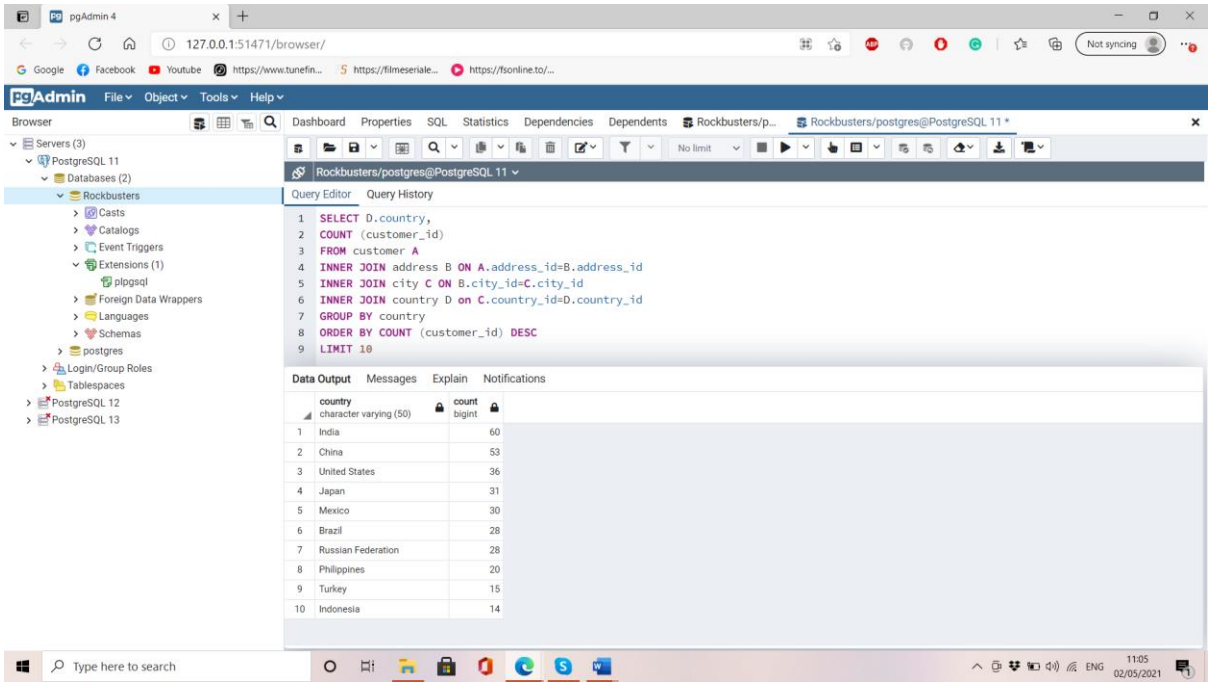
- Write a query to find the top 10 countries for Rockbuster in terms of customer numbers. (Tip: you will have to use GROUP BY and ORDER BY, both of which follow the join.)

➢ Copy-paste your query and its output into your answers document.

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

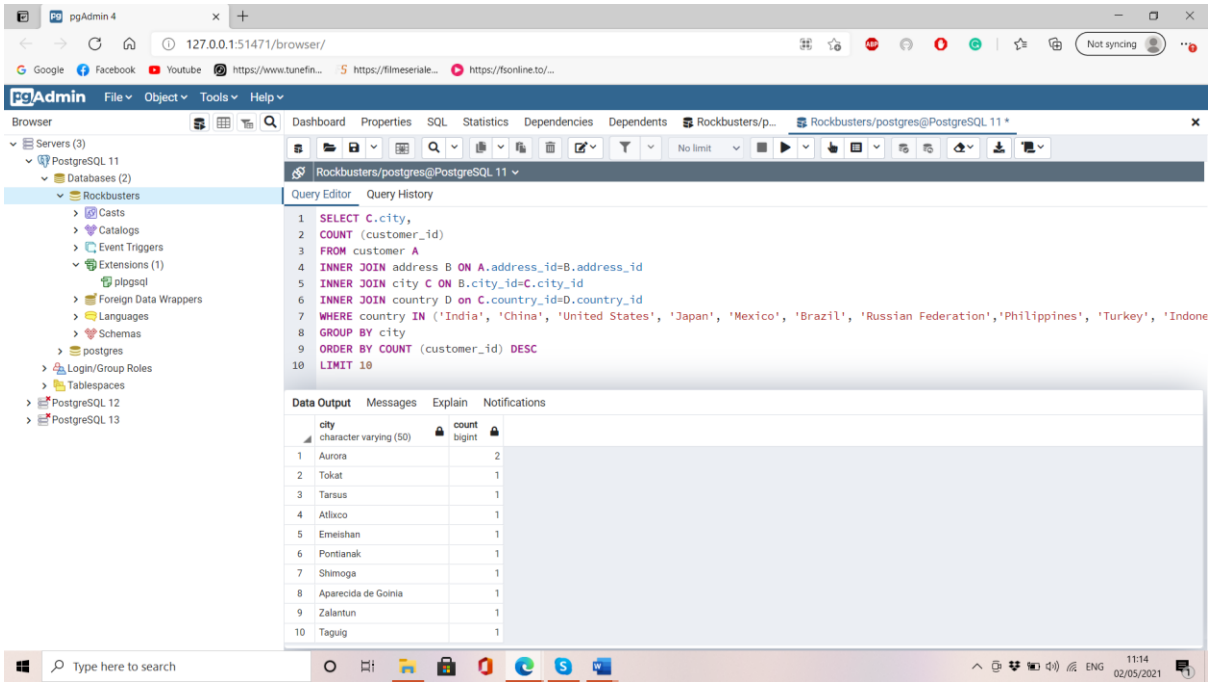
```
SELECT D.country,
 COUNT(customer_id)
FROM customer A
INNER JOIN address B ON A.address_id = B.address_id
INNER JOIN city C ON B.city_id = C.city_id
INNER JOIN country D ON C.country_ID = D.country_ID
GROUP BY country
ORDER BY COUNT(customer_id) DESC
LIMIT 10
```



