- [x] Use the test environment below to find the number of events that occur for each day for each channel.
- [x] Quiz 1
- [x] Now create a subquery that simply provides all of the data from your first query.
- [x] Quiz 2
- [x] Now find the average number of events for each channel. Since you broke out by day earlier, this is giving you an average per day.
- [x] Quiz 3

Input HISTORY MENU

SCHEMA

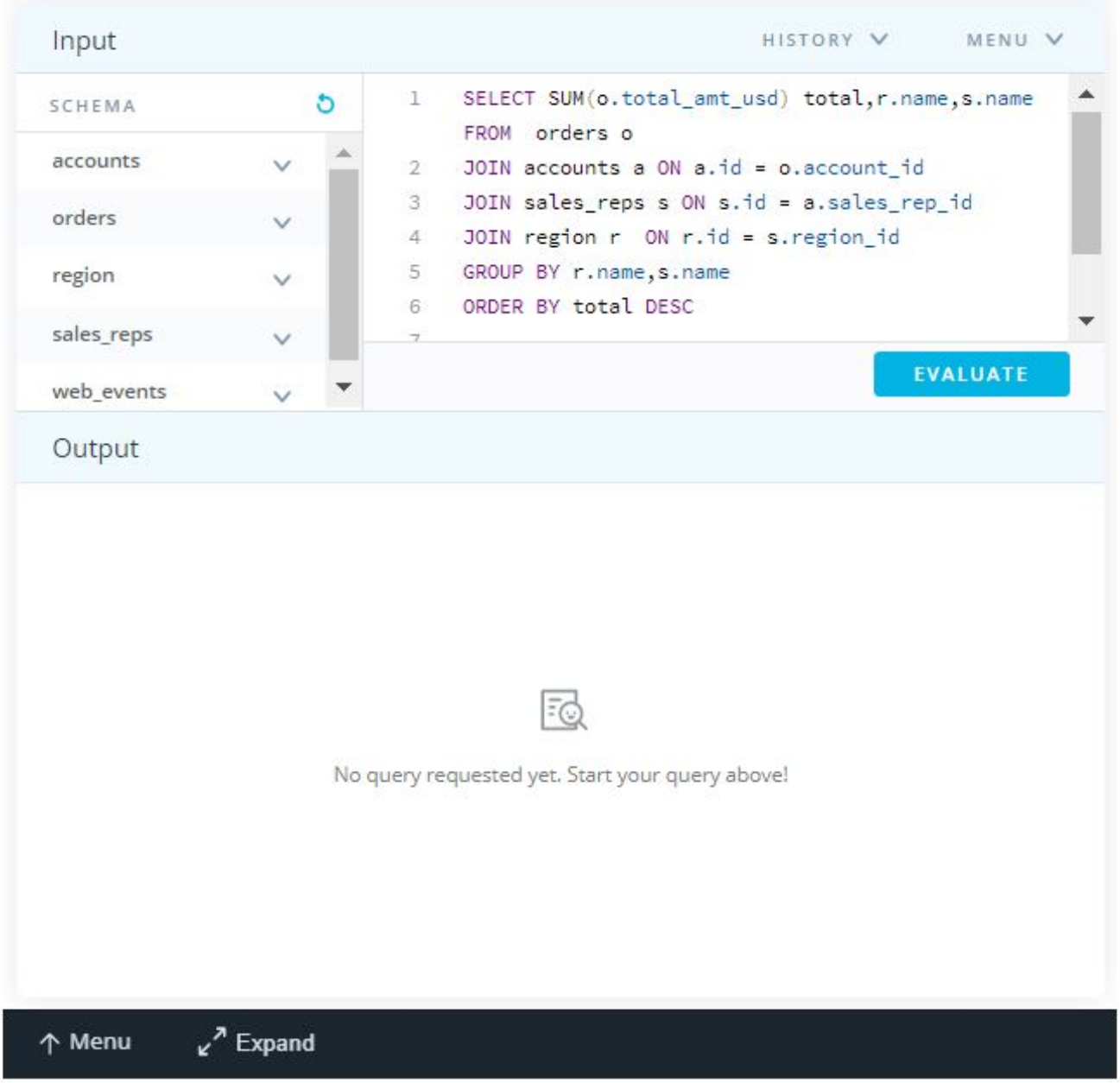
- accounts
- orders
- region
- sales_reps
- web_events

```
1  SELECT AVG(events),channel
2  FROM
3      (SELECT channel,DATE_TRUNC('day',occurred_at)
         as day,count(*) events
4      FROM web_events
5      GROUP BY channel,day
6      ORDER BY events DESC) tex
7  GROUP BY channel
```

