**Time\_Series\_Analysis\_Retailstore**

(SQL Project)

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Dataset: [Retail](https://drive.google.com/file/d/1QZeGUAlv79_nQ1UVTdmkYydfsZ8ZyJ20/view?usp=sharing) Store Dataset

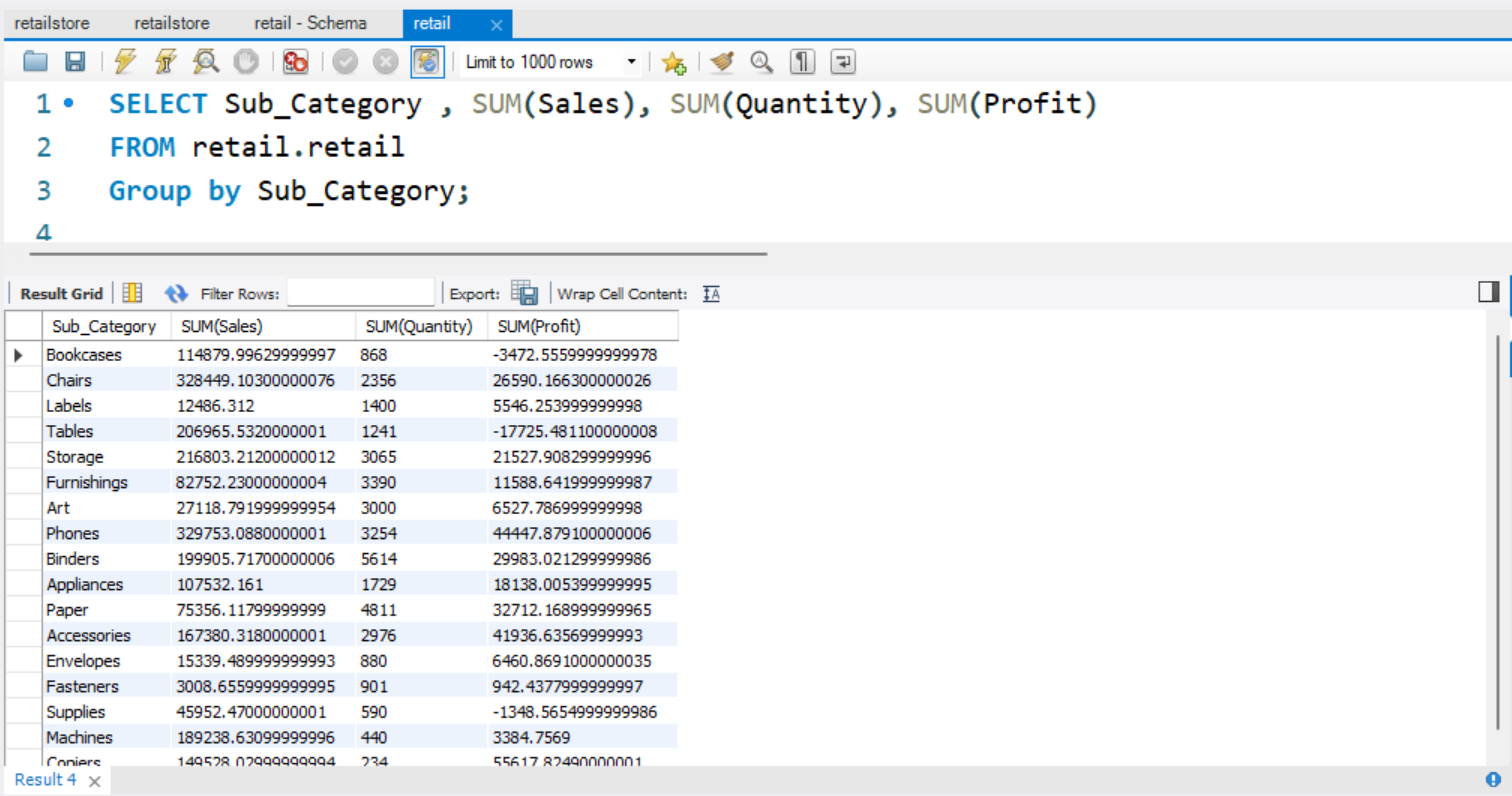
Source: <https://public.tableau.com/>

/\*1. Calculating Total Sales, Profit and Quantity for each Sub\_Category

SELECT Sub\_Category , SUM(Sales), SUM(Quantity), SUM(Profit)

FROM retail.retail

Group by Sub\_Category;



/\*2. Find the customers with the highest lifetime value (total sales).

