plays a role in each other one of the definitions. In other words, each term can be described by the other two (for the most part).

Topic (Question) 2 Summary

The authors brought very little attention to any problems with one-to-one relationships, as for they deemed them unimportant. One key problem facing one-to-many relationships is that the many tables rely solely on the single other table and if that table gets orphaned or removed completely, everything breaks. This is important because without being able to access a table, data won’t be able to be retrieved. One key problem the authors brought up for many-to-many relationships is that the complexity of the database increases and human understanding of what is going on becomes much harder. This is an issue because it could possibly lead to more human error and possibly catastrophic fault. Lastly, all relationships have an important issue the authors mentioned: possible orphaned tables. While they mentioned that most DBMS’s will try to prevent this, it can still occur.

Topic (Question) 3 Summary

The SELECT keyword is used to retrieve columns from tables. The author’s mentioned that this is the most used keyword. The select keyword is important because it is essentially the fundamental way of retrieving data from tables. The FROM keyword is used to describe which table(s) to select the data from. This is important because without it, it is unclear which table(s) to retrieve the data from. The WHERE keyword allows us to provide conditions. This could assist to further narrow down a dataset. This is extremely important where there are thousands of records. The GROUP BY keyword allows us to group by columns. This is important because it allows us (as described by the authors) a means of further narrowing the results we get. Lastly, the HAVING keyword makes it so we can filter groups from the GROUP BY keyword. This is important because without it, it would be hard to filter the results we wanted when grouping by columns.