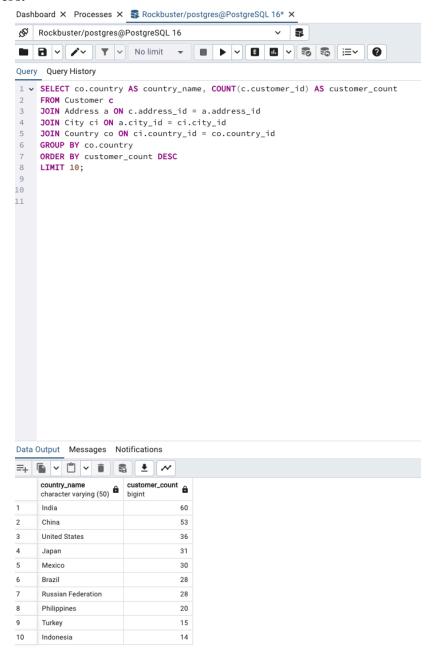
Kareemah Ashiru

Answers 3.7

1. Write a query to find the top 10 countries for Rockbuster in terms of customer numbers.



b. Explanation

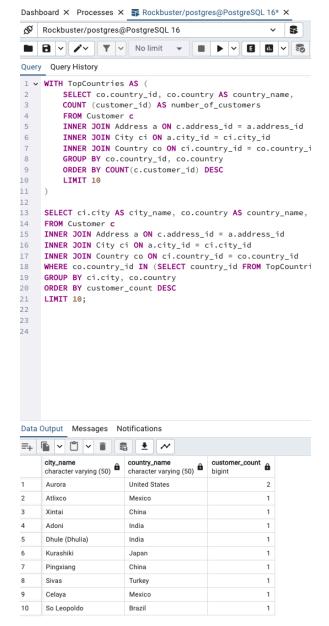
a.

 I used the Schema sheet to help me identify the tables, their contents and what table linked with the others. I was able to identify the multiple tables needed to produce the country list and the customer count: Customer -Address - City - Country. I used the count (c.customer_id) as a sum to rank the top countries based on the total number of customers. I grouped the query by country, ordered the customer count in a descending order and limited it to just 10 countries as instructed in this exercise. I chose INNER JOIN because what is needed is a limited number of countries (10) that can be found in both of the tables.

- ii. **JOIN Address a ON c.address_id = a.address_id:** Joins the Customer table with the Address table.
- iii. **JOIN** City ci ON a.city_id = ci.city_id: Joins the Address table with the City table.
- iv. **JOIN Country co ON ci.country_id = co.country_id:** Joins the City table with the Country table.
- v. **GROUP BY co.country:** Groups the results by country name.
- vi. **COUNT(c.customer_id) AS customer_count:** Counts the number of customers in each country.
- vii. **ORDER BY customer_count DESC:** Sorts the results by the customer count in descending order.
- viii. **LIMIT 10:** Limits the output to the top 10 countries.

c.

2. Write a query to identify the top 10 cities that fall within the top 10 countries you identified in step 1.



b. Explanation

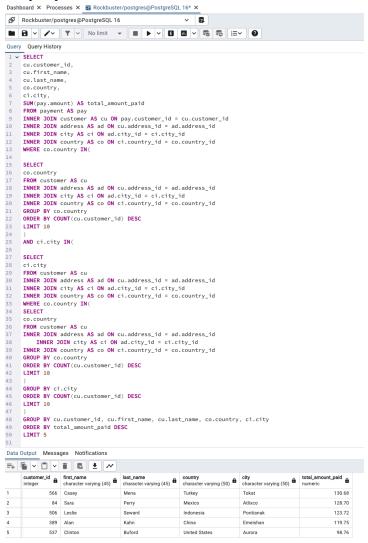
a.

- I used WITH TopCountries AS (...), a Common Table Expression that retrieves the top 10 countries based on customer count, similar to what we did in the first query. Then included the customer count and grouped it by country for one part of the column.
- ii. For the other part of the column I wanted to include the city and the associated country so I used co.country_id IN (SELECT country_id FROM TopCountries)that filters the results to include only customers from the top 10 countries.
- iii. **GROUP BY ci.city**: Groups the results by city name.

- iv. COUNT(c.customer_id) AS customer_count: Counts the number of customers in each city.
- v. **ORDER BY customer_count DESC**: Sorts the cities by customer count in descending order.
- vi. LIMIT 10: Limits the results to the top 10 cities.

The Inner Join is used here because of the desired result of this task which is to provide a limited number of information that can be found in both tables. This query will give you the top 10 cities, regardless of which top 10 country they are in, based on customer count.

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



b. Explanation

a.

- i. The Inner Join is used here as explained in 1 and 2.
- ii. I wanted the columns customer_id, first_name, last_name, country, city, and the sum of payment to show. So I used SELECT cu.customer_id, cu.first_name, cu.last_name, co.country, ci.city, sum (pay.amount) as total amount paid.
- iii. I used the WHERE co.country IN(function as a subquery to get the top 10 countries by number of customers.
- iv. I used the AND ci.city IN(subquery to get the top 10 cities by number of customers.
- v. Because #3 question only wants the top 5 paying customers, I used LIMIT 5.