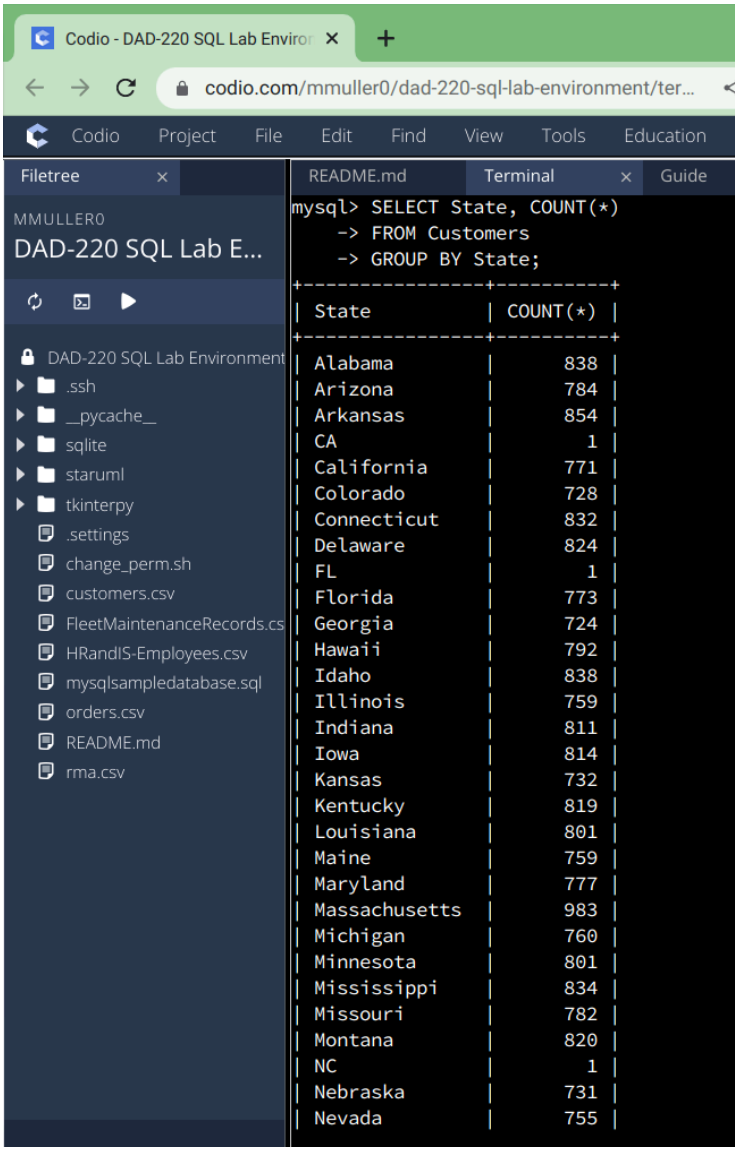
Matthew Muller

5-3 Major Activity: Analyzing Queries

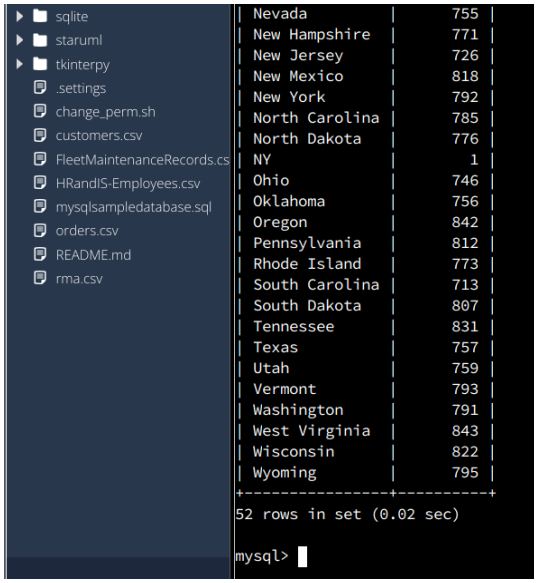
1. **Analyze the results of queries** to identify specific information that can be presented in your summary.

