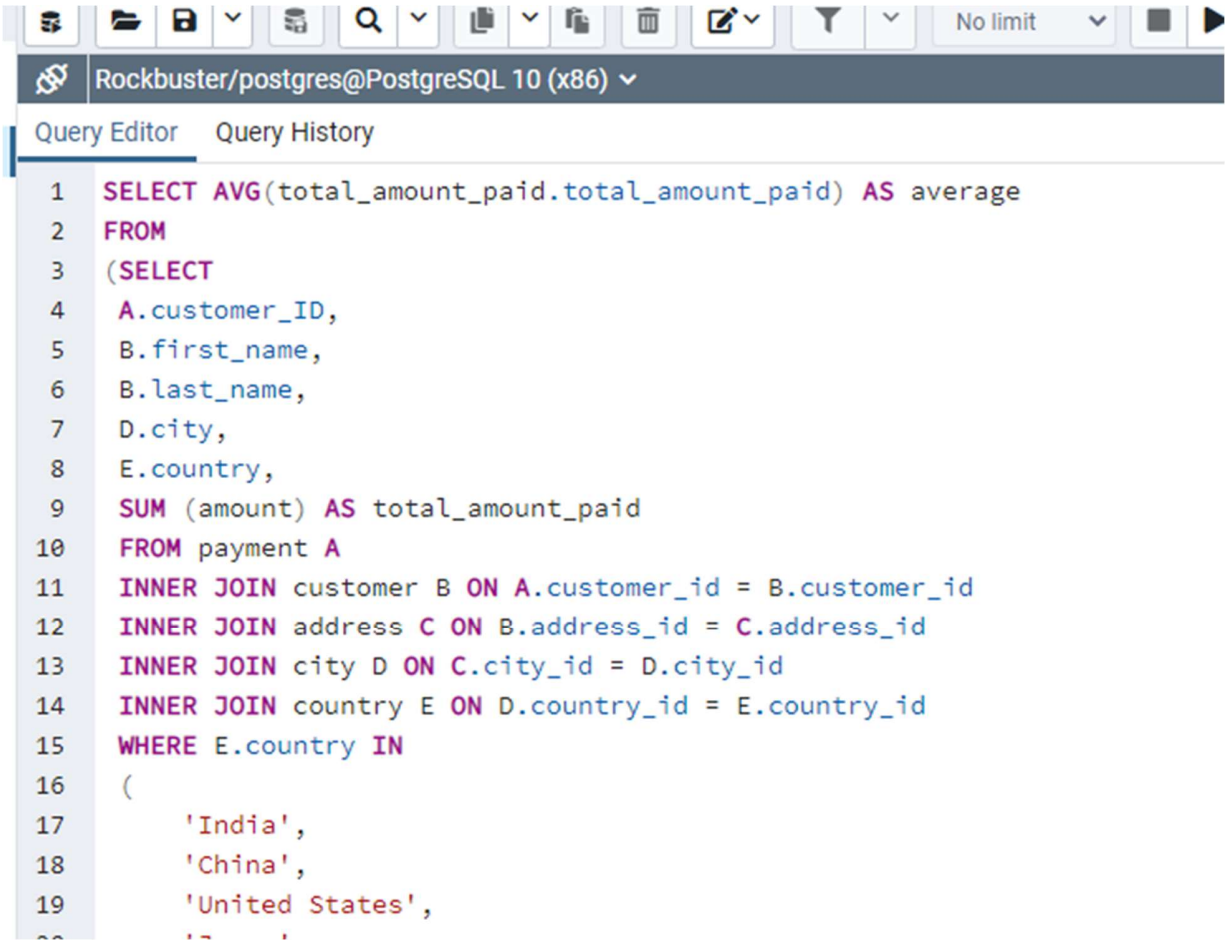
Performing Subqueries

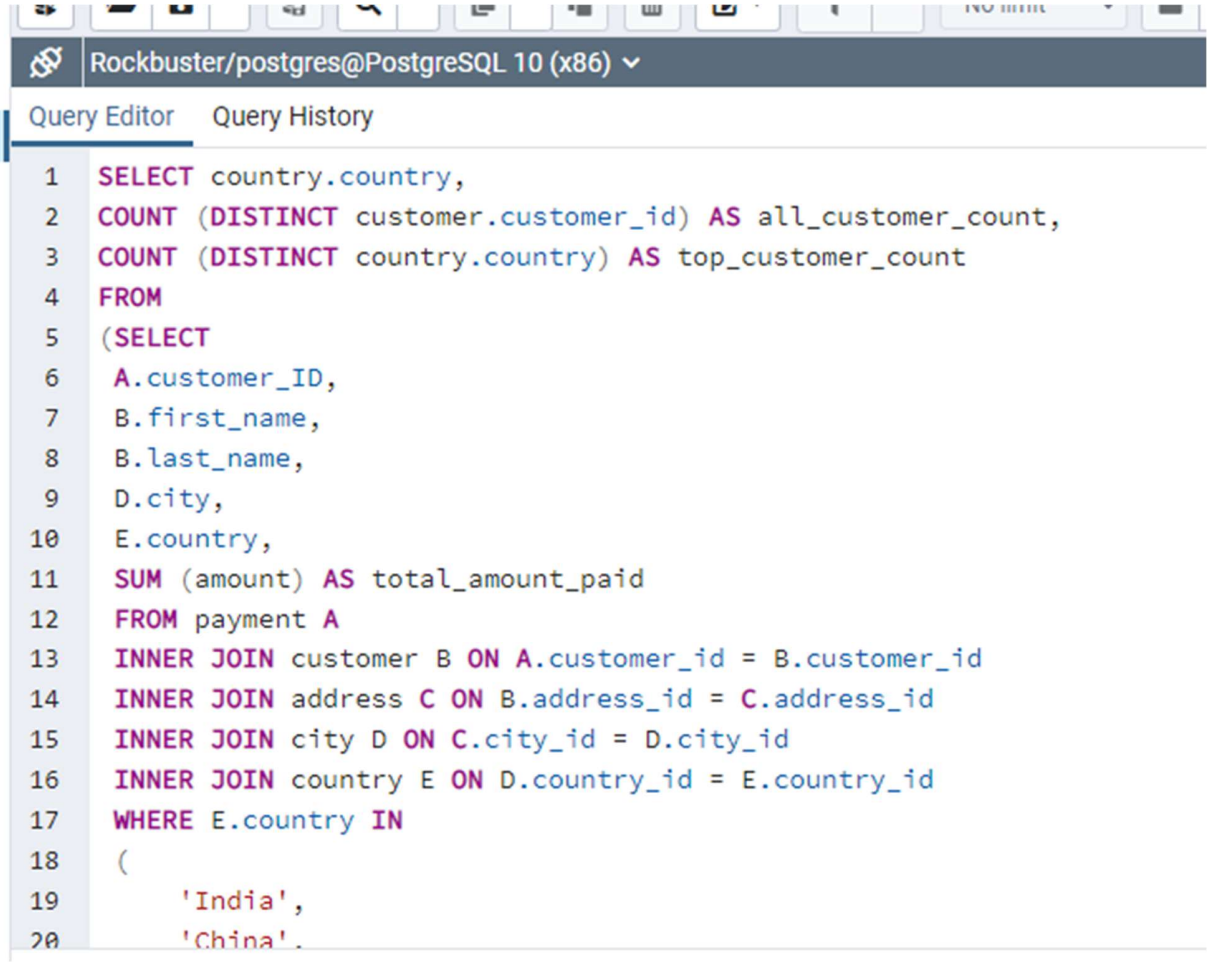



```
1  SELECT AVG(total_amount_paid.total_amount_paid) AS average
2  FROM
3  (SELECT
4   A.customer_ID,
5   B.first_name,
6   B.last_name,
7   D.city,
8   E.country,
9   SUM (amount) AS total_amount_paid
10  FROM payment A
11  INNER JOIN customer B ON A.customer_id = B.customer_id
12  INNER JOIN address C ON B.address_id = C.address_id
13  INNER JOIN city D ON C.city_id = D.city_id
14  INNER JOIN country E ON D.country_id = E.country_id
15  WHERE E.country IN
16  (
17      'India',
18      'China',
19      'United States',
```

```
20      'Japan',
21      'Mexico',
22      'Brazil',
23      'Russian Federation',
24      'Philippines',
25      'Turkey',
26      'Indonesia'
27      )
28  AND D.city in
29  (
30      'Aurora',
31      'Atlixco',
32      'Xintai',
33      'Adoni',
34      'Dhule (Dhulia)',
35      'Kurashiki',
36      'Pingxiang',
37      'Sivas',
38      'Celaya',
39      'So Leopoldo'
40  )
41  GROUP BY
42  A.customer_ID,
43  B.first_name,
44  B.last_name,
45  D.city,
46  E.country
47  ORDER BY total_amount_paid DESC
48  LIMIT 5) AS total_amount_paid
49
```

Data Output | Explain | Messages | Notifications

	average numeric
1	107.3540000000000000


Rockbuster/postgres@PostgreSQL 10 (x86)
Query Editor
Query History
SELECT country.country,
COUNT (DISTINCT customer.customer_id) AS all_customer_count,
COUNT (DISTINCT country.country) AS top_customer_count
FROM
(SELECT
A.customer_ID,
B.first_name,
B.last_name,
D.city,
