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Lab 9

1. I chose Khan Academy as a learning resource for databases. This is because I have previously utilized Khan Academy when I needed more information about a topic and because I am accustomed to the format they use to teach. Using this resource, I learned the basics of SQL including creating tables, inserting data, and querying. I observed that querying tables has English syntax so it is not that challenging to learn. For example, if I wanted to create a table I would do "CREATE TABLE name" and if I wanted to insert data into the table, I would do "INSERT INTO name VALUES." In addition to this, I also learned more advanced SQL queries like splitting data, joining tables based on commonality, and completed some challenges based on what I learned. One challenge I completed asked to query a books table where authors would be outputted if they wrote more than one million words. I completed this by "SELECT author, AVG(words) AS total_words FROM book GROUP BY author HAVING total_words > 1000000;"
2. For my mini project, I wanted to create a database that would be used by a class to keep track of students. It would include information of the first and last name of students, their email, where they are from, and their student id. The following table would be created:

   CREATE TABLE DB (student_id INT, first_name VARCHAR (30), last_name VARCHAR (30), email VARCHAR (50), country VARCHAR (30));

   The table would include sample data like:

   INSERT INTO DB (student_id, first_name, last_name, email, country)
   VALUES (1, "Lari", "Hollyland", "lhollyland0@gmail.com", "Croatia");

   INSERT INTO DB (student_id, first_name, last_name, email, country)
   VALUES (2, "Isidor", "Hindenberger", "ihindenberger1@gmail.com", "France");

   INSERT INTO DB (student_id, first_name, last_name, email, country)
   VALUES (3, "Ninette", "Willcot", "nwillcot2@gmail.com", "China");

   INSERT INTO DB (student_id, first_name, last_name, email, country)
   VALUES (4, "Diarmid", "Aronin", "daronin3@gmail.com", "France");

   INSERT INTO DB (student_id, first_name, last_name, email, country)
   VALUES (5, "Hillard", "Rookeby", "hrookeby4@gmail.com", "China");

   INSERT INTO DB (student_id, first_name, last_name, email, country)
   VALUES (6, "Barthel", "Cutchie","bcutchie5@gmail.com", "Portugal");

```
INSERT INTO DB (student_id, first_name, last_name, email, country)
VALUES (7, “Rockwell”, “Shedd”, “rshedd6@gmail.com”, “Kyrgyzstan”);
INSERT INTO DB (student_id, first_name, last_name, email, country)
VALUES (8, “Marvin”, “Notton”, “mnotton7@gmail.com”, “Spain”);

INSERT INTO DB (student_id, first_name, last_name, email, country)
VALUES (9, “Tallou”, “Solano”, “tsolano8@gmail.com”, “Sierra Leone”);

INSERT INTO DB (student_id, first_name, last_name, email, country)
VALUES (10, “Silvana”, “Igonet”, “sigonet9@gmail.com”, “Indonesia”);
```

If the table were to be queried to output students that are only from France in ascending order based on student_id, the following query would be used:

```
SELECT first_name, last_name
FROM DB
WHERE country= “France”
ORDERBY student_id ASC;
```