## Answer 3.7: Joining Tables of Data

1. Write a query to find the top 10 countries for Rockbuster in terms of customer numbers. (Tip: you'll have to use GROUP BY and ORDER BY, both of which follow the join.)

1a. **Copy-paste your query and its output into your answers document.**

Query | Query History

```
1  SELECT D.country,
2  COUNT(customer_id)AS Count_of_customer_numbers
3  FROM Customer A
4  INNER JOIN address B ON A. address_id=B. address_id
5  INNER JOIN city C ON B. city_id= C.city_id
6  INNER JOIN country D ON C.country_id= D.country_id
7  GROUP BY country
8  ORDER BY COUNT(A.customer_id )DESC
9  LIMIT 10;
```

Data output | Messages | Notifications

| | country character varying (50) | count_of_customer_numbers bigint |
|---|---|---|
| 1 | India | 60 |
| 2 | China | 53 |
| 3 | United States | 36 |
| 4 | Japan | 31 |
| 5 | Mexico | 30 |
| 6 | Brazil | 28 |
| 7 | Russian Federation | 28 |
| 8 | Philippines | 20 |
| 9 | Turkey | 15 |
| 10 | Indonesia | 14 |

Total rows: 10 of 10 | Query complete 00:00:00.089

1b. **Write a few sentences on how you approached this query and why. It's important that you can explain your thought process when writing queries, especially for future interviews.**

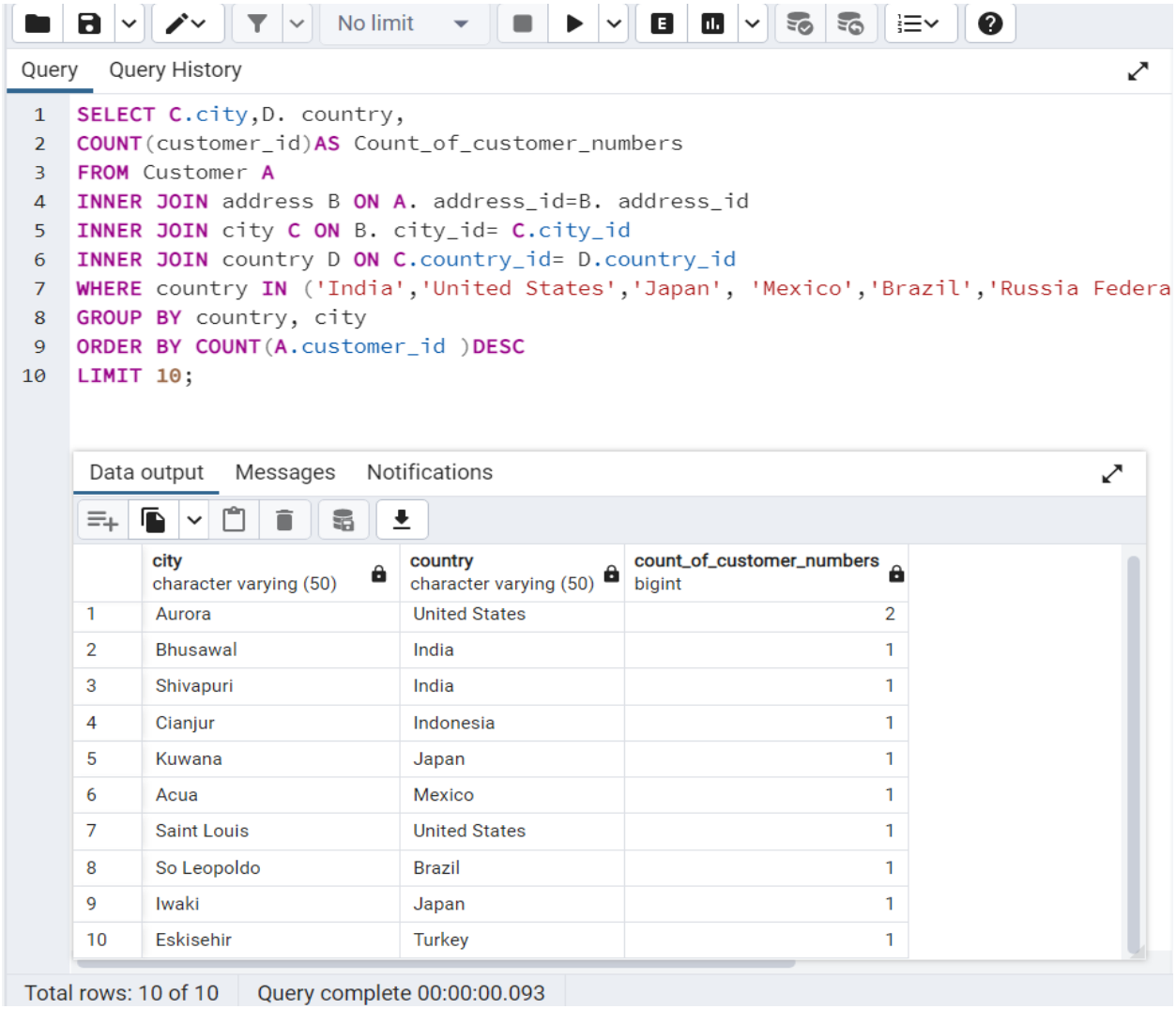
- I used the multiple joins and inner joins to connect the multiple tables. Inner joins were used because I only needed information from two tables but used the multiple joins approach because the two tables where the information was are not connected.

