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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)

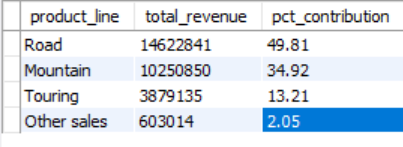
AS pct\_contribution

FROM sales s

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

GROUP BY p.product\_line

ORDER BY total\_revenue DESC;



Insights:

Road Product line generates the most revenue in all years.

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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

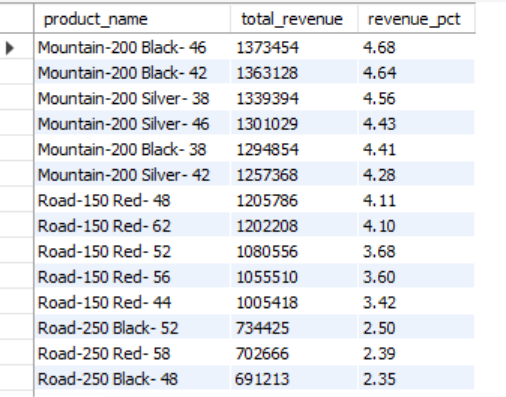
)

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,

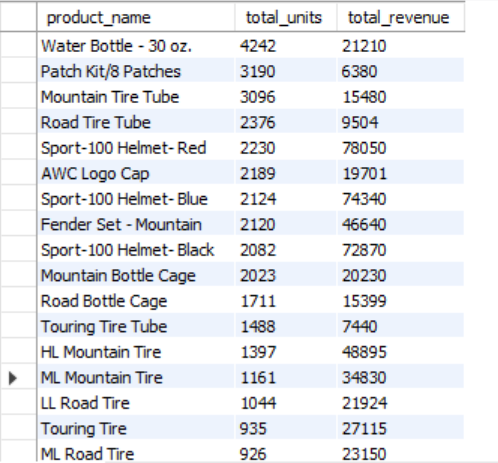
SUM(s.sales\_amount) AS total\_revenue

FROM sales s

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

GROUP BY p.product\_name

ORDER BY total\_units DESC;



Insights:

No, high-volume products does not always generate high-revenue.

Total units of HL Mountain Tire were 1397 but still generated highest revenue.

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Product subcategories with highest average profit margins

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select

p.subcategory,

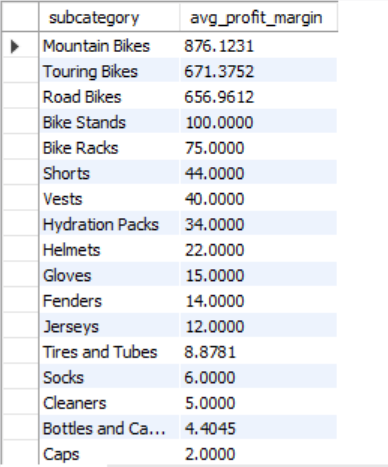
avg(s.sales\_price - p.cost) as avg\_profit\_margin

from sales s

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

group by p.subcategory

order by avg\_profit\_margin desc;



Insights:

Mountain Bikes have the maximum average profit margin whereas Caps have the lowest.

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How much are sales growing each year?

--------------------------------------------------------------------------------------------------------------------------

WITH yearly\_sales AS (

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

FROM sales

GROUP BY YEAR(order\_date)

)

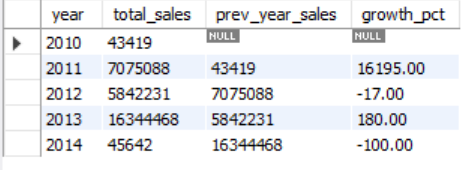
SELECT year, total\_sales,

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;



Insights:

The company’s year-on-year growth shows no clear upward trend.

Specifically, the growth rate declined in 2012, rebounded in 2013, and then dropped again in 2014.

This indicates that the business has been experiencing fluctuations rather than consistent growth.