A. Sales by region:

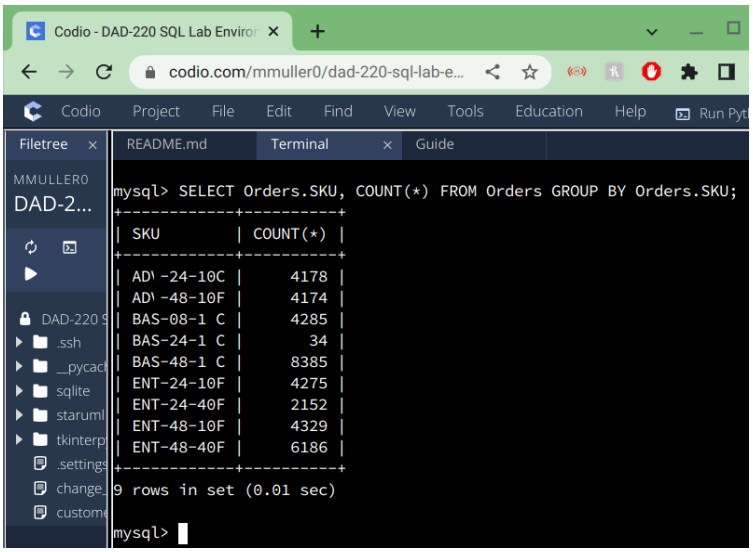
   a. Analyze sales data by state to determine where the company has the largest customer base.



The company appears to have its largest customer base in Massachusetts. There are 983 records in the Customers table with a State value of Massachusetts. This information could be accessed through the query:
SELECT State, COUNT(*) FROM Customers GROUP BY State;



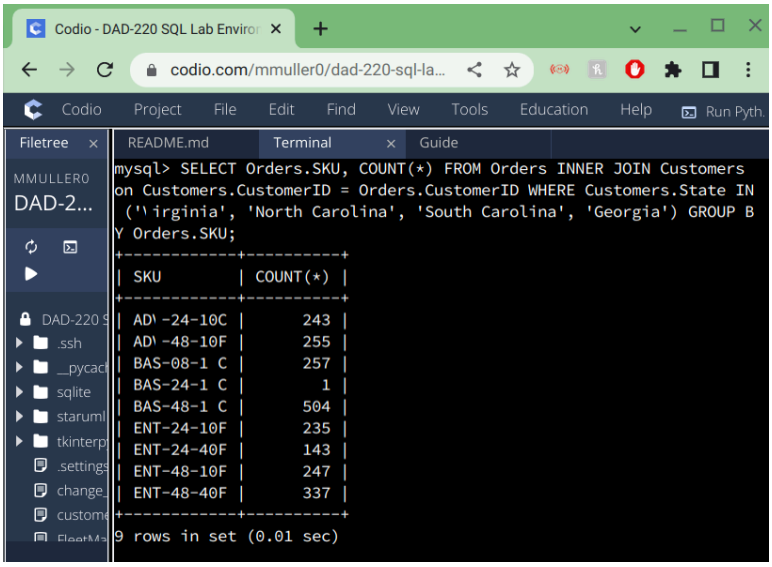
b. Analyze the data to determine the top three products sold in the United States.



The top three products sold in the United States are BAS-48-1 C, ENT-48-40F, and ENT-48-10F.

SELECT Orders.SKU, COUNT(*) FROM Orders GROUP BY Orders.SKU;

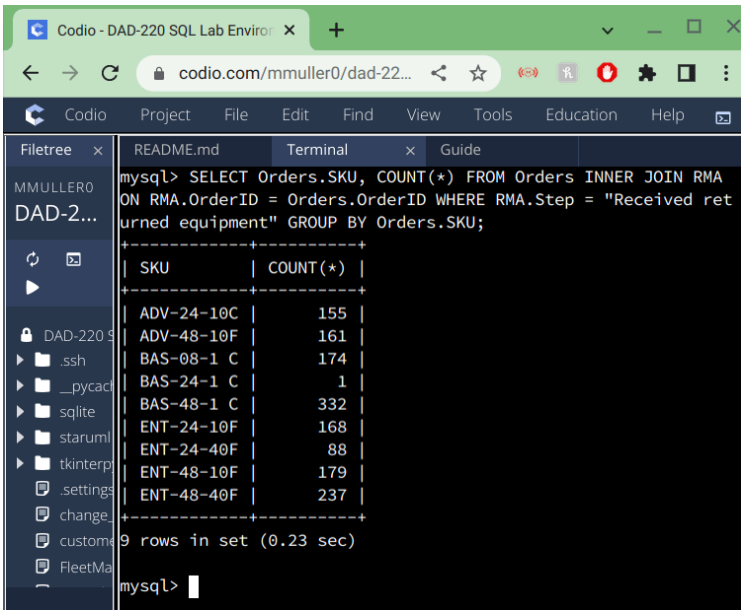
c. Analyze the data to determine the top three products sold in the southeastern region of the United States.
    1. Southeastern states to include in your analysis: Virginia, North Carolina, South Carolina, and Georgia



The top three products sold in the Southeastern region of the United States are BAS-48-1 C, ENT-48-40F, and BAS-08-1 C.