Firstly, use the SELECT command to find information from the Country table and counted the customer ID  to know how many customers for each country before using the join syntax to connect four tables to get the information needed from the two tables (customer and country).

I group it by country since we wanted to know the top 10 countries where Rockbuster has the most customers. Then, I order the table by the count of the customers' ids in descending order to be able to see the top country with the most customer. Finally, I limit it to the top 10 according to Rockbuster's request.

**2. Write a query to find the top 10 cities within the top 10 countries identified in step 1.**

2a**. Copy-paste your query and its output into your answers document.**



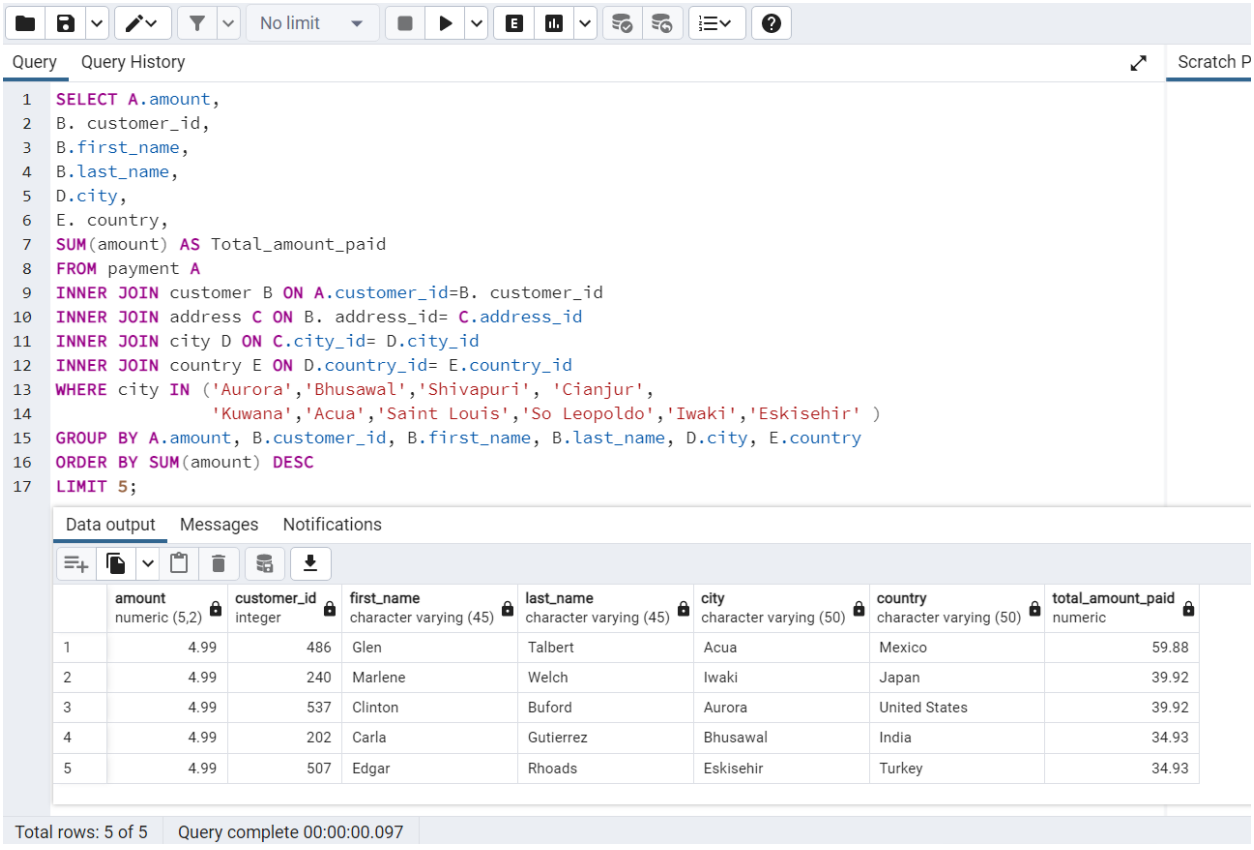

| | city character varying (50) | country character varying (50) | count_of_customer_numbers bigint |
|---|---|---|---|
| 1 | Aurora | United States | 2 |
| 2 | Bhusawal | India | 1 |
| 3 | Shivapuri | India | 1 |
| 4 | Cianjur | Indonesia | 1 |
| 5 | Kuwana | Japan | 1 |
| 6 | Acua | Mexico | 1 |
| 7 | Saint Louis | United States | 1 |
| 8 | So Leopoldo | Brazil | 1 |
| 9 | Iwaki | Japan | 1 |
| 10 | Eskisehir | Turkey | 1 |

