Common Table Expressions

Query to find the average amount paid by the top 5 customers(using CTE)

WITH top_10_countries (country) AS

(SELECT

ctry.country

FROM customer cus

INNER JOIN address AS addr ON cus.address_id = addr.address_id

INNER JOIN city AS cty ON addr.city_id =cty.city_id

INNER JOIN country AS ctry ON cty.country_id = ctry.country_id

GROUP BY ctry.country

ORDER BY COUNT (cus.customer_id) DESC

LIMIT 10),

top_10_cities (city,country) AS

(SELECT cty.city,t_cou.country

FROM customer cus

INNER JOIN address AS addr ON cus.address_id = addr.address_id

INNER JOIN city AS cty ON addr.city_id = cty.city_id

INNER JOIN country AS ctry ON cty.country_id = ctry.country_id

RIGHT JOIN top_10_countries AS t_cou ON ctry.country = t_cou.country

GROUP BY cty.city,t_cou.country

ORDER BY COUNT (cus.customer_id) DESC

LIMIT 10),

```sql
top_5_customers (customer_id,country,total_amount_paid) AS

(

SELECT cus.customer_id,t_cit.country,

SUM (pay.amount) AS total_amount_paid

FROM customer cus

INNER JOIN payment AS pay ON cus.customer_id= pay.customer_id

INNER JOIN address AS addr ON cus.address_id = addr.address_id

INNER JOIN city AS cty ON addr.city_id = cty.city_id

RIGHT JOIN top_10_cities AS t_cit ON cty.city=t_cit.city

GROUP BY cus.customer_id,t_cit.country

ORDER BY total_amount_paid DESC

LIMIT 5

)

SELECT AVG (total_amount_paid) AS average_amount_paid

FROM top_5_customers;
```

```
1    WITH top_10_countries (country) AS
2    (SELECT
3    ctry.country
4    FROM customer cus
5    INNER JOIN address AS addr ON cus.address_id = addr.address_id
6    INNER JOIN city AS cty ON addr.city_id =cty.city_id
7    INNER JOIN country AS ctry ON cty.country_id = ctry.country_id
8    GROUP BY ctry.country
9    ORDER BY COUNT (cus.customer_id) DESC
10   LIMIT 10),
11
12   top_10_cities (city,country) AS
13   (SELECT cty.city,t_cou.country
```

Data Output   Messages   Notifications

SQL   Showing

	average_amount_paid numeric
1	107.3540000000000000

Query to find out how many of the top 5 customers you identified in step 1 are based within each country(Using CTE)

WITH top_10_countries (country) AS

(SELECT

ctry.country

FROM customer cus

INNER JOIN address AS addr ON cus.address_id = addr.address_id

INNER JOIN city AS cty ON addr.city_id =cty.city_id

INNER JOIN country AS ctry ON cty.country_id = ctry.country_id

GROUP BY ctry.country

ORDER BY COUNT (cus.customer_id) DESC

LIMIT 10),

top_10_cities (city,country) AS

```
(SELECT cty.city,t_cou.country

FROM customer cus

INNER JOIN address AS addr ON cus.address_id = addr.address_id

INNER JOIN city AS cty ON addr.city_id = cty.city_id

INNER JOIN country AS ctry ON cty.country_id = ctry.country_id

RIGHT JOIN top_10_countries AS t_cou ON ctry.country = t_cou.country

GROUP BY cty.city,t_cou.country

ORDER BY COUNT (cus.customer_id) DESC

LIMIT 10),


top_5_customers (customer_id,country,total_amount_paid) AS

(

SELECT cus.customer_id,t_cit.country,

SUM (pay.amount) AS total_amount_paid

FROM customer cus

INNER JOIN payment AS pay ON cus.customer_id= pay.customer_id

INNER JOIN address AS addr ON cus.address_id = addr.address_id

INNER JOIN city AS cty ON addr.city_id = cty.city_id

RIGHT JOIN top_10_cities AS t_cit ON cty.city=t_cit.city

GROUP BY cus.customer_id,t_cit.country

ORDER BY total_amount_paid DESC

LIMIT 5

)

SELECT ccount.country,

COUNT(DISTINCT c.customer_id) AS all_customer_count,

COUNT(DISTINCT top_5_customers.customer_id) AStop_customer_count
```

```sql
FROM customer AS c

INNER JOIN address AS ad ON c.address_id = ad.address_id

INNER JOIN city AS cit ON ad.city_id = cit.city_id

INNER JOIN country AS ccount ON cit.country_id = ccount.country_id

LEFT JOIN top_5_customers ON ccount.country= top_5_customers.country

GROUP BY ccount.country

ORDER BY all_customer_count DESC;
```

```sql
1    WITH top_10_countries (country) AS
2    (SELECT
3    ctry.country
4    FROM customer cus
5    INNER JOIN address AS addr ON cus.address_id = addr.address_id
6    INNER JOIN city AS cty ON addr.city_id =cty.city_id
7    INNER JOIN country AS ctry ON cty.country_id = ctry.country_id
8    GROUP BY ctry.country
9    ORDER BY COUNT (cus.customer_id) DESC
10   LIMIT 10),
11   |
12   top_10_cities (city,country) AS
13   (SELECT cty.city,t_cou.country
```

Data Output   Messages   Notifications

Showing rows: 1 t

country character varying (50)	all_customer_count bigint	astop_customer_count bigint
1 India	60	1
2 China	53	0
3 United States	36	1
4 Japan	31	0
5 Mexico	30	2
6 Brazil	28	0
7 Russian Federation	28	0
8 Philippines	20	0
9 Turkey	15	1
10 Indonesia	14	0