Step 1

Query | Query History

```
1  SELECT d.country_id, d.country,
2  COUNT(a.customer_id) AS count_of_customers
3  FROM customer a
4  INNER JOIN address B ON a.address_id = b.address_id
5  INNER JOIN city c ON b.city_id = c.city_id
6  INNER JOIN country d ON c.country_id = d.country_id
7  GROUP BY d.country, d.country_id
8  ORDER BY COUNT(a.customer_id) DESC
9  LIMIT 10
```

Data output | Messages | Notifications

	country_id [PK] integer	country character varying (50)	count_of_customers bigint
1	44	India	60
2	23	China	53
3	103	United States	36
4	50	Japan	31
5	60	Mexico	30
6	15	Brazil	28
7	80	Russian Federation	28
8	75	Philippines	20
9	97	Turkey	15
10	45	Indonesia	14

I had to find the count of times that a customer (thus, customer_id) appeared in each country, so I looked at the ERD to see how the tables are connected. I needed data only from the customer and country tables, so I had to perform multiple joins to get this information.

Step 2

Query | Query History

```
SELECT c.city, d.country,
COUNT(a.customer_id) AS count_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, d.country
ORDER BY COUNT(a.customer_id) DESC
LIMIT 10
```

Data output | Messages | Notifications

	city character varying (50)	country character varying (50)	count_of_customers 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

I needed to be selective about which countries the cities are in, so I filtered the results with WHERE to only include the top 10 countries. Though looking at the results, there is no top 10, there is just a top 1 and the rest are all the same.

Step 3

Query | Query History

```sql
SELECT a.customer_ID, a.first_name, a.last_name, c.city,
d.country, SUM(e.amount) AS total_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 c.city IN ('Aurora','Atlixco','Xintai','Adoni','Dhule (Dhulia)','Kurashiki',
                 'Pingxiang','Sivas','Celaya','So Leopoldo')
GROUP BY a.customer_ID, c.city, d.country
ORDER BY total_payment DESC
LIMIT 5
```

Data output | Messages | Notifications

	customer_id integer	first_name character varying (45)	last_name character varying (45)	city character varying (50)	country character varying (50)	total_payment 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