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Which product lines dominate overall sales?

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SELECT p.product\_line,

SUM(s.sales\_amount) AS total\_revenue,

ROUND(100.0 \* SUM(s.sales\_amount) / SUM(SUM(s.sales\_amount)) OVER(), 2)

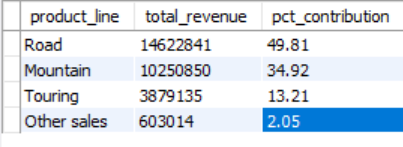
AS pct\_contribution

FROM sales s

JOIN products p ON s.product\_key = p.product\_key

GROUP BY p.product\_line

ORDER BY total\_revenue DESC;



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What is the revenue generated by each product?

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WITH ranked\_products AS (

SELECT p.product\_name,

SUM(s.sales\_amount) AS total\_revenue,

RANK() OVER(ORDER BY SUM(s.sales\_amount) DESC) AS rank\_order,

SUM(SUM(s.sales\_amount)) OVER() AS grand\_total

FROM sales s

JOIN products p ON s.product\_key = p.product\_key

GROUP BY p.product\_name

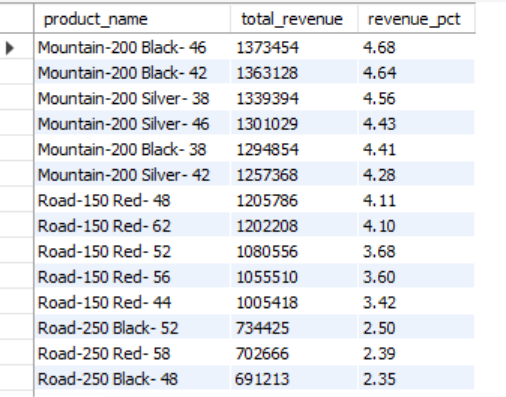
)

SELECT product\_name,

total\_revenue,

ROUND(100 \* total\_revenue / grand\_total, 2) AS revenue\_pct

FROM ranked\_products



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Are high-volume products always high-revenue?

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SELECT p.product\_name, SUM(s.quantity) AS total\_units,

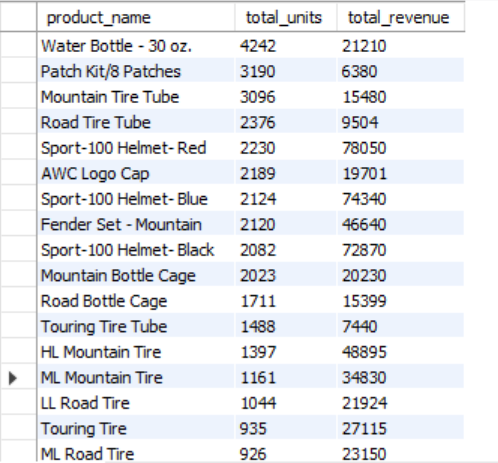
SUM(s.sales\_amount) AS total\_revenue

FROM sales s

JOIN products p ON s.product\_key = p.product\_key

GROUP BY p.product\_name

ORDER BY total\_units DESC;



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Product subcategories with highest average profit margins

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select

p.subcategory,

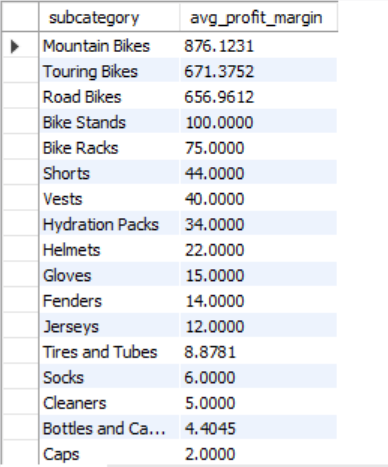
avg(s.sales\_price - p.cost) as avg\_profit\_margin

from sales s

join products p on s.product\_key = p.product\_key

group by p.subcategory

order by avg\_profit\_margin desc;



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How much are sales growing each year?

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WITH yearly\_sales AS (

SELECT YEAR(order\_date) AS year, SUM(sales\_amount) AS total\_sales

FROM sales

GROUP BY YEAR(order\_date)

)

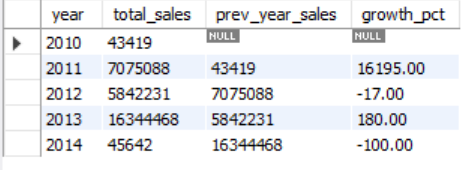
SELECT year, total\_sales,

LAG(total\_sales) OVER(ORDER BY year) AS prev\_year\_sales,

ROUND((total\_sales - LAG(total\_sales) OVER(ORDER BY year)) /

NULLIF(LAG(total\_sales) OVER(ORDER BY year),0), 2) \*100 AS growth\_pct

FROM yearly\_sales;



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Segmenting customers based on Recency, Frequency and Monetary

