

3.7: Joining Tables of Data

1: Top 10 Countries in terms of customer numbers

Query Editor

Query History

1

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SELECT

D.country,

COUNT(customer_id) AS

number_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

GROUP BY

country

ORDER BY

number_of_customers DESC

LIMIT

10

Data Output

Explain

Messages

Notifications

country

character varying (50)

number_of_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

I started out by looking at what was asked of me. I needed to find the top 10 countries by customer numbers which means I needed a count of customer ids, grouped by the country, I only needed 10 records as I want the top 10 and I needed to order it largest to smallest. Then I looked for the link between customers and countries: customer table was linked to address table, which linked to city table and then country table. I used inner join as I only needed select information from the two tables and not all columns from any of the tables.

2. Top 10 Cities within the top 10 countries

Query Editor

Query History

```

1  SELECT C.city,
2         D.country,
3         COUNT(customer_id) AS number_of_customers
4  FROM customer A
5  INNER JOIN address B ON A.address_id = B.address_id
6  INNER JOIN city C ON B.city_id = C.city_id
7  INNER JOIN country D ON C.country_ID = D.country_ID
8  WHERE country IN ('India', 'China', 'United States', 'Japan', 'Mexico', 'Brazil', 'Russian Federation', 'Philippines', 'Turkey', 'Indonesia')
9  GROUP BY city, country
10 ORDER BY number_of_customers DESC
11 LIMIT 10

```

Data Output

Explain

Messages

Notifications

	city character varying (50)	country character varying (50)	number_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 approached this query the same as the previous but adding a where syntax as I knew we were only concerned with the top 10 cities in the top 10 countries we had just found. Then I grouped by city and country.

3. Top 5 Customers in top 10 Cities with highest paid total amount

Query Editor

Query History




```
1 SELECT A.customer_id, A.first_name, A.last_name, C.city, D.country,
2       SUM(E.amount) AS total_amount_paid
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 city IN ('Aurora', 'Atlixco', 'Xintai', 'Adoni', 'Dhule (Dhulia)', 'Kurashiki', 'Pingxiang', 'Sivas', 'Celaya', 'So Leopoldo')
9 GROUP BY A.customer_id, C.city, D.country
10 ORDER BY total_amount_paid DESC
11 LIMIT 5
```

Data Output

Explain

Messages

Notifications

	 customer_id integer	 first_name character varying (45)	 last_name character varying (45)	 city character varying (50)	 country character varying (50)	 total_amount_paid numeric	
1	84	Sara	Perry	Atlixco	Mexico	128.7	
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	97.8	