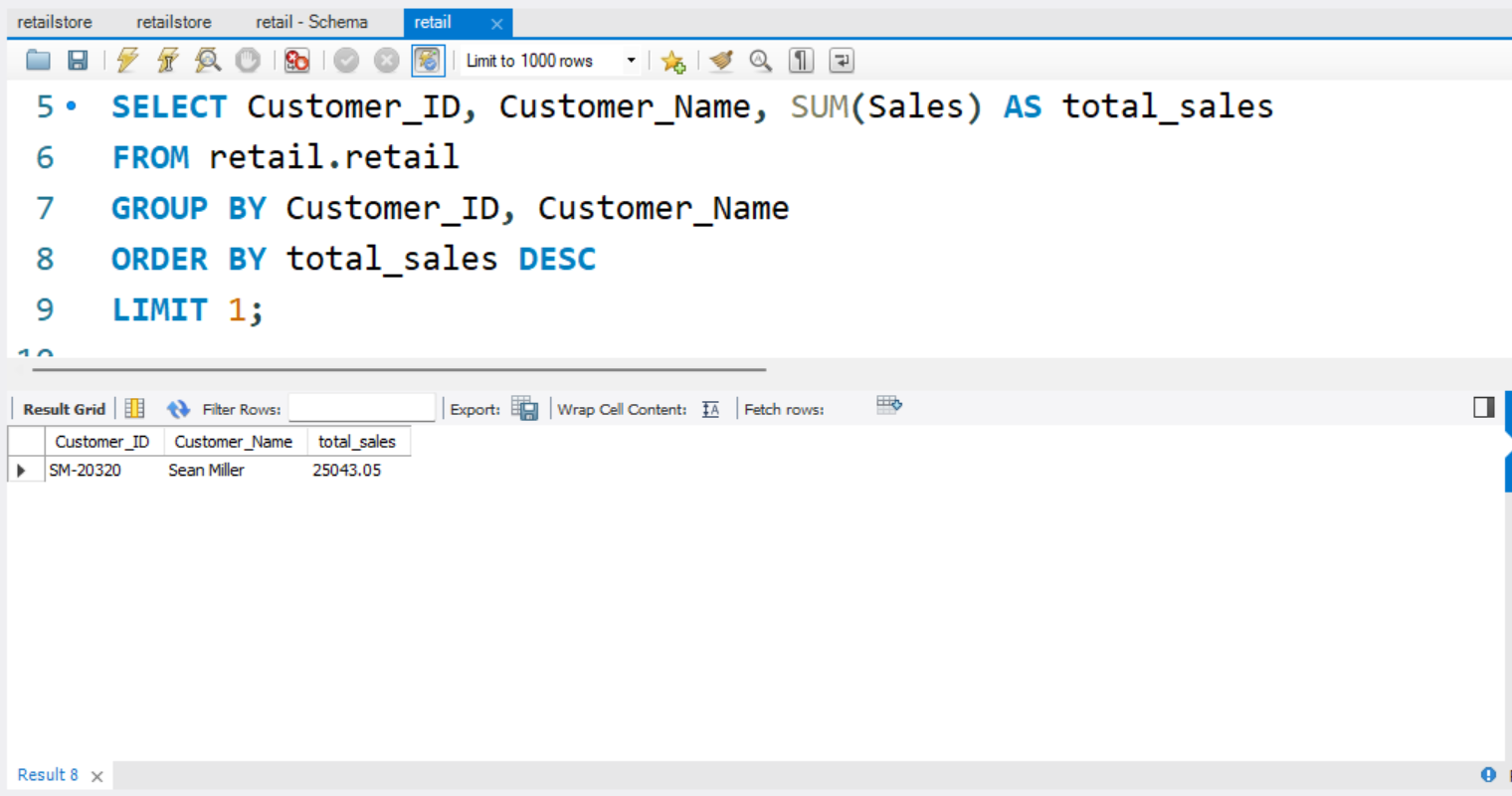
SELECT Customer\_ID, Customer\_Name, SUM(Sales) AS total\_sales

FROM retail.retail

GROUP BY Customer\_ID, Customer\_Name

ORDER BY total\_sales DESC

LIMIT 1;