E.country,
SUM (amount) AS total_amount_paid
FROM payment A
INNER JOIN customer B ON A.customer_id = B.customer_id
INNER JOIN address C ON B.address_id = C.address_id
INNER JOIN city D ON C.city_id = D.city_id
INNER JOIN country E ON D.country_id = E.country_id
WHERE E.country IN
(
'India',
'China',

```
    'China',
    'United States',
    'Japan',
    'Mexico',
    'Brazil',
    'Russian Federation',
    'Philippines',
    'Turkey',
    'Indonesia'
    )
AND D.city in
(
    'Aurora',
    'Atlixco',
    'Xintai',
    'Adoni',
    'Dhule (Dhulia)',
    'Kurashiki',
    'Pingxiang',
    'Sivas',
```

```
40      'Celaya',
41      'So Leopoldo'
42  )
43   GROUP BY
44   A.customer_ID,
45   B.first_name,
46   B.last_name,
47   D.city,
48   E.country
49   ORDER BY total_amount_paid DESC
50   LIMIT 5) AS top_5_customers
51   LEFT JOIN customer ON customer.customer_id = customer.customer_id
52   LEFT JOIN address ON customer.address_id = address.address_id
53   LEFT JOIN city ON address.city_id = city.city_id
54   LEFT JOIN country ON city.country_id = country.country_id
55   GROUP BY country.country
56   ORDER BY COUNT (country.country) DESC
57
```

Data Output | Explain | Messages | Notifications

	country character varying (50)	all_customer_count bigint	top_customer_count bigint
1	India	60	1
2	China	53	1
3	United States	36	1
4	Japan	31	1
5	Mexico	30	1

- Step can be done without a subquery function whilst with Step 2 we will need a subquery because we have to compare other tables.
- Subqueries are useful for comparing different tables.