Rockbuster Queries

```
Query: WITH average_total_amount_paid_cte (customer_id, first_name, last_name,
city, country, total_amount_paid) AS
(Select a.customer_id, a.first_name, a.last_name, d.city, e.country,
SUM(b.amount) AS total_amount_paid
FROM Customer a
INNER JOIN payment b ON a.customer_id = b.customer_id
INNER JOIN address c ON a.address_id = c.address_id
INNER JOIN city d ON c.city_id = d.city_id
INNER JOIN country e ON d.country_id = e.country_id
WHERE d.city IN ('Aurora',
'Tokat',
'Tarsus',
'Atlixco',
'Emeishan',
'Pontianak',
'Shimoga',
'Aparecida de Goinia'
'Zalantun')
GROUP BY a.customer_id, a.first_name, a.last_name, d.city, e.country
ORDER BY total_amount_paid DESC
LIMIT 5)
SELECT AVG(total_amount_paid) AS average_amount_paid
FROM average_total_amount_paid_cte
```

```
WITH top_customer_count_cte(amount, customer_id, first_name, last_name, city,
country, total_amount_paid) AS
(Select a.amount, b.customer_id, b.first_name, b.last_name, d.city, e.country,
SUM(a.amount) AS total_amount_paid
FROM payment a
INNER JOIN customer b ON a.customer_id = b.customer_id
INNER JOIN address c ON b.address_id = c.address_id
INNER JOIN city d ON c.city_id = d.city_id
INNER JOIN country e ON d.country_id = e.country_id
WHERE d.city IN ('Aurora',
'Tokat',
'Tarsus',
'Atlixco',
'Emeishan',
'Pontianak',
'Shimoga',
'Aparecida de Goinia'
'Zalantun')

GROUP BY a.amount, b.customer_id, b.first_name, b.last_name, d.city, e.country
ORDER BY SUM(amount) DESC
LIMIT 5),
```

