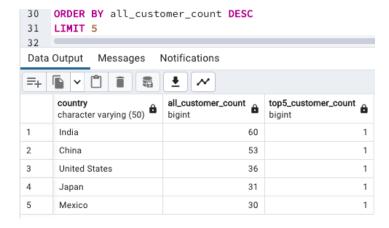
STEP 1

Find the average amount paid by the top 5 customers.

```
Query Query History
1
    SELECT AVG(total_amount_paid) AS average_amount_paid
 2
    FROM (SELECT SUM(A.amount) AS total_amount_paid,
                 B.customer_id,
 3
                 B.first_name,
 4
 5
                 B.last_name,
 6
                 D.city,
 7
                 E.country
 8
         FROM payment A
 9
         INNER JOIN customer B ON A.customer_id = B.customer_id
10
         INNER JOIN address C ON B.address_id = C.address_id
11
         INNER JOIN city D ON C.city_id = D.city_id
12
         INNER JOIN country E ON D.country_id = E.country_id
         WHERE city IN ('Aurora', 'Acua', 'Citrus Heights', 'Iwaki', 'Ambattur', 'Shanwei',
13
                    'So Leopoldo', 'Teboksary', 'Tianjin', 'Cianjur')
14
         GROUP BY B.customer_id,
15
16
                   first_name,
17
                   last_name,
18
                   city,
19
                   country
20
         ORDER BY total_amount_paid DESC
         LIMIT 5) AS total_amount_paid
21
Data Output Messages Notifications
    average_amount_paid
     numeric
     105.55400000000000000
```

STEP 2

Find out how many of the top 5 customers are based within each country.



Query Query History 1 **SELECT** E.country, 2 COUNT(DISTINCT B.customer_id) AS all_customer_count, 3 COUNT(DISTINCT top5_customer.customer_id) AS top5_customer_count 4 FROM country E 5 INNER JOIN city D ON E.country_id = D.country_id INNER JOIN address C ON D.city_id = C.city_id 7 INNER JOIN customer B ON C.address_id = B.address_id LEFT JOIN 8 9 (SELECT SUM(A.amount) AS total_amount_paid, 10 B.customer_id, 11 B.first_name, 12 B.last_name, 13 D.city, 14 E.country 15 FROM payment A 16 INNER JOIN customer B ON A.customer_id = B.customer_id INNER JOIN address C ON B.address_id = C.address_id 17 INNER JOIN city D ON C.city_id = D.city_id 18 19 INNER JOIN country E ON D.country_id = E.country_id 20 WHERE city IN ('Aurora', 'Acua', 'Citrus Heights', 'Iwaki', 'Ambattur', 'Shanwei', 'So Leopoldo', 'Teboksary', 'Tianjin', 'Cianjur') 21 22 GROUP BY B.customer_id, 23 first_name, 24 last_name, 25 city, 26 country 27 ORDER BY total_amount_paid DESC 28 LIMIT 5) AS top5_customer ON E.country=top5_customer.country 29 GROUP BY E.country 30 ORDER BY all_customer_count DESC

STEP 3

Do you think steps 1 and 2 could be done without using subqueries?

When do you think subqueries are useful?

• I am sure that the steps 1 and 2 could be completed without subqueries. However, that would mean that we would have to write separate queries and use the results to write queries for next step.

Nested subqueries allow us to pull the data that is used to determine the results in the main query. It helps us avoid writing endless lines of unnecessary code.