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SELECT c.customer\_id,

concat(c.first\_name, ' ', c.last\_name) as name,

DATEDIFF(CURDATE(), MAX(s.order\_date)) AS recency,

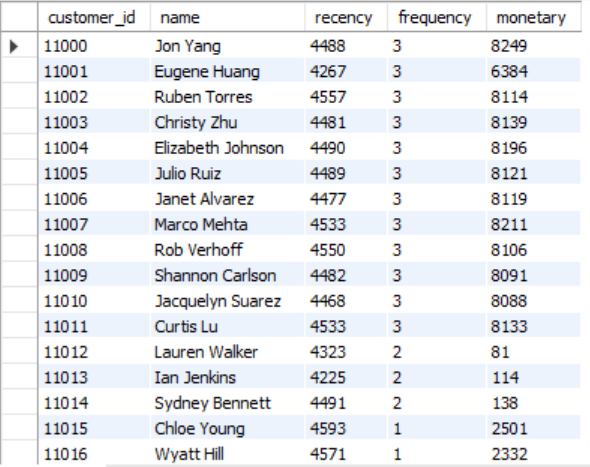
COUNT(DISTINCT s.order\_number) AS frequency,

SUM(s.sales\_amount) AS monetary

FROM sales s

JOIN customers c ON s.customer\_key = c.customer\_key

GROUP BY c.customer\_id, concat(c.first\_name, ' ', c.last\_name)



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Which customers haven’t purchased recently?

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SELECT c.customer\_id, c.first\_name, c.last\_name,

MAX(s.order\_date) AS last\_order,

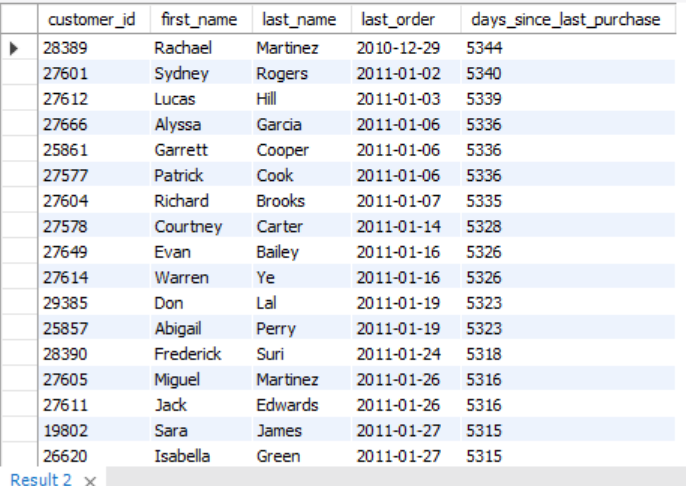
DATEDIFF(CURDATE(), MAX(s.order\_date)) AS days\_since\_last\_purchase

FROM customers c

JOIN sales s ON c.customer\_key = s.customer\_key

GROUP BY c.customer\_id, c.first\_name, c.last\_name

ORDER BY days\_since\_last\_purchase DESC;



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Which categories are most often delayed?

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SELECT p.category,

ROUND(AVG(DATEDIFF(s.shipping\_date, s.due\_date)), 2) AS avg\_delay\_days

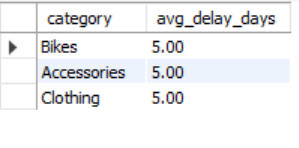
FROM sales s

JOIN products p ON s.product\_key = p.product\_key

WHERE s.shipping\_date > s.due\_date

GROUP BY p.category

ORDER BY avg\_delay\_days DESC;



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Top 10 customers by total revenue with country and gender info

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select

c.customer\_key,

c.first\_name,

c.last\_name,

c.country,

c.gender,

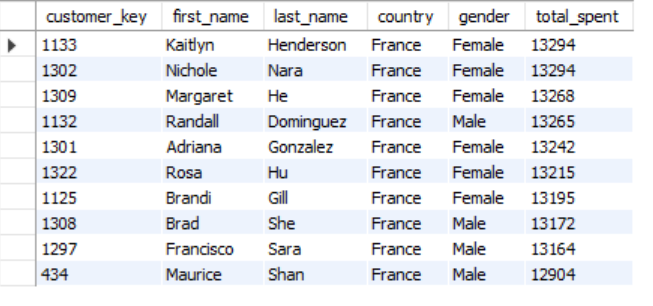
sum(s.sales\_amount) as total\_spent

from sales s

join customers c on s.customer\_key = c.customer\_key

group by c.customer\_key, c.first\_name, c.last\_name, c.country, c.gender

order by total\_spent desc limit 10;



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Which geographies are most profitable?

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SELECT c.country,

SUM(s.sales\_amount - (p.cost \* s.quantity)) AS total\_profit

FROM sales s

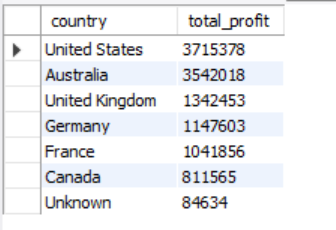
JOIN products p ON s.product\_key = p.product\_key

JOIN customers c ON s.customer\_key = c.customer\_key

GROUP BY c.country

ORDER BY total\_profit DESC;

LIMIT 10;



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Customer purchasing patterns by age group and marital status

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with customer\_age as (

select

customer\_key,

floor(datediff(current\_date, birth\_date) / 365) as age,

marital\_status

from customers

),

age\_groups as (

select

customer\_key,

marital\_status,

case

when age < 25 then 'Under 25'

when age between 25 and 40 then '25-40'

when age between 41 and 60 then '41-60'

else '60+'

end as age\_group

from customer\_age

),

sales\_by\_group as (

select

ag.age\_group,

ag.marital\_status,

sum(s.sales\_amount) as total\_sales,

count(distinct s.customer\_key) as customer\_count

from sales s

join age\_groups ag on s.customer\_key = ag.customer\_key

group by ag.age\_group, ag.marital\_status

)

select \* from sales\_by\_group

order by total\_sales desc;