SELECT Orders.SKU, COUNT(*) FROM Orders INNER JOIN Customers on Customers.CustomerID = Orders.CustomerID WHERE Customers.State IN ('Virginia', 'North Carolina', 'South Carolina', 'Georgia') GROUP BY Orders.SKU;

B. Returns by region:
   a. Analyze the data to determine the top three products returned in the United States.

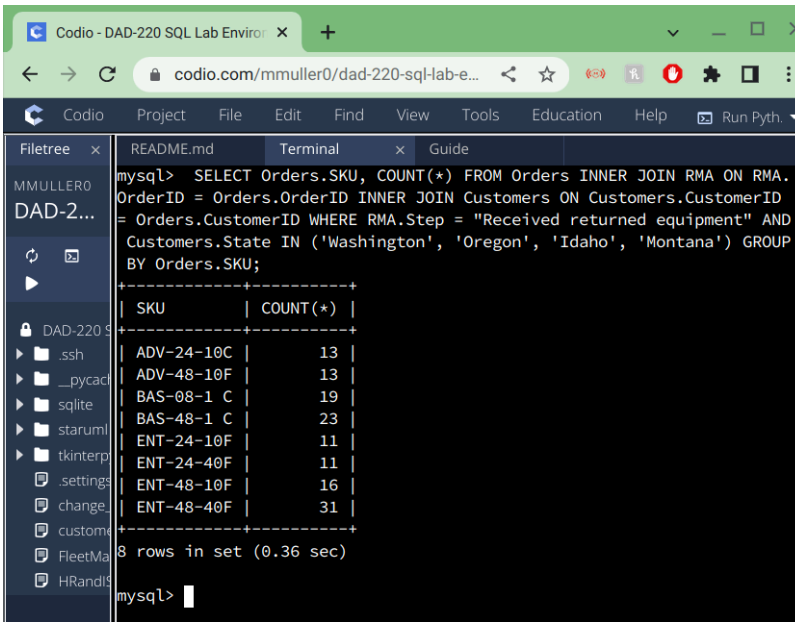


The top three products returned in the United States are: BAS-48-1 C, ENT-48-40F, and ENT-48-10F.

SELECT Orders.SKU, COUNT(*) FROM Orders INNER JOIN RMA ON RMA.OrderID = Orders.OrderID WHERE RMA.Step = "Received returned equipment" GROUP BY Orders.SKU;

b. Analyze the data to determine the top three products returned in the northwestern region of the United States.

2. Northwestern states to include in your analysis: Washington, Oregon, Idaho, and Montana



The top three returned products in the northwestern region of the United States are: ENT-48-40F, BAS-48-1 C, and BAS-08-1 C.

SELECT Orders.SKU, COUNT(*) FROM Orders INNER JOIN RMA ON RMA.OrderID = Orders.OrderID INNER JOIN Customers ON Customers.CustomerID = Orders.CustomerID WHERE RMA.Step = "Received returned equipment" AND Customers.State IN ('Washington', 'Oregon', 'Idaho', 'Montana') GROUP BY Orders.SKU;

B. **Write a report** to the Quantigration product manager that explains your findings in a way nontechnical stakeholders can digest and use.

a. This report should include an effective summary of the analysis of the captured data.

i. Sales data by region: Provide a well-written summary of your analysis on Part A.

The company currently has strong sales numbers across the United States, with a slight concentration of customers in Massachusetts. This translates to a total of 983 customers in the state of Massachusetts, which is over 100 more than the state with the second most being Arkansas with 854 customers. However, sales numbers are well spread out by region, as every state has at least 713 customers. This figure belongs to South Carolina, the state in which the company has the least current customers. The top three products sold by the company in all of the United States are

BAS-48-1 C, ENT-48-40F, and ENT-48-10F. This differs slightly from the company's top three products sold in the Southeastern region of the United States (Virginia, North Carolina, South Carolina, and Georgia) being BAS-48-1 C, ENT-48-40F, and BAS-08-1 C.

ii. Returns data by region: Provide a well-written summary of your analysis of Part B.

Currently the company's top three most returned products in the United States are: BAS-48-1 C, ENT-48-40F, and ENT-48-10F. This differs slightly from the company's top three most returned products in the Northwestern region of the United States (Washington, Oregon, Idaho, and Montana) being ENT-48-40F, BAS-48-1 C, and BAS-08-1 C.