- First, I have thought about the connection between customer and country.
- To identify the relationship, I used the entity-relationship diagram, which I learnt task 3.2, and found out the chained tables from the customer table to the country table.
- Only I needed is count of the costumer which has country information, so I picked INNER JOIN, build query with identical columns between table and used GROUP BY, ORDER BY and LIMIT to make top 10 countries that customer based on.

- Write a query to find the top 10 cities within the top 10 countries identified in step 1.
  - Copy-paste your query and its output into your answers document.
  - Write a short explanation of how you approached this query and why.

```
SELECT C.city,
 COUNT(customer_id)
FROM customer A
INNER JOIN address B ON A.address_id = B.address_id
INNER JOIN city C ON B.city_id = C.city_id
INNER JOIN country D ON C.country_id = D.country_id
WHERE country IN ('india','China','United States','Japan','Mexico','Brazil','Russian
Federation','Philippones','Turkey','Indonesia')
GROUP BY city
ORDER BY COUNT(customer_id) DESC
LIMIT 10
```



- I instantly came up the constrained command like WHERE because it instructed where I must extract.
- To shows top 10 cities, I swap to city column in SELECT command and GROUP BY command.

- 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 will 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, Total Amount Paid.
- Copy-paste your query and its output into your answers document.

```
SELECT C.first_name,
 C.last_name,
 SUM(amount)
FROM payment A
INNER JOIN rental B ON A.rental_id = B.rental_id
INNER JOIN customer C ON B.customer_id = C.customer_id
INNER JOIN address D ON C.address_id = D.address_id
INNER JOIN city E ON D.city_id = E.city_id
```

INNER JOIN country F ON E.country_id = F.country_id

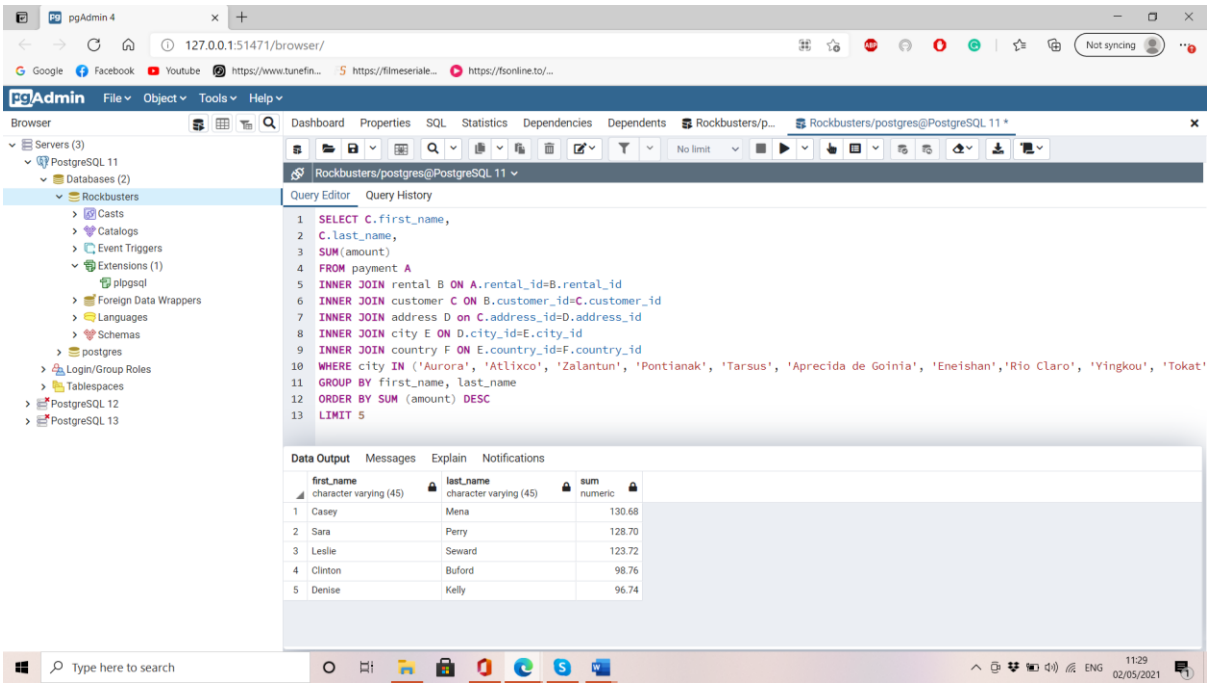
WHERE city IN ('Aurora','Atlixco','Zalantun','Pontianak','Tarsus','Aparecida de

Goinia','Emeishan','Rio Claro','Yingkou','Tokat')

GROUP BY first_name, last_name

ORDER BY SUM(amount) DESC

LIMIT 5



- Took what we had in problem 2 so I knew what I Inner joins would be we just need to change FROM to payments table and add in Customer_ id and First_name, Last_name, then added the top city I pulled from problem 2 and grouped by first name last name city country and amount.