Success! EVALUATE

Output 6 results

avg	channel
1.5701906412478336	adwords
1.6672504378283713	organic
1.3166666666666667	twitter
4.8964879852125693	direct



↑ Menu Expand

More Subqueries Quizzes

Above is the ERD for the database again - it might come in handy as you tackle the quizzes below. You should write your solution as a subquery or subqueries, not by finding one solution and copying the output. The importance of this is that it allows your query to be dynamic in answering the question - even if the data changes, you still arrive at the right answer.

1. Provide the **name** of the **sales_rep** in each **region** with the largest amount of **total_amt_usd** sales.

Provide the name of the sales_rep in each region with the largest amount of total_amt_usd sales.

```
SELECT t2.max_tot,t2.max_reg,t3.sale
FROM
 (SELECT MAX(t1.total_amount) max_tot,t1.region        max_reg
        FROM
      (SELECT SUM(o.total_amt_usd)  total_amount, s.name sale, r.name region
        FROM orders o
              JOIN accounts a ON a.id = o.account_id
              JOIN sales_reps s ON s.id = a.sales_rep_id
              JOIN region r ON r.id = s.region_id
              GROUP BY 2,3) t1
        GROUP BY 2) t2
JOIN
   (SELECT SUM(o.total_amt_usd) total_amount, s.name sale, r.name region
        FROM orders o
         JOIN accounts a ON a.id = o.account_id
        JOIN sales_reps s ON s.id = a.sales_rep_id
         JOIN region r ON r.id = s.region_id
         GROUP BY 2,3) t3
ON t3.region = t2.max_reg AND  t3.total_amount = t2.max_tot
```

For the region with the largest (sum) of sales total_amt_usd, how many total (count) orders were placed?

```
SELECT COUNT(o.total), r.name
        FROM region r
  JOIN sales_reps s ON s.region_id = r.id
  JOIN accounts a ON a.sales_rep_id = s.id
  JOIN orders o ON o.account_id = a.id
        GROUP BY r.name
HAVING SUM(o.total_amt_usd) =
   (SELECT MAX(t1.total_amount)
      FROM
        (SELECT SUM(o.total_amt_usd)
       total_amount,r.name region
         FROM orders o
         JOIN accounts a ON a.id = o.account_id
         JOIN sales_reps s ON s.id = a.sales_rep_id
         JOIN region r ON r.id = s.region_id
         GROUP BY 2) t1)
```

How many accounts had more total purchases than the account name which has bought the most standard_qty paper throughout their lifetime as a customer?

```
SELECT COUNT(*) FROM
(SELECT SUM(total),a.name FROM region r
    JOIN sales_reps s ON s.region_id = r.id
    JOIN accounts a ON a.sales_rep_id = s.id
    JOIN orders o ON o.account_id = a.id
    GROUP BY a.name
    HAVING SUM(total) >
        (SELECT MAX(sum_std) max_std FROM
   (SELECT a.name acc_name, SUM(standard_qty) sum_std
    FROM region r
    JOIN sales_reps s ON s.region_id = r.id
    JOIN accounts a ON a.sales_rep_id = s.id
    JOIN orders o ON o.account_id = a.id
                GROUP BY a.name)t1))t2
```

What is the lifetime average amount spent in terms of total_amt_usd for the top 10 total spending accounts?

```
SELECT AVG(tot_spent)
FROM (SELECT a.id, a.name, SUM(o.total_amt_usd) tot_spent
    FROM orders o
    JOIN accounts a
    ON a.id = o.account_id
    GROUP BY a.id, a.name
    ORDER BY 3 DESC
     LIMIT 10) temp;
```

