

Performing Subqueries

Find the average amount paid by the top 5 customers.

```
SELECT AVG (total_amount_paid) AS average_amount_paid
FROM
(SELECT customer.customer_id,
customer.first_name,
customer.last_name,
ctry.country,
cty.city,
SUM (pay.amount) AS total_amount_paid
FROM customer
INNER JOIN payment AS pay ON customer.customer_id= pay.customer_id
INNER JOIN address AS addr ON customer.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
WHERE ctry.country IN (
SELECT ctry.country
FROM customer AS 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)
AND cty.city IN (
SELECT cty.city
```

```
FROM customer AS 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
WHERE country IN ('India','China','United States','Japan', 'Mexico','Brazil',
'Russian Federation','Philippines','Turkey', 'Indonesia')
GROUP BY cty.city,
         ctry.country
ORDER BY COUNT (cus.customer_id) DESC
LIMIT 10)
GROUP BY customer.customer_id, customer.first_name,
customer.last_name,cty.city,ctry.country
ORDER BY total_amount_paid DESC
LIMIT 5) AS average;
```

Query Query History

```
1  SELECT AVG (total_amount_paid) AS average_amount_paid
2  FROM
3  (SELECT customer.customer_id,
4    customer.first_name,
5    customer.last_name,
6    ctry.country,
7    cty.city,
8    SUM (pay.amount) AS total_amount_paid
9  FROM customer
10 INNER JOIN payment AS pay ON customer.customer_id= pay.customer_id
11 INNER JOIN address AS addr ON customer.address_id = addr.address_id
12 INNER JOIN city AS cty ON addr.city_id = cty.city_id
13 INNER JOIN country AS ctry ON cty.country_id = ctry.country_id
14 WHERE ctry.country IN (
15   SELECT ctry.country
16   FROM customer AS cus
17   INNER JOIN address AS addr ON cus.address_id = addr.address_id
18   INNER JOIN city AS cty ON addr.city_id = cty.city_id
19   INNER JOIN country AS ctry ON cty.country_id = ctry.country_id
20   GROUP BY ctry.country
21   ORDER BY COUNT (cus.customer_id) DESC
22   LIMIT 10)
23 AND cty.city IN(
24   SELECT cty.city
```

Data Output Messages Notifications

	average_amount_paid	numeric	lock
1	107.35400000000000		

Showing rows: 1 to 1

Find out how many of the top 5 customers you identified in step 1 are based within each country

```
SELECT cnt1.country,
       COUNT(DISTINCT cust1.customer_id) AS all_customer_count,
       COUNT(DISTINCT top_5_customers.customer_id) AS top_customer_count
  FROM customer AS cust1
  INNER JOIN address AS addr1 ON cust1.address_id = addr1.address_id
  INNER JOIN city AS cty1 ON addr1.city_id = cty1.city_id
  INNER JOIN country AS cnt1 ON cty1.country_id = cnt1.country_id
  LEFT JOIN
  (SELECT customer.customer_id,
         customer.first_name,
         customer.last_name,
```

```
        ctry.country,  
        cty.city,  
        SUM (pay.amount) AS total_amount_paid  
    FROM customer  
    INNER JOIN payment AS pay ON customer.customer_id= pay.customer_id  
    INNER JOIN address AS addr ON customer.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  
    WHERE  
        ctry.country IN (  
            SELECT ctry.country  
            FROM customer AS 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)  
        AND cty.city IN (  
            SELECT cty.city  
            FROM customer AS 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  
            WHERE country IN ('India','China','United States','Japan', 'Mexico','Brazil',  
'Russian Federation','Philippines','Turkey', 'Indonesia')
```

```

GROUP BY cty.city,
        ctry.country
ORDER BY COUNT (cus.customer_id) DESC
LIMIT 10)

GROUP BY customer.customer_id, customer.first_name,
customer.last_name, cty.city, ctry.country
ORDER BY total_amount_paid DESC
LIMIT 5) AS top_5_customers ON top_5_customers.country = cnt1.country
GROUP BY cnt1.country
ORDER BY top_customer_count DESC, all_customer_count DESC;

```

Query History

```

1  SELECT cnt1.country,
2    COUNT(DISTINCT cust1.customer_id) AS all_customer_count,
3    COUNT(DISTINCT top_5_customers.customer_id) AS top_customer_count
4  FROM customer AS cust1
5    INNER JOIN address AS addr1 ON cust1.address_id = addr1.address_id
6    INNER JOIN city AS cty1 ON addr1.city_id = cty1.city_id
7    INNER JOIN country AS cnt1 ON cty1.country_id = cnt1.country_id
8    LEFT JOIN
9      (SELECT customer.customer_id,
10        customer.first_name,
11        customer.last_name,
12        ctry.country,
13        cty.city,
14        SUM(pay.amount) AS total_amount_paid
15      FROM customer
16        INNER JOIN payment AS pay ON customer.customer_id= pay.customer_id
17        INNER JOIN address AS addr ON customer.address_id = addr.address_id
18        INNER JOIN city AS cty ON addr.city_id = cty.city_id
19        INNER JOIN country AS ctry ON cty.country_id = ctry.country_id
20    WHERE

```

Data Output Messages Notifications

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SQL
Showing rows:

	country character varying (50)	all_customer_count bigint	top_customer_count bigint
1	Mexico	30	2
2	India	60	1
3	United States	36	1
4	Turkey	15	1