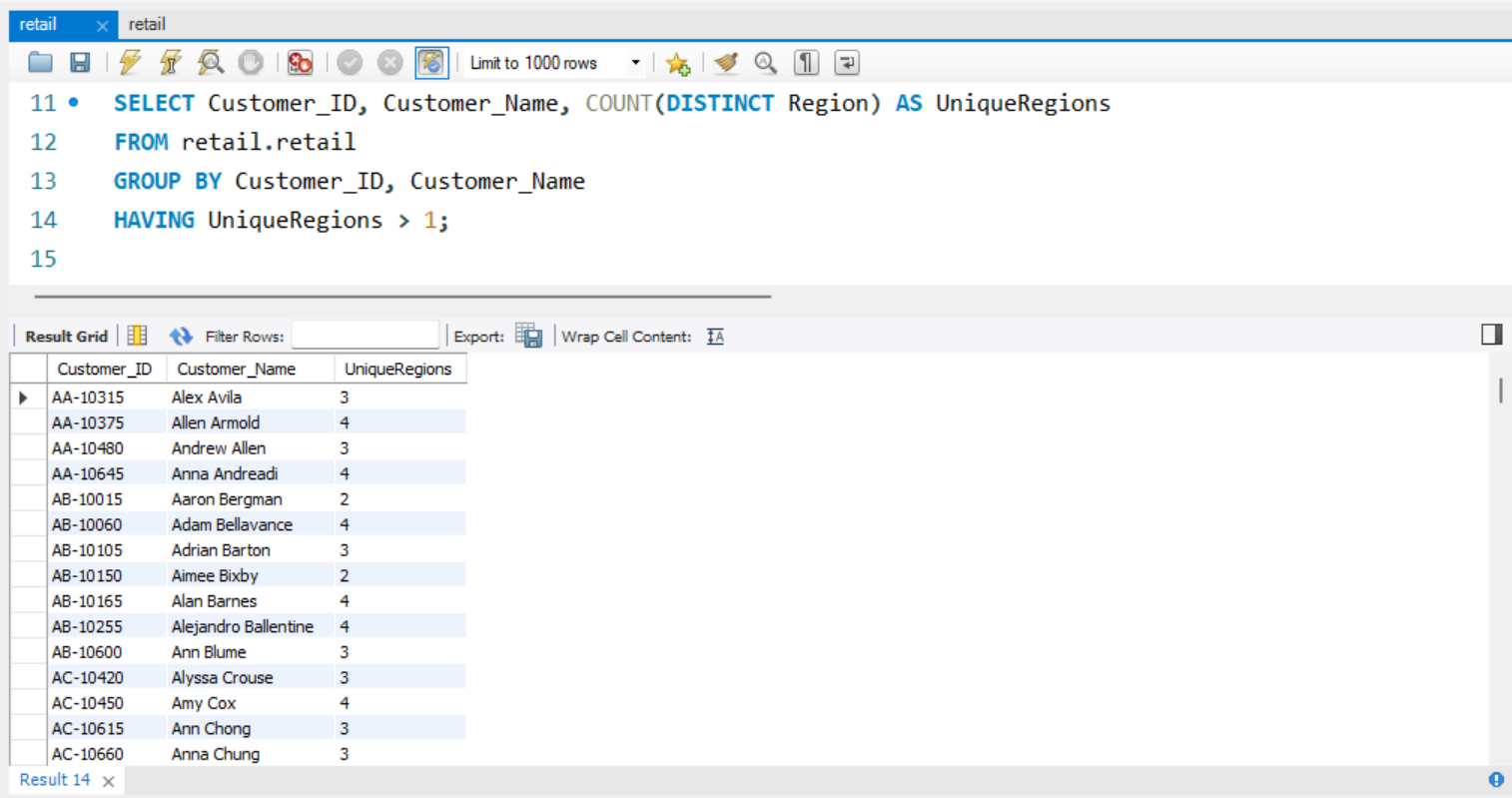
/\*3. List the customers who have placed orders in multiple regions.

SELECT Customer\_ID, Customer\_Name, COUNT(DISTINCT Region) AS UniqueRegions

FROM retail.retail

GROUP BY Customer\_ID, Customer\_Name

HAVING UniqueRegions > 1;

