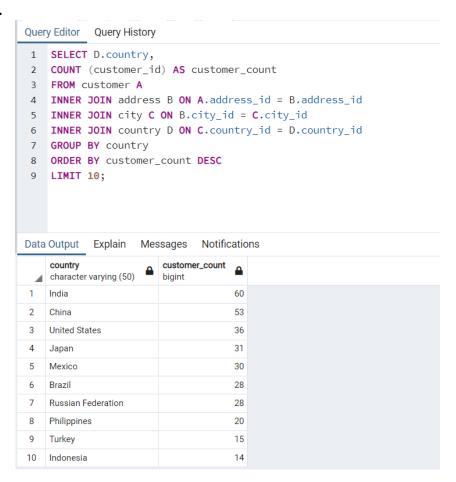
## 3.7: Joining Tables of Data Prepared by: Rob Rowland

1.



The needed information is found in the customer and country tables, but those two tables cannot be joined without the use of the address and country tables as well. I began by defining my desired columns of country and customer\_count but using the SELECT and COUNT functions and selecting customer\_id from the customer table. I then used INNER JOIN to connect tables using the follow: table A -> table B using address\_id, table B -> table C using city\_id, and table C to table D using country\_id. Lastly, I grouped the records by country using GROUP BY and ordered the records from most to least customers using ORDER BY and DESC and limited the counts to the top ten countries using LIMIT.

## Query Editor Query History SELECT C.city AS top\_ten\_cities, D.country, COUNT (customer\_id) AS customer\_count 2 FROM customer A 3 INNER JOIN address B ON A.address\_id = B.address\_id 4 INNER JOIN city C ON B.city\_id = C.city\_id 5 INNER JOIN country D ON C.country\_id = D.country\_id 6 WHERE country IN ('India', 7 'China', 8 'United States', 9 10 'Japan', 11 'Mexico', 'Brazil', 12 'Russian Federation', 13 'Philippines', 14 'Turkey', 15 'Indonesia') 16 17 GROUP BY C.city, D.country 18 ORDER BY customer\_count DESC 19 LIMIT 10; Notifications **Data Output** Explain Messages customer\_count\_ top\_ten\_cities country character varying (50) character varying (50) bigint United States 2 1 Aurora 2 Atlixco Mexico 1 3 Xintai China 1 India 4 Adoni 1 Dhule (Dhulia) 5 India 1 Kurashiki 1 6 Japan

I used the same general format as the last query but made slight edits in order to pull the top ten cities instead. With the SELECT function, I added a city column. I then inserted a WHERE function to ensure it was only pulling cities from the top ten countries I discovered in the previous query. Lastly, I added city to the GROUP BY function to ensure the records were being grouped by both city and country.

```
SELECT A.customer_id, B.first_name, B.last_name, D.city, E.country,
SUM(amount) AS customer_total_payments
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 country IN ('India',
                                 'China',
                                 'United States',
                                 'Japan',
                                 'Mexico',
                                 'Brazil',
                                 'Russian Federation',
                                 'Philippines',
                                 'Turkey',
                                 'Indonesia')
AND city IN ('Aurora',
                        'Atlixco',
                        'Xintai',
                        'Adoni',
                        'Dhule (Dhulia)',
                        'Kurashiki',
                        'Pingxiang',
                        'Sivas',
                        'Celaya',
                        'So Leopoldo')
GROUP BY A.customer_id, B.first_name, B.last_name, D.city, E.country
ORDER BY customer_total_payments DESC
LIMIT 5;
```

4	customer_id_	first_name character varying (45)	last_name character varying (45)	city character varying (50)	country character varying (50)	customer_total_payments
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