For the customer that spent the most (in total over their lifetime as a customer) total_amt_usd, how many web_events did they have for each channel?

```
SELECT a.name, w.channel, COUNT(*)
FROM accounts a
JOIN web_events w
ON a.id = w.account_id AND a.id =  (SELECT id
                  FROM (SELECT a.id, a.name, SUM(o.total_amt_usd) tot_spent
                      FROM orders o
                      JOIN accounts a
                      ON a.id = o.account_id
                      GROUP BY a.id, a.name
                      ORDER BY 3 DESC
                      LIMIT 1) inner_table)
GROUP BY 1, 2
ORDER BY 3 DESC;
```

What is the lifetime average amount spent in terms of total_amt_usd, including only the companies that spent more per order, on average, than the average of all orders

```
SELECT AVG(avg_com) FROM

(SELECT AVG(total_amt_usd) avg_com,a.name,a.id FROM accounts a JOIN orders o ON o.account_id =
a.id

GROUP BY 2,3

HAVING AVG(total_amt_usd) > (SELECT AVG(total_amt_usd) FROM orders))t1
```

WITH STATEMANT

Provide the name of the sales_rep in each region with the largest amount of total_amt_usd sales.

```
WITH
        t1 AS (SELECT SUM(o.total_amt_usd) total_amt,r.name reg,s.name sale FROM region r
   JOIN sales_reps s ON s.region_id = r.id
   JOIN accounts a ON a.sales_rep_id = s.id
   JOIN orders o ON o.account_id = a.id
   GROUP BY 2,3),

        t3 AS (SELECT SUM(o.total_amt_usd) total_amt,r.name reg,s.name sale FROM region r
    JOIN sales_reps s ON s.region_id = r.id
    JOIN accounts a ON a.sales_rep_id = s.id
    JOIN orders o ON o.account_id = a.id
    GROUP BY 2,3)

SELECT t2.max_amt,t3.reg,t3.sale FROM
(SELECT MAX(total_amt) max_amt,reg
 FROM t1
 GROUP BY 2)t2
JOIN t3
 ON t2.max_amt=t3.total_amt and t2.reg = t3.reg
```

For the region with the largest sales total_amt_usd, how many total orders were placed?

```
WITH t2 AS (SELECT r.name reg_name,SUM(o.total_amt_usd) sum_tot FROM region r
JOIN sales_reps s ON s.region_id = r.id
JOIN accounts a ON a.sales_rep_id = s.id
JOIN orders o ON o.account_id = a.id
GROUP BY reg_name
ORDER BY sum_tot DESC
LIMIT 1)

SELECT r.name reg_name,SUM(o.total_amt_usd) sum_tot,count(*) FROM region r
JOIN sales_reps s ON s.region_id = r.id
JOIN accounts a ON a.sales_rep_id = s.id
JOIN orders o ON o.account_id = a.id
GROUP BY reg_name
HAVING SUM(o.total_amt_usd) = (SELECT sum_tot FROM t2)
```

For the customer that spent the most (in total over their lifetime as a customer) total_amt_usd, how many web_events did they have for each channel?

```
WITH t1 AS (SELECT a.name acc_name,a.id acc_id, SUM(o.total_amt_usd) SUM_tot FROM accounts a

JOIN orders o ON o.account_id = a.id

GROUP BY 1,2

ORDER BY 3 DESC

LIMIT 1)


SELECT COUNT(*), w.channel web_cha FROM web_events w

JOIN accounts a ON a.id = w.account_id

and a.id = (SELECT t1.acc_id FROM t1)

GROUP BY w.channel
```

What is the lifetime average amount spent in terms of total_amt_usd for the top 10 total spending accounts?

```
WITH t1 AS (SELECT a.id acc_id,a.name acc_name, SUM(o.total_amt_usd) sum_tot FROM accounts a

JOIN orders o ON o.account_id = a.id

GROUP BY 1,2

ORDER BY 3 DESC

LIMIT 10)


SELECT AVG(sum_tot) FROM t1
```

What is the lifetime average amount spent in terms of total_amt_usd, including only the companies that spent more per order, on average, than the average of all orders.

```
WITH t1 AS (
  SELECT AVG(o.total_amt_usd) avg_all
  FROM orders o
  JOIN accounts a
  ON a.id = o.account_id),
t2 AS (
  SELECT o.account_id, AVG(o.total_amt_usd) avg_amt
  FROM orders o
  GROUP BY 1
  HAVING AVG(o.total_amt_usd) > (SELECT * FROM t1))
SELECT AVG(avg_amt)
FROM t2;
```