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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,

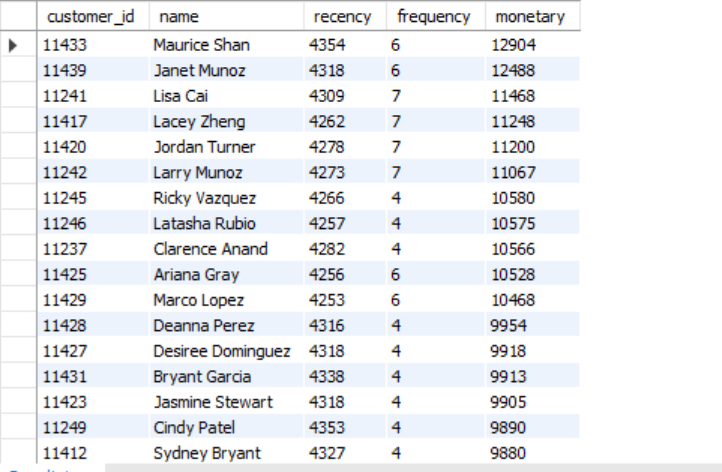
COUNT(DISTINCT s.order\_number) AS frequency,

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,

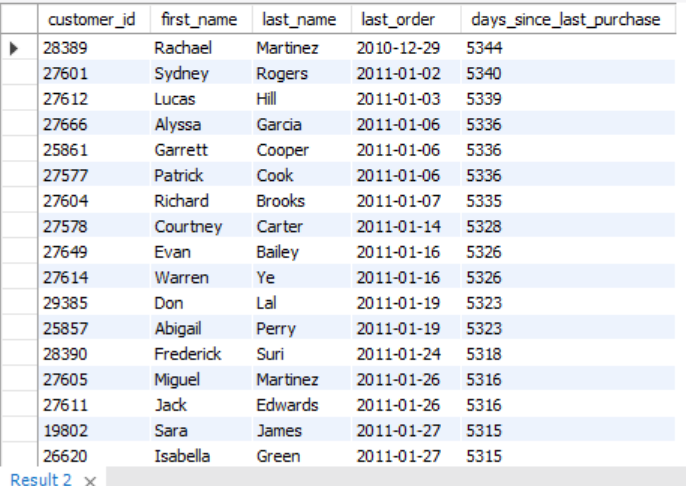
DATEDIFF(CURDATE(), MAX(s.order\_date)) AS days\_since\_last\_purchase

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

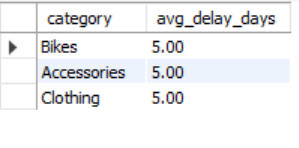
FROM sales s

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;



Insights:

Analysis shows that all product categories experience the same average delivery delay.

This suggests that the delay is not category-specific, but rather a systemic issue in the supply chain or logistics process.

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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,

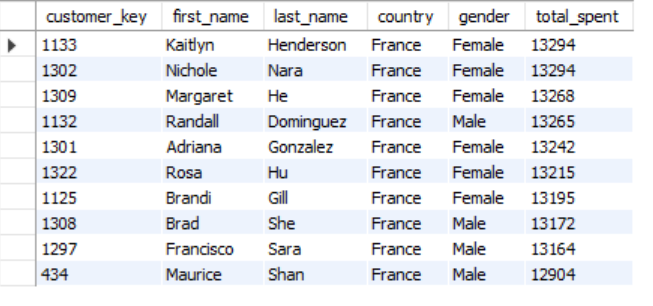
sum(s.sales\_amount) as total\_spent

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;



Insights:

Among all regions, France hosts the top 10 highest-spending customers.

This indicates that the French market contributes disproportionately to revenue compared to other regions.

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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

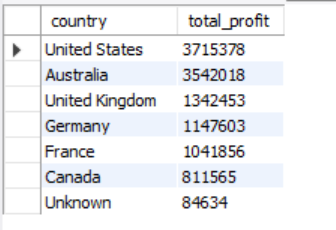
JOIN products p ON s.product\_key = p.product\_key

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

GROUP BY c.country

ORDER BY total\_profit DESC;

LIMIT 10;



Insights:

United States emerges as the most profitable market, contributing the highest share to overall profit, whereas Canada is the least profitable market.

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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

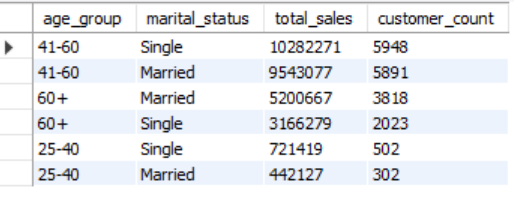
join age\_groups ag on s.customer\_key = ag.customer\_key

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

)

select \* from sales\_by\_group

order by total\_sales desc;



Insights:

The core customer base consists of single individuals aged 41–60, making up the majority of our sales.

In contrast, younger customers form a significantly smaller segment of our customer base.