

Achievement 3.7

1)

```
1 SELECT D.country,  
2     COUNT(customer_id) AS Customer_Count  
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 country  
8 ORDER BY Customer_Count DESC  
9 LIMIT 10
```

Data output Messages Notifications

	country character varying (50)	customer_count 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

We are trying to see which countries has the most customers, there fore we need to connect the tables from customer>address>city>country. The question want to know top ten of the countries so “GROUP BY” country and set the sorting “ORDER BY” Customer_count by descending order (“DESC”).

2)

```
1 SELECT C.city,  
2      D.country,  
3      COUNT(customer_id) AS Customer_Count  
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',  
9                  'Japan', 'Mexico', 'Brazil',  
10                 'Russian Federation', 'Philippines',  
11                 'Turkey', 'Indonesia')  
12 GROUP BY country, city  
13 ORDER BY Customer_Count DESC  
14 LIMIT 10
```

Data output Messages Notifications

	city character varying (50)	country character varying (50)	customer_count bigint
1	Aurora	United States	2
2	Acua	Mexico	1
3	Citrus Heights	United States	1
4	Iwaki	Japan	1
5	Ambattur	India	1
6	Shanwei	China	1
7	So Leopoldo	Brazil	1
8	Teboksary	Russian Federation	1
9	Tianjin	China	1
10	Cianjur	Indonesia	1

Total rows: 10 of 10 Query complete 00:00:00.060

Question #2 asks for the top ten cities customer count within the top ten countries from question #1. We need to sort the cities within the query from question #1. So we need to filter the ten countries by adding a “WHERE” country “IN” so we are only counting the cities in the top ten countries.

3)

```
1 SELECT B.customer_id, B.first_name, B.last_name, E.country, D.city,
2 SUM(amount) AS total_amount_paid
3 FROM payment A
4 INNER JOIN customer B ON A.customer_id = B.customer_id
5 INNER JOIN address C ON B.address_id = C.address_id
6 INNER JOIN city D ON C.city_id = D.city_id
7 INNER JOIN country E ON D.country_ID = E.country_ID
8 WHERE city IN ('Aurora', 'Acua', 'Citrus Heights',
9               'Iwaki', 'Ambattur', 'Shanwei',
10              'So Leopoldo', 'Teboksary',
11              'Tianjin', 'Cianjur')
12 GROUP BY country, city, B.customer_id
13 ORDER BY total_amount_paid DESC
14 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)	total_amount_paid numeric
1	225	Arlene	Harvey	India	Ambattur	111.76
2	424	Kyle	Spurlock	China	Shanwei	109.71
3	240	Marlene	Welch	Japan	Iwaki	106.77
4	486	Glen	Talbert	Mexico	Acua	100.77
5	537	Clinton	Buford	United States	Aurora	98.76

Total rows: 5 of 5 Query complete 00:00:00.058