Diagram

Description automatically generated

### 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.

SELECT

sub3.sales\_rep,

sub3.region,

sub2.total\_sales

FROM

(SELECT

region,

MAX(total\_sales) total\_sales

FROM

(SELECT

s.name sales\_rep,

r.name region,

SUM(o.total\_amt\_usd) total\_sales

FROM region r

JOIN sales\_reps s

ON s.region\_id=r.id

JOIN accounts a

ON s.id=a.sales\_rep\_id

JOIN orders o

ON a.id=o.account\_id

GROUP BY 1,2

ORDER BY 3 DESC

) sub1

GROUP BY 1) sub2

JOIN

(SELECT

s.name sales\_rep,

r.name region,

SUM(o.total\_amt\_usd) total\_sales

FROM region r

JOIN sales\_reps s

ON s.region\_id=r.id

JOIN accounts a

ON s.id=a.sales\_rep\_id

JOIN orders o

ON a.id=o.account\_id

GROUP BY 1,2

ORDER BY 3 DESC) sub3

ON sub2.region=sub3.region

AND sub2.total\_sales=sub3.total\_sales

1. For the region with the largest (sum) of sales **total\_amt\_usd**, how many **total** (count) orders were placed?

SELECT

r.name region,

COUNT(\*) num\_orders

FROM orders o

JOIN accounts a

ON o.account\_id=a.id

JOIN sales\_reps s

ON s.id=a.sales\_rep\_id

JOIN region r

ON r.id=s.region\_id

GROUP BY 1

HAVING SUM(o.total\_amt\_usd)=

(SELECT

MAX(total\_sales)

FROM

(SELECT

r.name region,

SUM(o.total\_amt\_usd) total\_sales

FROM region r

JOIN sales\_reps s

ON r.id=s.region\_id

JOIN accounts a

ON s.id=a.sales\_rep\_id

JOIN orders o

ON o.account\_id=a.id

GROUP BY r.name

) s1)

1. **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 a.name accounts

FROM orders o

JOIN accounts a

ON a.id=o.account\_id

GROUP BY 1

HAVING SUM(o.total)>

(SELECT

most\_total

FROM

(SELECT

a.name account,

SUM(o.standard\_qty) most\_standard,

SUM(o.total) most\_total

FROM orders o

JOIN accounts a

ON a.id=o.account\_id

GROUP BY 1

ORDER BY 2 DESC

LIMIT 1) sub1 )

) sub2

1. 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 account,

w.channel channel,

COUNT(\*) num\_web\_events

FROM web\_events w

JOIN accounts a

ON w.account\_id=a.id

GROUP BY 1,2

HAVING a.name=

(SELECT account

FROM

(select

a.name account,

SUM(o.total\_amt\_usd) total\_spent

FROM orders o

JOIN accounts a

ON a.id=o.account\_id

GROUP BY 1

ORDER BY 2 DESC

LIMIT 1

) s1)

ORDER BY 3 DESC;

1. What is the lifetime average amount spent in terms of **total\_amt\_usd** for the top 10 total spending **accounts**?

SELECT

AVG(total\_spent) avg\_lifetime\_spend

FROM

(SELECT

a.name account,

SUM(o.total\_amt\_usd) total\_spent

FROM orders o

JOIN accounts a

ON a.id=o.account\_id

GROUP BY 1

ORDER BY 2 DESC

LIMIT 10

) s1;

1. 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(total\_spent)

FROM

(SELECT

a.name accounts,

AVG(o.total\_amt\_usd) total\_spent

FROM orders o

JOIN accounts a

ON a.id=o.account\_id

GROUP BY 1

HAVING

AVG(o.total\_amt\_usd)>

(SELECT

AVG(o.total\_amt\_usd) total\_spent

FROM orders o)) s1 ;