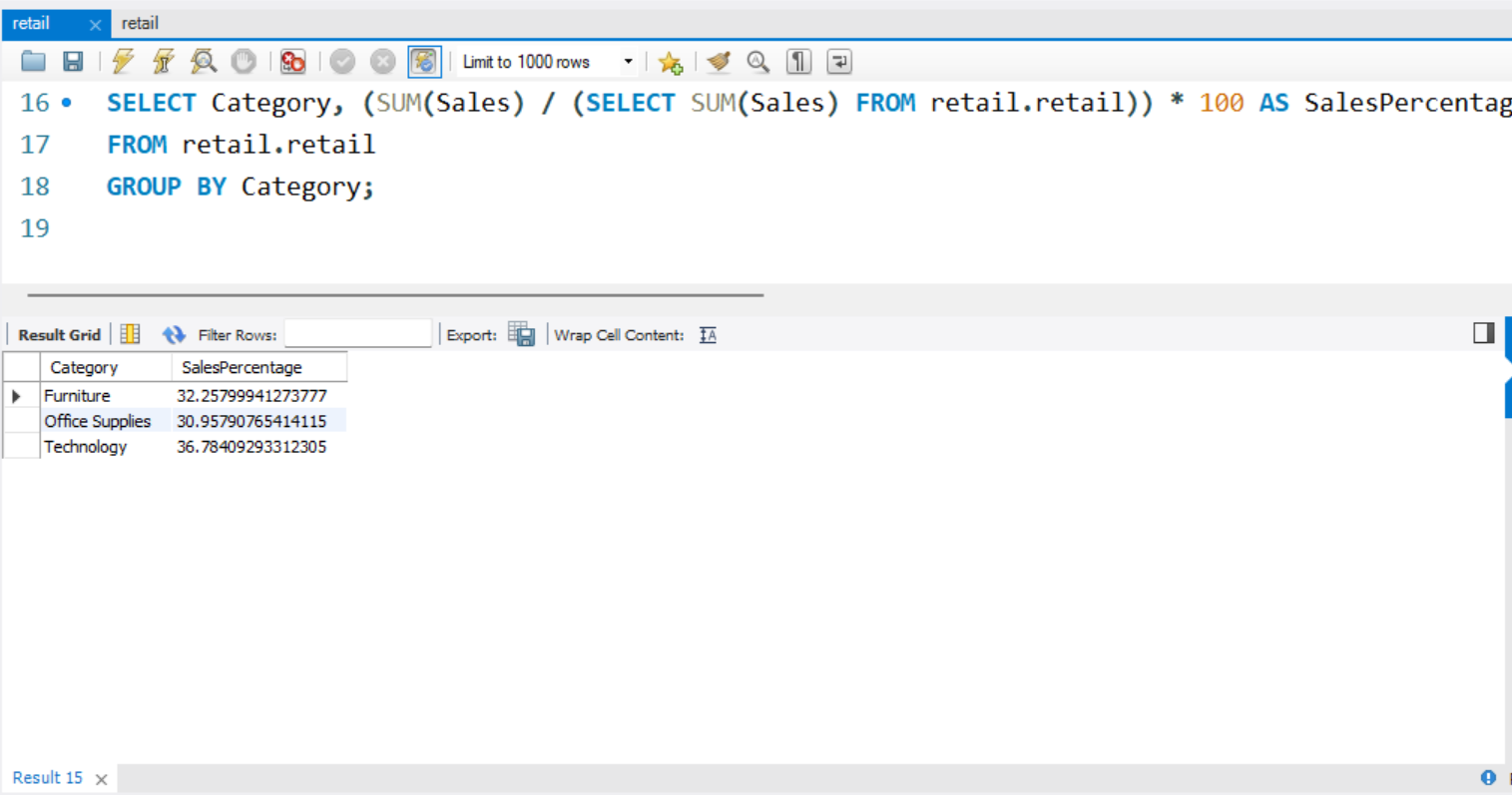


/\*4. Determine the percentage contribution of each category to the total sales.

SELECT Category, (SUM(Sales) / (SELECT SUM(Sales) FROM retail.retail)) \* 100 AS SalesPercentage

FROM retail.retail

GROUP BY Category;