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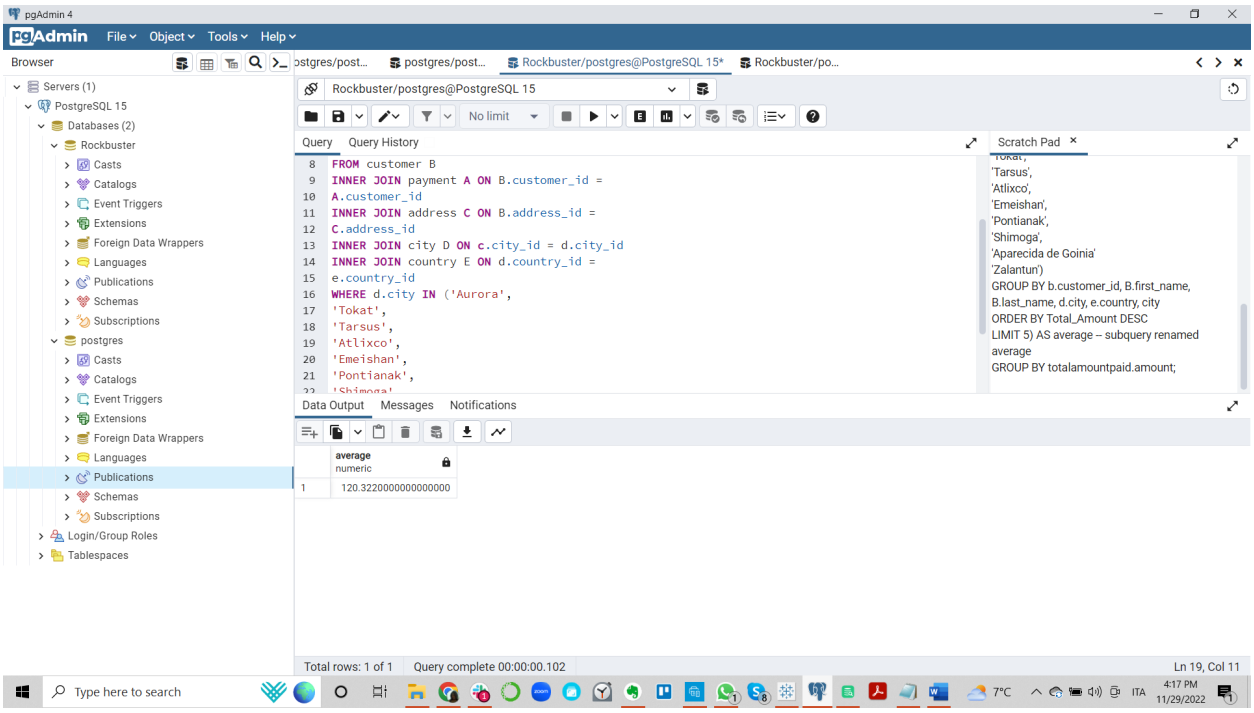
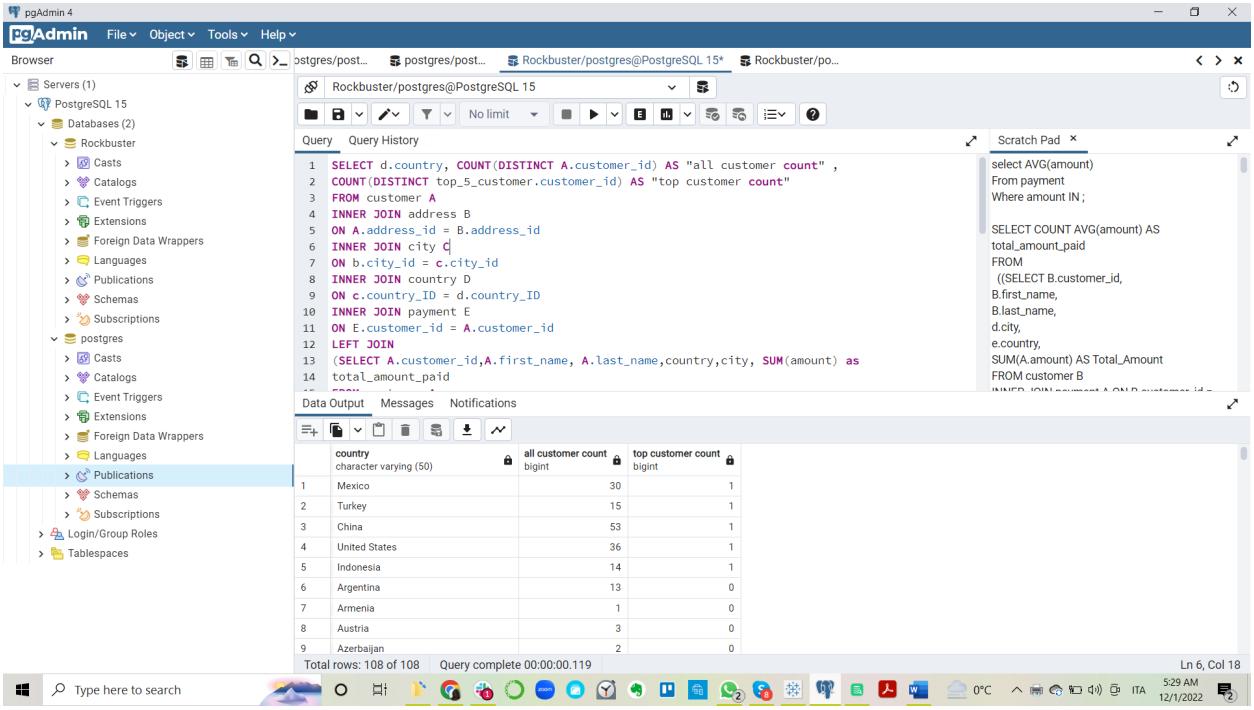
```
customer_count_cte AS
(SELECT d.country, COUNT(DISTINCT A.customer_id) AS all_customer_count,
COUNT(DISTINCT d.country) AS top_customer_count

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 d.country)

SELECT d.country, COUNT(DISTINCT A.customer_id) AS all_customer_count,
COUNT(DISTINCT top_customer_count_cte.country) AS top_customer_count
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
LEFT JOIN top_customer_count_cte ON d.country=top_customer_count_cte.country
Group by d.country
Order by top_customer_count DESC
Limit 5
```

