3.7 **Answers**- Joining tables
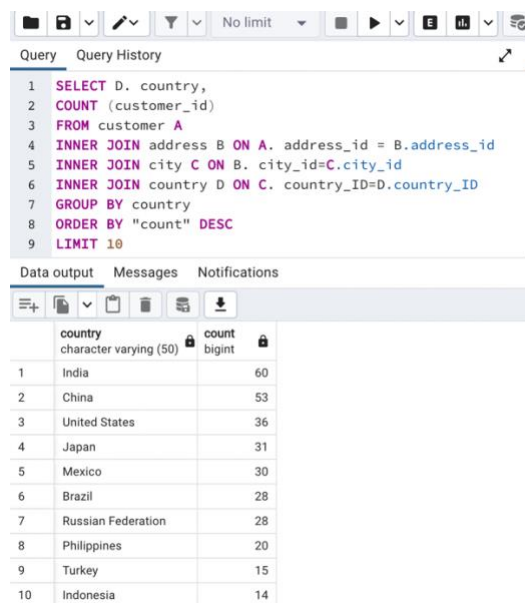
1. **Write a query to find the top 10 countries for Rockbuster in terms of customer numbers. (Tip: you'll have to use GROUP BY and ORDER BY, both of which follow the join.)** The Inner Join method was used since we were being asked specific values, such as top 10 countries and these were grouped by country and in descending order, which allowed us to view the Top 10.

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" DESC
LIMIT 10

2. **Write a query to find the top 10 cities within the top 10 countries identified in step 1.**
The same INNER JOIN method/query for finding the top 10 Countries was used, except a WHERE query was inserted to specify where we wanted the *cities* from. The queries for *Country* were swapped with *City* .
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',
            'Philippines','Turkey','Indonesia')
GROUP BY city
ORDER BY "count" DESC
LIMIT 10

```
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',
                  'Philippines','Turkey','Indonesia')
GROUP BY city
ORDER BY "count" DESC
LIMIT 10
```

Data output   Messages   Notifications

	city character varying (50)	count bigint
1	Aurora	2
2	Tokat	1
3	Tarsus	1
4	Atlixco	1
5	Emeishan	1
6	Pontianak	1
7	Shimoga	1
8	Aparecida de Goinia	1
9	Zalantun	1
10	Taguig	1

3. **Write a query to find the top 5 customers in the top 10 cities who have paid the highest total amounts to Rockbuster.**

```
SELECT A. customer_id, A.first_name, A. last_name, D. country, C.City,
SUM(E.amount) AS Payment
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
INNER JOIN payment E ON A. customer_id =E.customer_id
WHERE city IN ('Aurora','Tokat','Tarsus',
               'Atlixco','Emeishan','Pontianak','Shimoga',
               'Aparecida de Goinia','Zalantun','Taguig')
GROUP BY A. customer_id, D.country, C.city
ORDER BY Payment DESC
LIMIT 5
```

Data output   Messages   Notifications

	customer_id integer	first_name character varying (45)	last_name character varying (45)	country character varying (50)	city character varying (50)	payment numeric
1	566	Casey	Mena	Turkey	Tokat	130.68
2	84	Sara	Perry	Mexico	Atlixco	128.7
3	506	Leslie	Seward	Indonesia	Pontianak	123.72
4	389	Alan	Kahn	China	Emeishan	119.75
5	537	Clinton	Buford	United States	Aurora	98.76