/\*5. Identify the products that have consistently increased in sales over the past three months

SELECT Sub\_Category, Order\_Date, Sales

FROM (

SELECT Sub\_Category, Order\_Date, Sales,

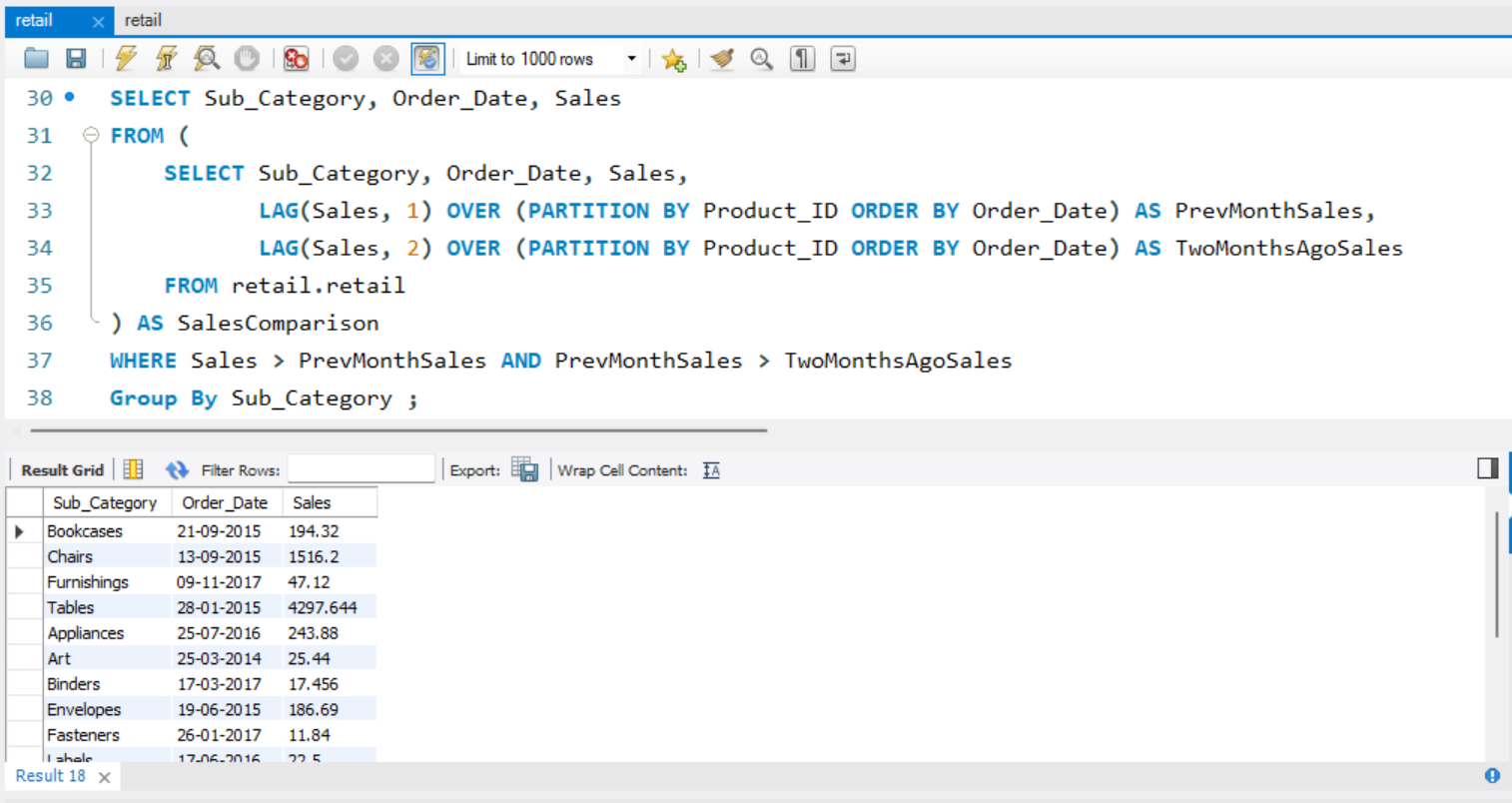
LAG(Sales, 1) OVER (PARTITION BY Product\_ID ORDER BY Order\_Date) AS PrevMonthSales,