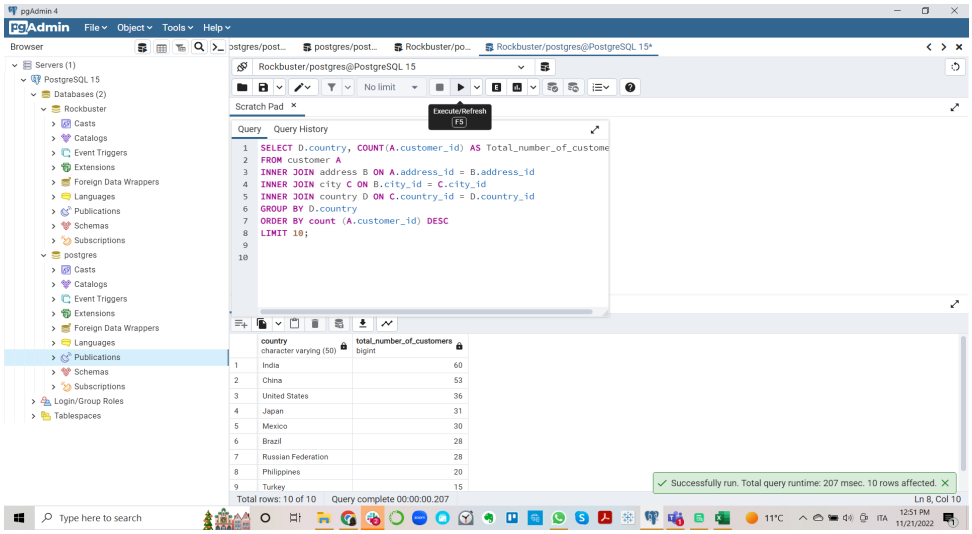


Rockbuster Queries

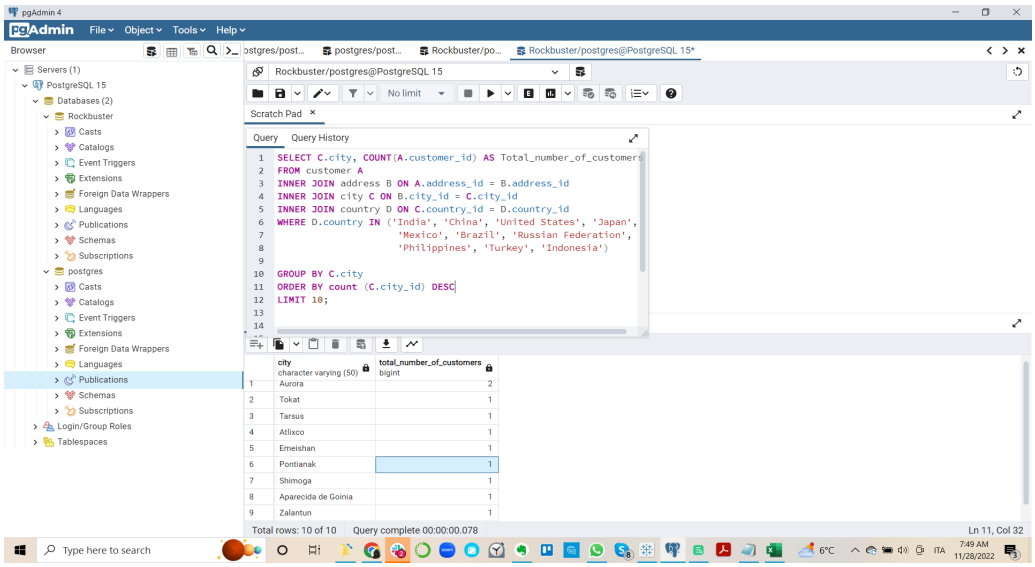


1a	Write a query to find the top 10 countries for Rockbuster in terms of customer numbers. (Tip: you'll have to use GROUP BY and ORDER BY, both of which follow the join.)	SELECT D.country, COUNT(A.customer_id) AS Total_number_of_customers FROM customer A INNER JOIN address B ON A.address_id = B.address_id INNER JOIN city C ON B.city_id = C.city_id INNER JOIN country D ON C.country_id = D.country_id GROUP BY D.country ORDER BY Total_number_of_customers DESC LIMIT 10		
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.		This query needed to be multiple joins. The customer table contained some information but could not be joined directly with the country table. There needed to be an intermediary connecting the two tables to produce the client's desired output.	
2	Write a query to find the top 10 cities within the top 10 countries identified in step 1.	SELECT C.city, COUNT(A.customer_id) AS Total_number_of_customers 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 D.country IN ('India', 'China', 'United States', 'Japan', 'Mexico', 'Brazil', 'Russian Federation', 'Philippines', 'Turkey', 'Indonesia') GROUP BY C.city ORDER BY count (C.city_id) DESC LIMIT 10;		
2b	Write a short explanation of how you approached this query and why.		Like with the previous query multiple join were used and there was a change to the group by focusing on 'city' rather than country	A = customer , B = address, C = city, D = 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!	SELECT B.customer_id, B.first_name, B.last_name, d.city, e.country, SUM(A.amount) AS Total_Amount FROM customer B INNER JOIN payment A ON B.customer_id = A.customer_id INNER JOIN address C ON B.address_id = C.address_id INNER JOIN city D ON c.city_id = d.city_id INNER JOIN country E ON d.country_id = e.country_id WHERE d.city IN ('Aurora', 'Tokat', 'Tarsus', 'Atlixco', 'Emeishan', 'Pontianak', 'Shimoga', 'Aparecida de Goinia' 'Zalantun') GROUP BY b.customer_id, B.first_name, B.last_name, d.city, e.country, city ORDER BY Total_Amount DESC LIMIT 5;	This was a bit more complicated in that I have to do another join ('payment') in order to calculate the 'amount'. In addition, the 'where' function needed to be used to narrow the query to the cities that were of interest to the client.	A = payment, B = customer , C = address, D = city, E = country

country	total_number_of_customers
India	60
China	53
United States	36
Japan	31
Mexico	30
Brazil	28
Russian Federation	28
Philippines	20
Turkey	15
Indonesia	14



city	total_number_of_customers
Aurora	2
Tokat	1
Tarsus	1
Atlixco	1
Emeishan	1
Pontianak	1
Shimoga	1
Aparecida d	1
Zalantun	1



customer_id	first_name	last_name	city	country	total_amount	customer_count
566	Casey	Mena	Tokat	Turkey	130.68	8
84	Sara	Perry	Atlixco	Mexico	128.7	8
506	Leslie	Seward	Pontianak	Indonesia	123.72	8
389	Alan	Kahn	Emeishan	China	119.75	7
537	Clinton	Buford	Aurora	United States	98.76	3