SQL Join command—Assignment 7

1.1: Find the top 10 countries for Rockbuster in terms of customer numbers.

Query | Query History

```
--SELECT * FROM pg_catalog.pg_tables
SELECT country,
    COUNT(customer_id) AS customer_count
FROM  customer

INNER Join  address ON customer.address_id = address.address_id
INNER JOIN  city ON address.city_id = city.city_id
INNER JOIN  country ON city.country_id = country.country_id

GROUP BY  country
ORDER BY   customer_count DESC
LIMIT 10;
```

Data Output | Messages | Notifications

	country character varying (50)	customer_count 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

1.2: To write this query, I first thought about what the question was asking: to find the top 10 countries with the most customers. I knew I had to count how many customers each country has, so I looked at how the tables are connected. The customer table doesn't have a direct link to country, but it does connect through the address, city, and then country tables. So, I used inner joins to connect these tables step by step. After that, I grouped the results by country name and used the COUNT() function to count the number of customers in each group. Then I sorted the results in descending order so the countries with the most customers appear first, and I used LIMIT 10 to show only the top 10 countries.

2.1. Identify the top 10 cities that fall within the top 10 countries you identified in step 1.

Query | Query History

```
13
14  SELECT city,country,
15         COUNT(customer_id) AS customer_count
16  FROM customer
17  INNER JOIN address ON customer.address_id = address.address_id
18  INNER JOIN city ON address.city_id = city.city_id
19  INNER JOIN country ON city.country_id = country.country_id
20  WHERE country IN ('India', 'China', 'United States', 'Japan',
21                    'Mexico', 'Brazil', 'Russian Federation',
22                    'Philippines', 'Turkey', 'Indonesia')
23  GROUP BY city, country
24  ORDER BY COUNT(customer_id) DESC
25  LIMIT 10;
26
```

Data Output | Messages | Notifications

	city character varying (50)	country character varying (50)	customer_count bigint
1	Aurora	United States	2
2	Atlixco	Mexico	1
3	Xintai	China	1
4	Adoni	India	1
5	Dhule (Dhulia)	India	1
6	Kurashiki	Japan	1
7	Pingxiang	China	1
8	Sivas	Turkey	1
9	Celaya	Mexico	1
10	So Leopoldo	Brazil	1

2.2:

Well, we already had the top 10 countries, and now my goal was to find the cities within those countries that have the most customers. I used the same table joins as before; customer to address, address to city, and city to country. Then, I added a WHERE clause to filter the results to only include the 10 countries I'm interested in. I grouped the data by both city and country to make sure cities with the same name in different countries wouldn't be combined. I also used COUNT() to get the number of customers in each city and sorted the results in descending order to find the top 10 cities overall.

3.1. Find the top 5 customers from the top 10 cities who've paid the highest total amounts to Rockbuster.

Query Query History

```
27  SELECT customer.customer_id,
28         customer.first_name,
29         customer.last_name,
30         city.city,
31         country.country,
32  SUM(payment.amount) AS total_payment_amount
33  FROM payment
34  INNER JOIN customer ON payment.customer_id = customer.customer_id
35  INNER JOIN address  ON customer.address_id = address.address_id
36  INNER JOIN city     ON address.city_id = city.city_id
37  INNER JOIN country  ON city.country_id = country.country_id
38
39  WHERE
40      city IN ('Aurora', 'Atlixco', 'Xintai', 'Adoni',
41               'Dhule (Dhulia)','Kurashiki', 'Pingxiang',
42               'Sivas','Celaya', 'So Leopoldo')
43  AND
44      country IN ('India', 'China', 'United States', 'Japan',
45                          'Mexico', 'Brazil', 'Russian Federation',
46                          'Philippines', 'Turkey', 'Indonesia')
47
48  GROUP BY customer.customer_id, customer.first_name, customer.last_name,
49           city.city, country.country
50  ORDER BY total_payment_amount DESC
51  LIMIT 5;
```

Data Output Messages Notifications

SQL

	customer_id integer	first_name character varying (45)	last_name character varying (45)	city character varying (50)	country character varying (50)	total_payment_amount numeric
1	84	Sara	Perry	Atlixco	Mexico	128.70
2	518	Gabriel	Harder	Sivas	Turkey	108.75
3	587	Sergio	Stanfield	Celaya	Mexico	102.76
4	537	Clinton	Buford	Aurora	United States	98.76
5	367	Adam	Gooch	Adoni	India	97.80