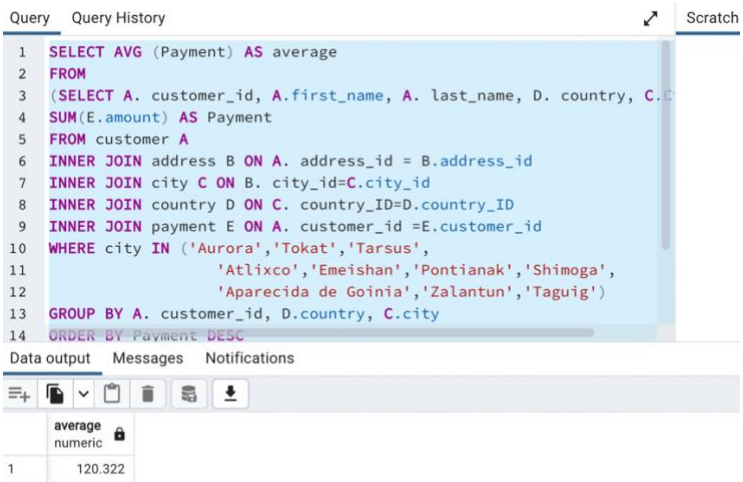
3.8 Answers- Subqueries

1.

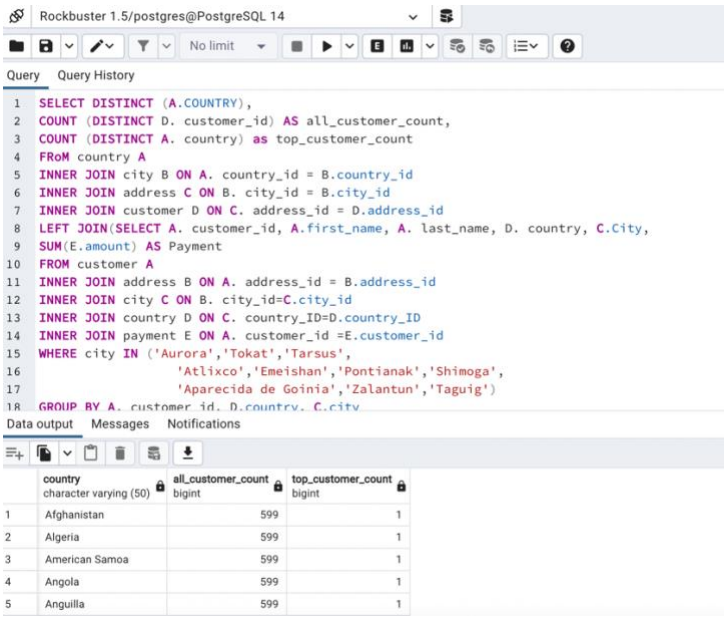
```
SELECT AVG (Payment) AS average
FROM
(SELECT A. customer_id, A.first_name, A. last_name, D. country, C.City,
SUM(E.amount) AS Payment
FROM customer A
INNER JOIN address B ON A. address_id = B.address_id
INNER JOIN city C ON B. city_id=C.city_id
INNER JOIN country D ON C. country_ID=D.country_ID
INNER JOIN payment E ON A. customer_id =E.customer_id
WHERE city IN ('Aurora','Tokat','Tarsus',
            'Atlixco','Emeishan','Pontianak','Shimoga',
            'Aparecida de Goinia','Zalantun','Taguig')
GROUP BY A. customer_id, D.country, C.city
ORDER BY Payment DESC
LIMIT 5) AS Total_amount_paid
```



2.

```
SELECT DISTINCT (A.COUNTRY),
COUNT (DISTINCT D. customer_id) AS all_customer_count,
COUNT (DISTINCT A. country) as top_customer_count
FROM country A
INNER JOIN city B ON A. country_id = B.country_id
INNER JOIN address C ON B. city_id = B.city_id
INNER JOIN customer D ON C. address_id = D.address_id
LEFT JOIN(SELECT A. customer_id, A.first_name, A. last_name, D. country, C.City,
SUM(E.amount) AS Payment
FROM customer A
```

```
INNER JOIN address B ON A. address_id = B.address_id
INNER JOIN city C ON B. city_id=C.city_id
INNER JOIN country D ON C. country_ID=D.country_ID
INNER JOIN payment E ON A. customer_id =E.customer_id
WHERE city IN ('Aurora','Tokat','Tarsus',
            'Atlixco','Emeishan','Pontianak','Shimoga',
            'Aparecida de Goinia','Zalantun','Taguig')
GROUP BY A. customer_id, D.country, C.city
ORDER BY Payment DESC
LIMIT 5) AS top_5_customers
ON A. country=top_5_customers.COUNTRY
GROUP BY A. country, top_5_customers
ORDER BY all_customer_count DESC
LIMIT 5
```




```
SELECT DISTINCT (A.COUNTRY),
COUNT (DISTINCT D. customer_id) AS all_customer_count,
COUNT (DISTINCT A. country) as top_customer_count
FRoM country A
INNER JOIN city B ON A. country_id = B.country_id
INNER JOIN address C ON B. city_id = B.city_id
INNER JOIN customer D ON C. address_id = D.address_id
LEFT JOIN(SELECT A. customer_id, A.first_name, A. last_name, D. country, C.City,
SUM(E.amount) AS Payment
FROM customer A
INNER JOIN address B ON A. address_id = B.address_id
INNER JOIN city C ON B. city_id=C.city_id
INNER JOIN country D ON C. country_ID=D.country_ID
INNER JOIN payment E ON A. customer_id =E.customer_id
WHERE city IN ('Aurora','Tokat','Tarsus',
            'Atlixco','Emeishan','Pontianak','Shimoga',
            'Aparecida de Goinia','Zalantun','Taguig')
GROUP BY A. customer_id, D.country, C.city
ORDER BY Payment DESC
LIMIT 5) AS top_5_customers
```

```
ON A. country=top_5_customers.COUNTRY
GROUP BY A. country, top_5_customers
ORDER BY all_customer_count DESC
LIMIT 5
```

3 For query number 1, this could've been made without subqueries and using HAVE clause and aggregated functions instead, but Query number 2 needed a subquery, because this was pulling from different data tables. Subqueries are useful when there is data that is constantly changing and instead of writing the query or pulling information that is obsolete, then this