








## Answers 3.7

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.)

Query	Query History
1	<b>SELECT</b> D.country, <b>count</b> (A.customer_id) <b>AS</b> total_customers
2	<b>FROM</b> customer A
3	<b>INNER JOIN</b> address B <b>on</b> A.address_id = B.address_id
4	<b>INNER JOIN</b> city C <b>on</b> B.city_id = C.city_id
5	<b>INNER JOIN</b> country D <b>on</b> C.country_id = D.country_id
6	<b>GROUP BY</b> country
7	<b>ORDER BY</b> total_customers <b>DESC</b>
8	<b>LIMIT</b> 10

Data output	Messages	Notifications
<div></div>		
	country character varying (50)	total_customers 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

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.

Since I need to connect customer numbers to countries, I must establish the shortest link path from the customer table to the country table. Using the ERD, I discovered that the country table can connect back to the city table, which can then connect back to the address table, which can then connect back to the customer table, which we want. Now that the path has been established, we must select from country to connect to a customer count, followed by 3 inner joins to link the tables. After this we must group the data by country and order them by the customer count in descending order with a limit of 10.

Write a query to find the top 10 cities within the top 10 countries identified in step 1.

Query







Query History

```
1 SELECT C.city, D.country, count(A.customer_id) AS total_customers
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 D.country IN ('India','China','United States','Japan','Mexico',
7                     'Brazil','Russian Federation','Philippines','Turkey','Indonesia')
8 GROUP BY city, country
9 ORDER BY total_customers DESC
10 LIMIT 10
```

Data output

Messages

Notifications



	city character varying (50)	country character varying (50)	total_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

Write a short explanation of how you approached this query and why.

For this query I simply added city to the SELECT and GROUP BY functions. However, this included data from countries outside the top 10, such as a result from the United Kingdom tied for 1<sup>st</sup>, so I added a WHERE that listed the top 10 countries.

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!

Query

Query History

Scratch Pad x

```

1 SELECT A.customer_id, A.first_name, A.last_name, B.address,
2       C.city, D.country, SUM(E.amount) AS total_payment
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 INNER JOIN payment E on A.customer_id = E.customer_id
8 WHERE C.city IN ('Aurora', 'Atlixco', 'Xintai', 'Adoni', 'Dhule (Dhulia)',
9                'Kurashiki', 'Pingxang', 'Sivas', 'Celaya', 'So Leopoldo')
10 GROUP BY A.customer_id, A.first_name, A.last_name, B.address, C.city, D.country
11 ORDER BY total_payment DESC
12 LIMIT 5

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Data output

Messages

Notifications

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	customer_id integer	first_name character varying (45)	last_name character varying (45)	address character varying (50)	city character varying (50)	country character varying (50)	total_payment numeric
1	84	Sara	Perry	125 Citt del Vaticano Boulev...	Atlixco	Mexico	128.7
2	518	Gabriel	Harder	680 A Corua (La Corua) Manor	Sivas	Turkey	108.75
3	587	Sergio	Stanfield	1402 Zanzibar Boulevard	Celaya	Mexico	102.76
4	537	Clinton	Buford	43 Vilnius Manor	Aurora	United States	98.76
5	367	Adam	Gooch	230 Urawa Drive	Adoni	India	97.8