LAG(Sales, 2) OVER (PARTITION BY Product\_ID ORDER BY Order\_Date) AS TwoMonthsAgoSales

FROM retail.retail

) AS SalesComparison

WHERE Sales > PrevMonthSales AND PrevMonthSales > TwoMonthsAgoSales;



/\*6. List the cities where the average profit per order is below the overall average

WITH AvgProfitPerOrder AS (

SELECT City, AVG(Profit) AS CityAvgProfit

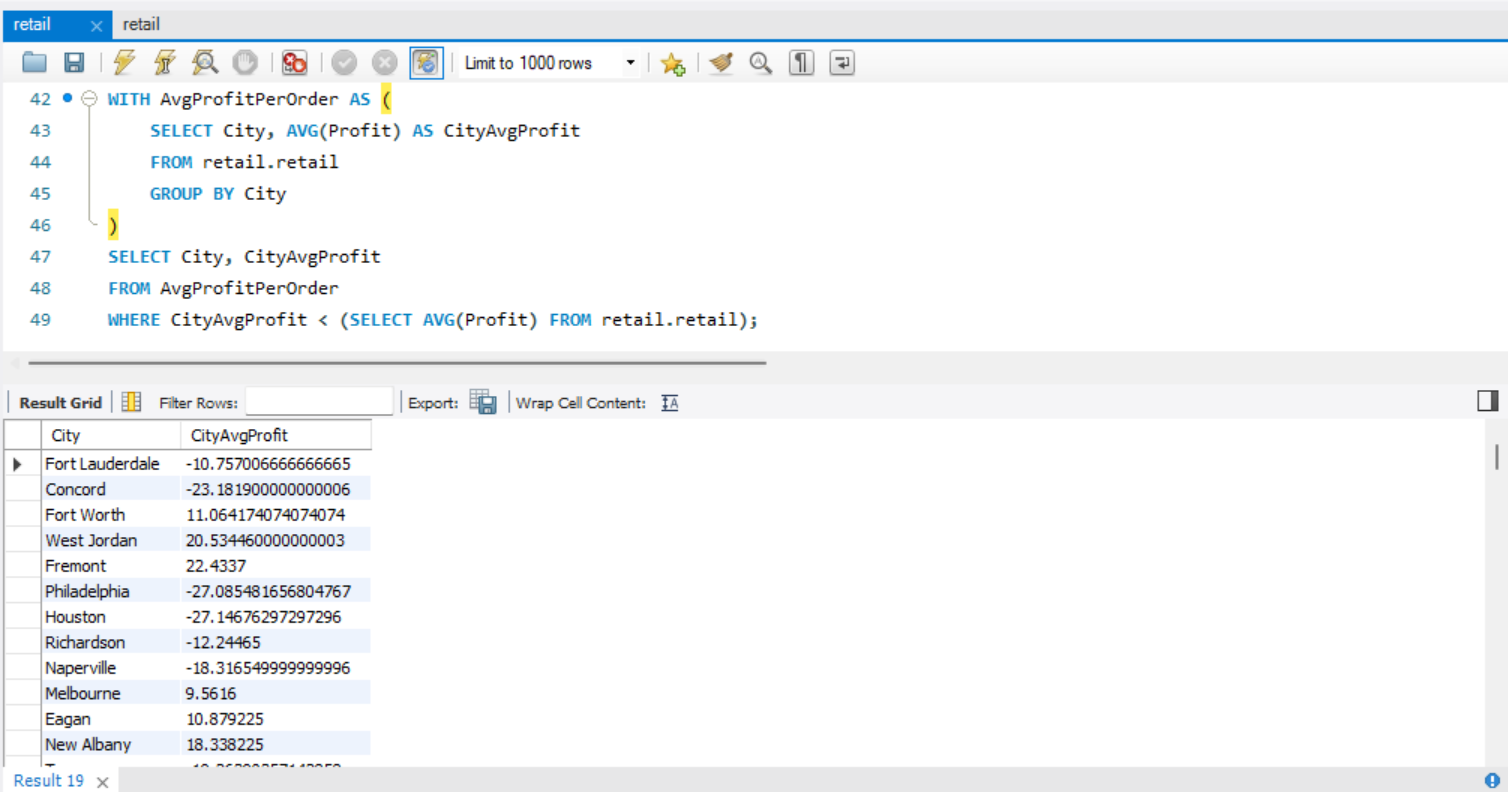
FROM retail.retail

GROUP BY City)

SELECT City, CityAvgProfit

FROM AvgProfitPerOrder

WHERE CityAvgProfit < (SELECT AVG(Profit) FROM retail.retail);

