**State University of New York at New Paltz**

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**S22-52**

**REPORT for PROJECT # 02**

(Advanced SQL)

**CPS593-04 “Database Management Systems”**

**(Professor Hanh Pham)**

**Summer 2022**

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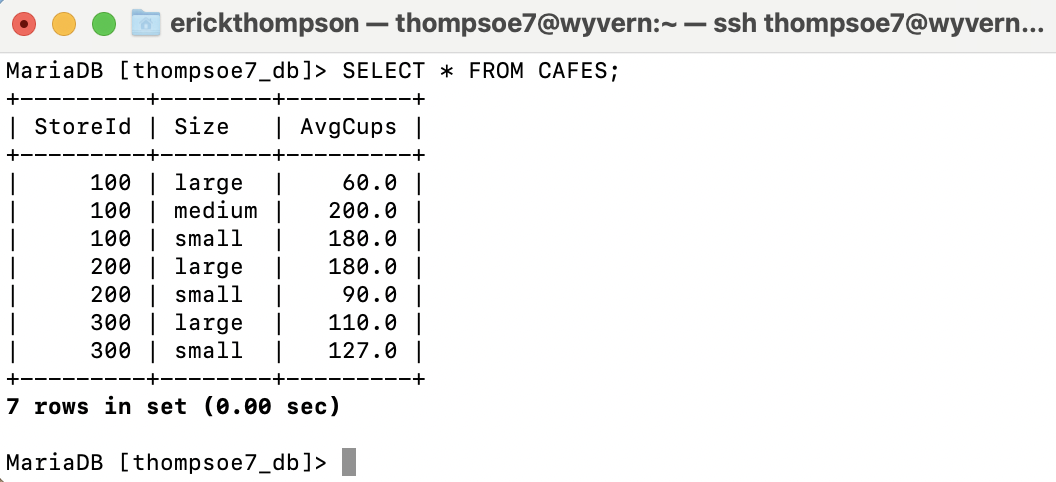
**Business Situation**

A businessman wants to keep track of coffee cup sales in a state. They store data about each cup size, which store the cups were sold to, and the average number of cups that were sold to the store for a specific size. Due to a recent cup shortage, we want to target which cup size is being used the most so that the businessman can inform the business which cup to increase production in.

Additionally, since this businessman was recently promoted and now tracks cup sales on the whole east coast, he needs to expand his research and keep track of more cup sales. The businessman wants to see where the minimum and maximum number of cups are sold and create more tables in his database to store more cup sales data.

The data we have in step-10 after project 1 in the table “CAFES” are:

**Table CAFES**



STEP-1: **CHANGE** the **data type** of a COLUMN in a table:

**ALTER TABLE CAFES MODIFY COLUMN AvgCups INT(3);**

Table

Description automatically generated

STEP-2: **GET/Retrieve** particular data using a keyword (with WHERE … = "keyword";)

**SELECT StoreId, AvgCups FROM CAFES where Size='large';**

Table

Description automatically generated

STEP-3: **Make a COPY** of a table

**CREATE TABLE NewCafe AS (SELECT \* FROM CAFES);**

**Table

Description automatically generated**

STEP-4: **DELETE** a table;

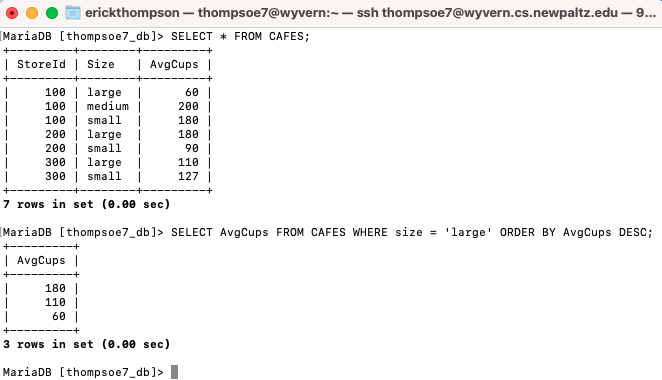
**DROP TABLE NewCafe;**

Graphical user interface, text, application

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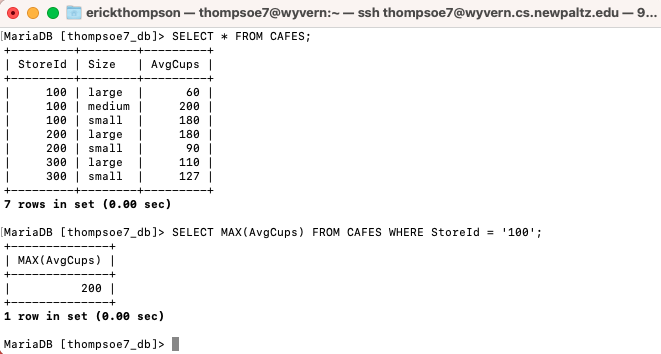
STEP-5: **FILTER** and **SORT** data from a table using **ORDER BY clause**

**SELECT AvgCups FROM CAFES WHERE size = 'large' ORDER BY AvgCups DESC;**

****

STEP-6: Use **SQL functions** to **get MAX, MIN, AVE** … based on data from a table

**SELECT MAX(AvgCups) FROM CAFES WHERE StoreId = '100';**

****

STEP-7: Use **SQL function COUNT** to get define the size of data from a table

**SELECT COUNT(\*) AS "Big Orders" FROM CAFES WHERE Avgcups > 150;**

Table

Description automatically generated with medium confidence

STEP-8: Using **DISTINCT** clause

**SELECT COUNT(DISTINCT Size) AS "Unique Sizes" FROM CAFES WHERE AvgCups < 300;**

Table

Description automatically generated

STEP-9: Using **GROUP BY** clause

**SELECT Size, COUNT(\*) AS "Number of Stores" FROM CAFES GROUP BY Size;**

Table

Description automatically generated

STEP-10: Use **HAVING** clause

**SELECT \* FROM CAFES HAVING AvgCups > 100 ORDER BY Size DESC;**

**Table

Description automatically generated**