**2b. Write a short explanation of how you approached this query and why.**

- I approached this task 2 as task 1, the difference is that I selected city as well so the table can show city name, country name and count of customer ids. To display the 10 top cities within the top 10 countries, I included the WHERE and IN commands to specify in the query where(country) and in which countries (top 10 countries) the top 10 cities should be picked from. I also group by both city and country.

**3. Write a query to find the top 5 customers in the top 10 cities who have paid the highest total amounts to Rockbuster. The customer team would like to reward them for their loyalty!**

- **Tip: After the join syntax, you'll need to use the WHERE clause with an operator, followed by GROUP BY and ORDER BY. Your output should include the following columns: Customer ID, Customer First Name and Last Name, Country, City, and Total Amount Paid.**




| | amount numeric (5,2) | customer_id integer | first_name character varying (45) | last_name character varying (45) | city character varying (50) | country character varying (50) | total_amount_paid numeric |
|---|---|---|---|---|---|---|---|
| 1 | 4.99 | 486 | Glen | Talbert | Acua | Mexico | 59.88 |
| 2 | 4.99 | 240 | Marlene | Welch | Iwaki | Japan | 39.92 |
| 3 | 4.99 | 537 | Clinton | Buford | Aurora | United States | 39.92 |
| 4 | 4.99 | 202 | Carla | Gutierrez | Bhusawal | India | 34.93 |
| 5 | 4.99 | 507 | Edgar | Rhoads | Eskisehir | Turkey | 34.93 |