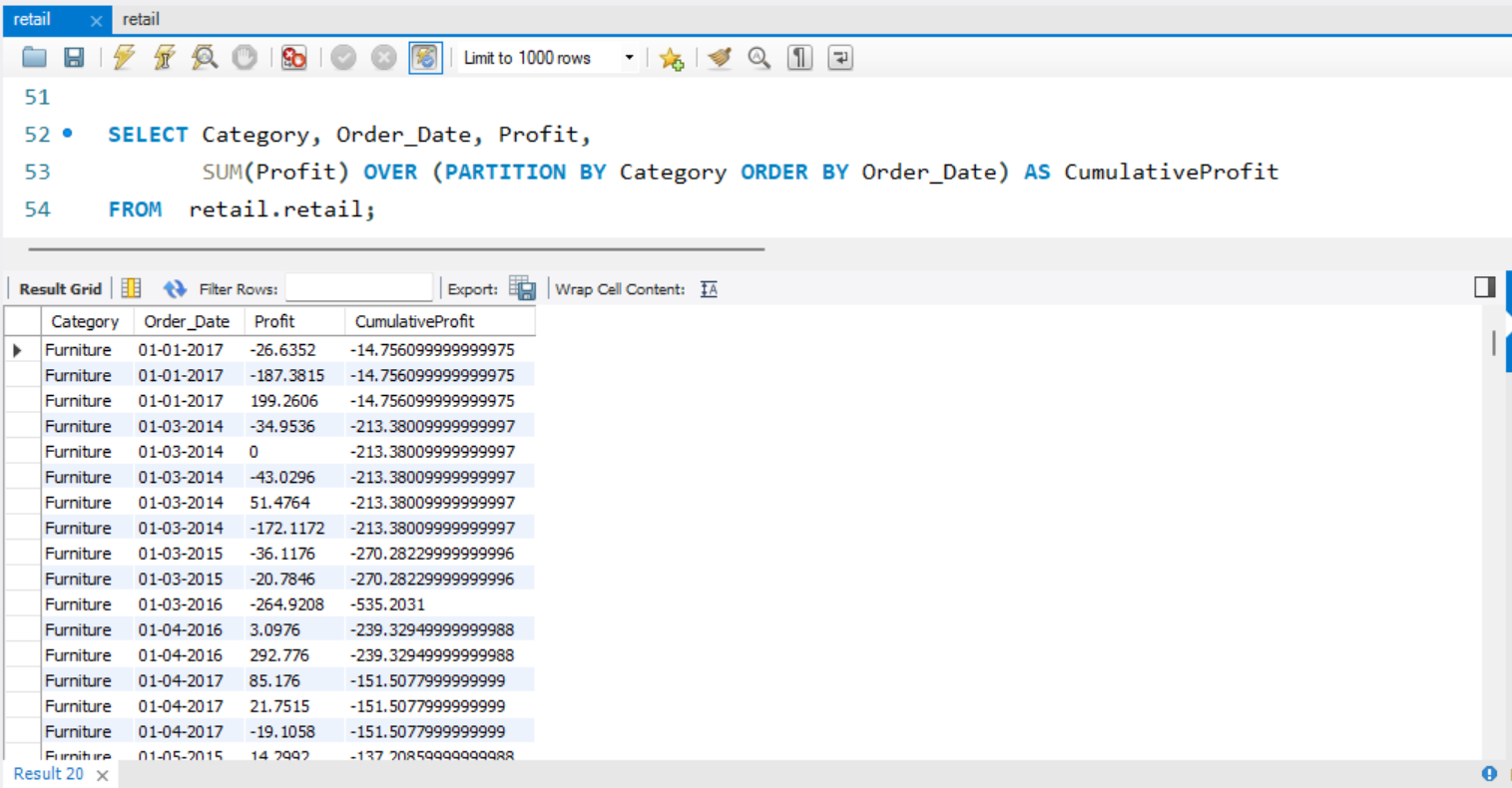


/\*7. Calculate the cumulative profit for each category over time.

SELECT Category, Order\_Date, Profit,

SUM(Profit) OVER (PARTITION BY Category ORDER BY Order\_Date) AS CumulativeProfit

FROM retail.retail;

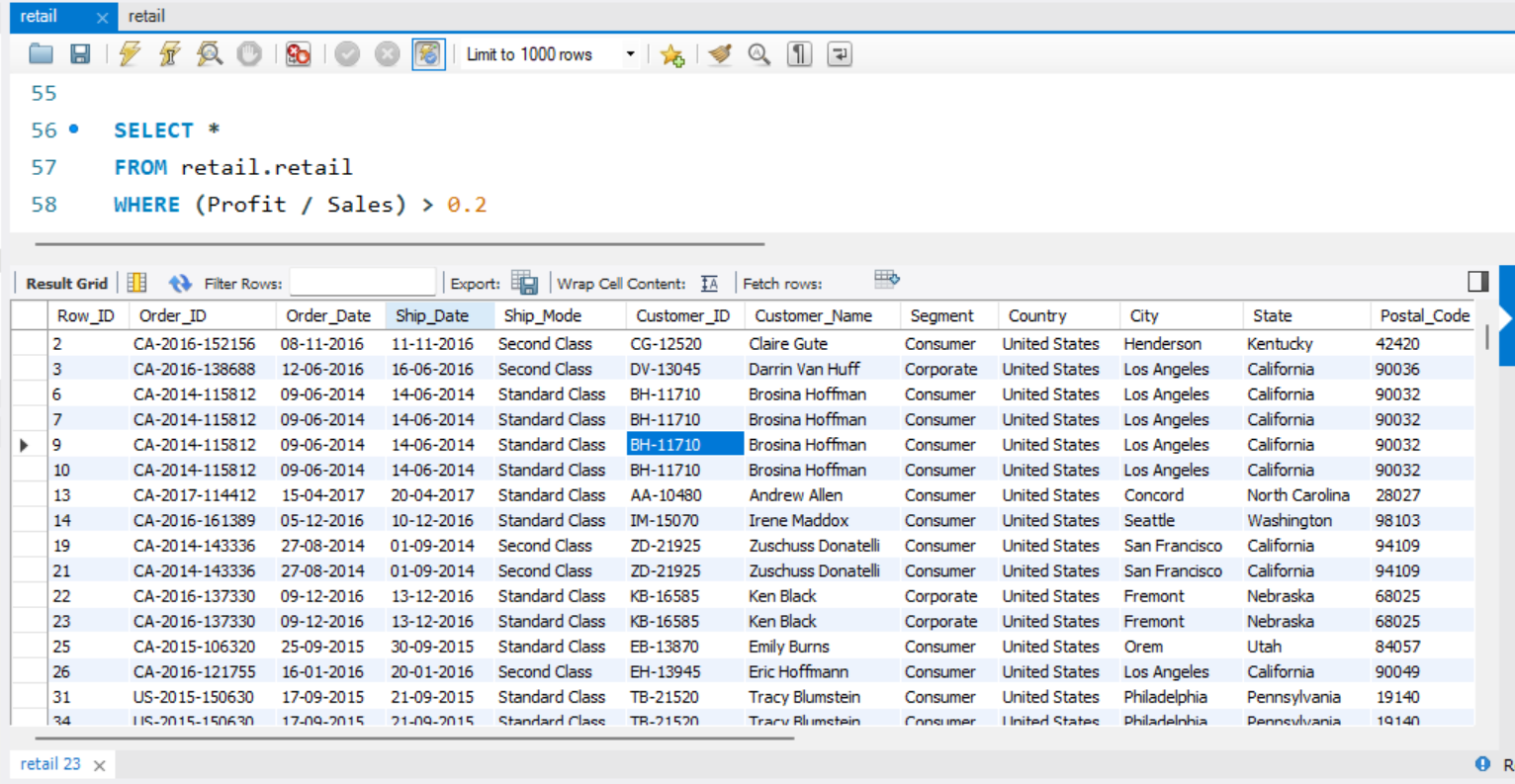


/\*8. List all orders with a profit margin greater than 20%.

