Ex 3.7

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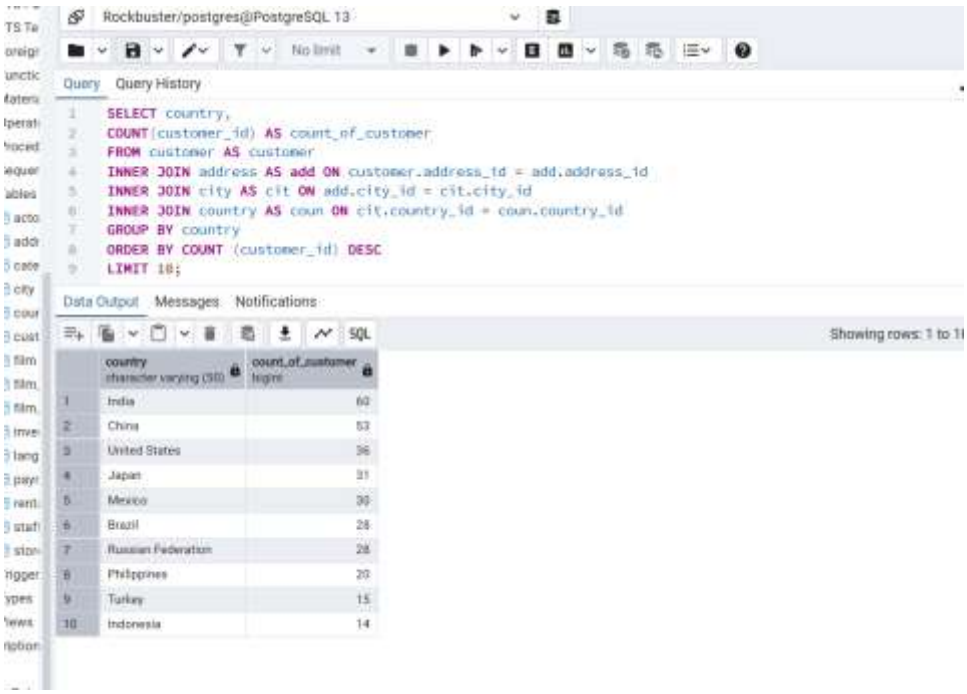
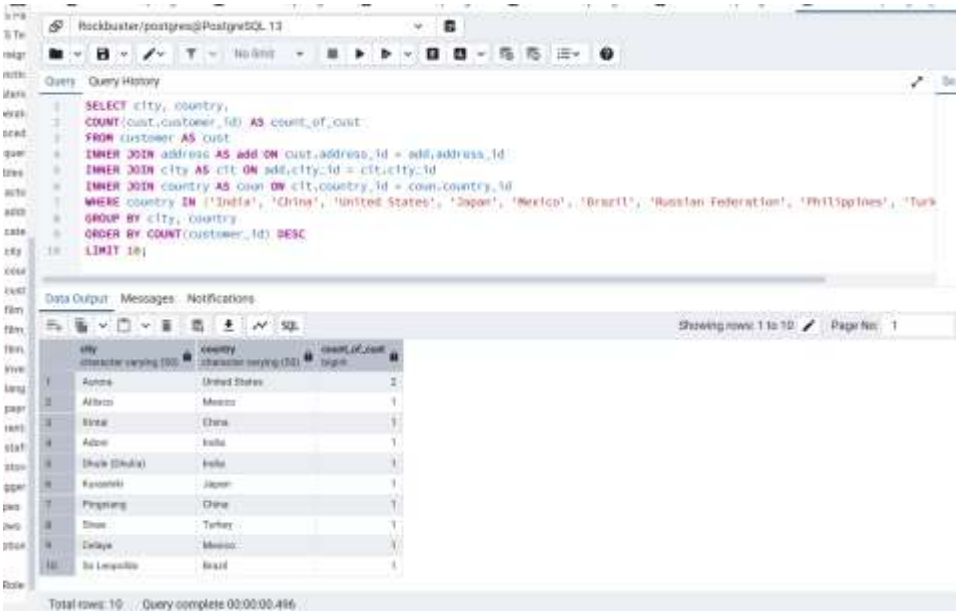
1. **Write a query to find the top 10 countries for Rockbuster in terms of customer numbers. (Tip: you'll have to use GROUP BY and ORDER BY, both of which follow the join.)**



