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Exercise 3.8

Question 1:

SELECT AVG(total\_amount\_paid)

FROM

(SELECT A.customer\_id,

A.first\_name,

A.last\_name,

C.city,

D.country,

Sum(E.amount) AS total amount paid

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 C.city IN ('Aurora', 'So Leopoldo', 'Tianjin', 'Shanwei', 'Citrus Heights',

'Teboksary', 'Iwaki', 'Ambattur', 'Cianjur', 'Acua')

GROUP BY A.customer\_id,

A.first\_name,

A.last\_name,

C.city,

D.country

ORDER BY total amount paid DESC

LIMIT 5) AS average



## Question 2:

**SELECT** 

D.country,

COUNT(DISTINCT A.customer\_id) AS all\_customer\_count,

COUNT('top 5 customers') AS top customer count

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

**LEFT JOIN** 

(SELECT A.customer\_id,

A.first\_name,

A.last name,

C.city,

D.country,

Sum(E.amount) AS total\_amount\_paid

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

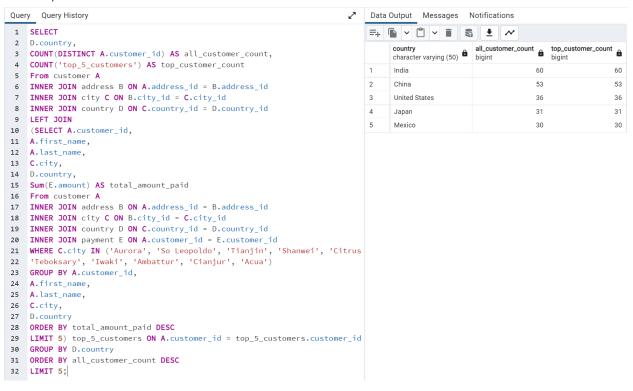
WHERE C.city IN ('Aurora', 'So Leopoldo', 'Tianjin', 'Shanwei', 'Citrus Heights',

'Teboksary', 'Iwaki', 'Ambattur', 'Cianjur', 'Acua')

GROUP BY A.customer id,

A.first name,

A.last\_name,
C.city,
D.country
ORDER BY total\_amount\_paid DESC
LIMIT 5) top\_5\_customers ON A.customer\_id = top\_5\_customers.customer\_id
GROUP BY D.country
ORDER BY all\_customer\_count DESC
LIMIT 5;



## Question 3:

We could've gotten the same results without using subqueries. Although we would've already had to have known which cities are the top five in order to do so. Without this information though we would definitely need to use the subqueries to get our results.