SELECT \*

FROM retail.retail

WHERE (Profit / Sales) > 0.2

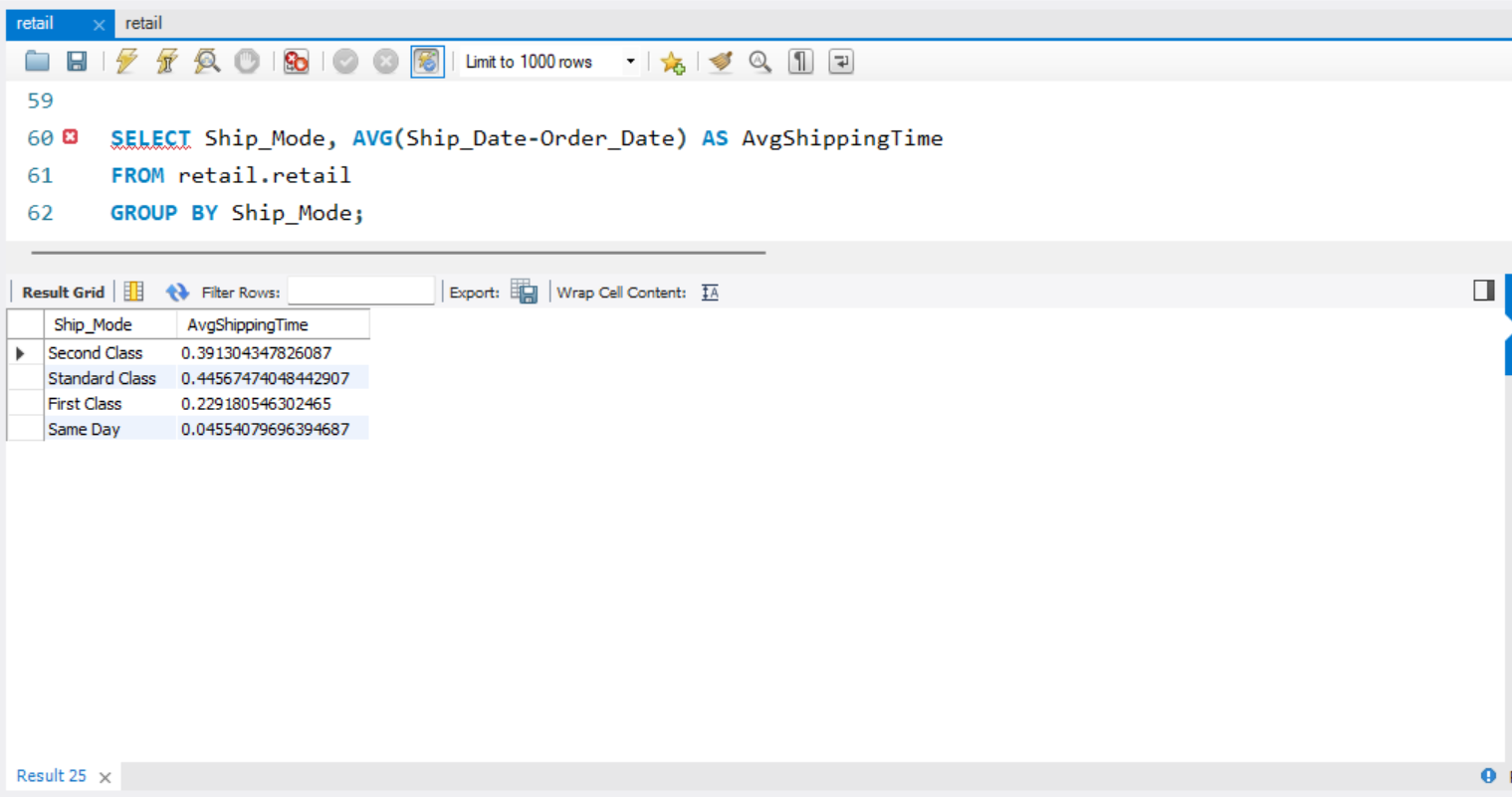


/\*9. Determine the average shipping time (in days) for each ship mode

SELECT Ship\_Mode, AVG(Ship\_Date-Order\_Date) AS AvgShippingTime

FROM retail.retail

GROUP BY Ship\_Mode;



/\*10. Calculate the total sales and profit for each month

SELECT YEAR(Order\_Date) AS OrderYear, MONTH(Order\_Date) AS OrderMonth,

SUM(Sales) AS TotalSales, SUM(Profit) AS TotalProfit

FROM retail.retail

GROUP BY OrderYear, OrderMonth

ORDER BY OrderYear, OrderMonth;