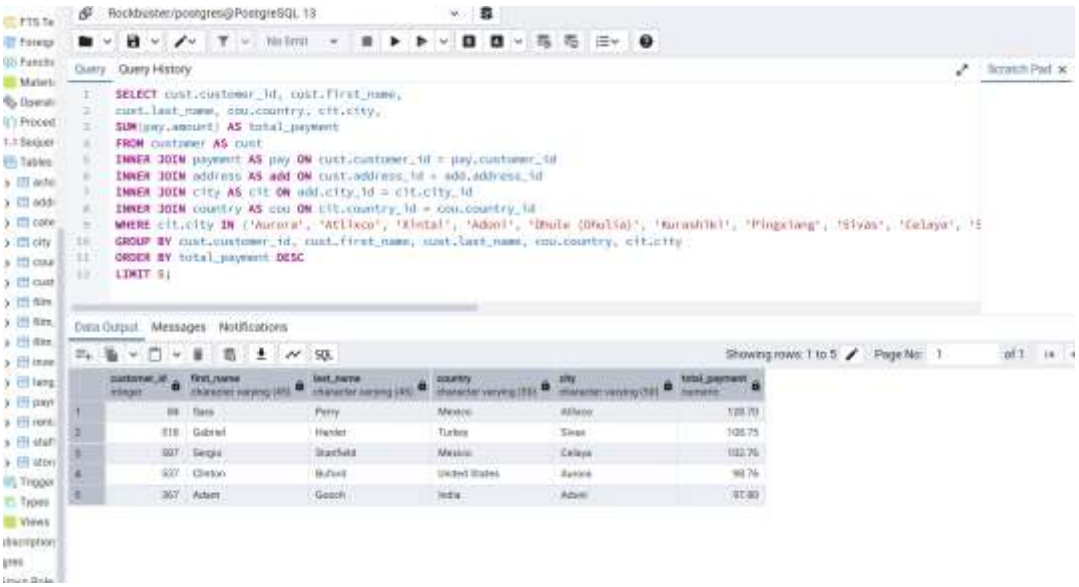
To identify the top 10 countries by customer numbers, I followed the relational path between tables: customer → address → city → country. I used INNER JOINs to connect these tables because customer locations are stored indirectly through address and city. After linking the correct tables, I grouped the results by country to count how many customers belong to each country. Finally, I ordered the results from highest to lowest and limited the output to the top 10. This approach ensures that I accurately capture customer distribution across countries while keeping the query efficient and easy to interpret.

2. **Next, write a query to identify the top 10 cities that fall within the top 10 countries you identified in step 1. (Hint: the top 10 cities can be in any of the countries identified—you don't need to create a separate list for each country.)**



I already knew the top 10 countries from the previous query, so I used them directly in the WHERE clause to filter the cities. I then joined the customer, address, city, and country tables to connect each customer to their city and country. After filtering to the top countries, I grouped the results by city and country and counted the number of customers in each city. Finally, I ordered the results in descending order to find the top 10 cities overall. This approach is straightforward and avoids the need for a separate subquery.

3. **Now 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!**



To find the top 5 customers with the highest total payments in the top 10 cities, I first used the list of top cities identified in the previous query. I joined the customer, payment, address, city, and country tables so that each customer could be linked to their city and country. Then I filtered the results to include only customers living in the top 10 cities and top 10 countries. I grouped the data by customer and summed up their total payments. Finally, I sorted the totals in descending order and selected the top 5 customers. This approach ensures that only the most valuable customers within the most important cities are included.