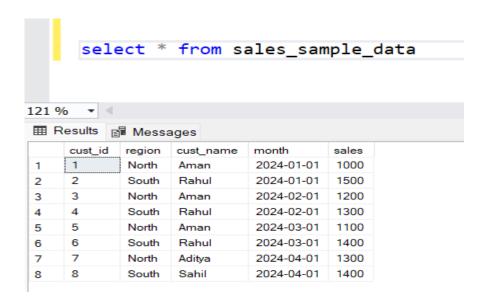
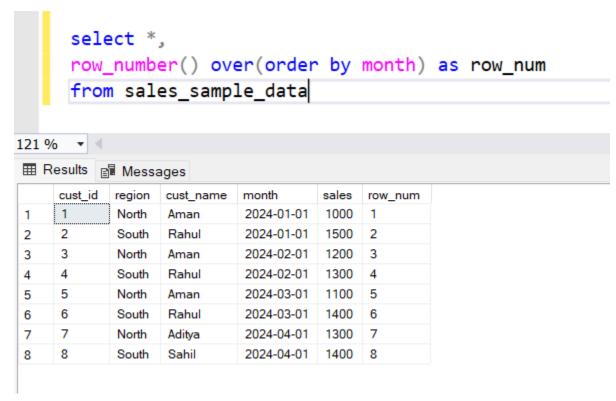
Window Functions

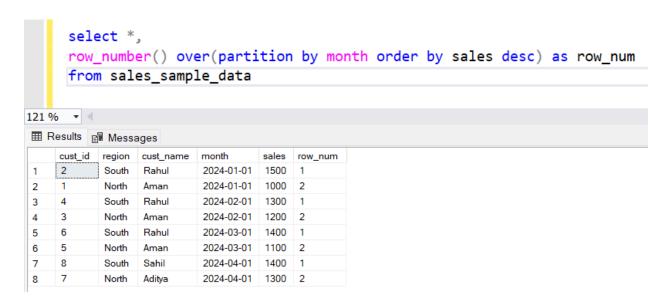
Window functions apply to aggregate and ranking functions over a particular window (set of rows).



Row Number - Assign a unique number to rows.
Scenario 1: You want to assign a unique rank to each sales record based on the month.

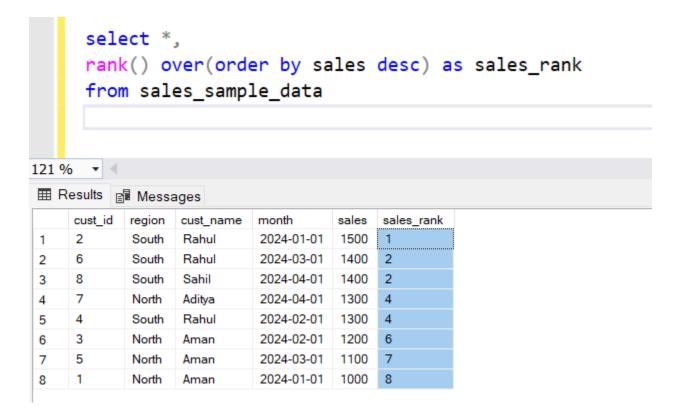


Scenario 2: You want to assign a unique rank to each monthly sale.

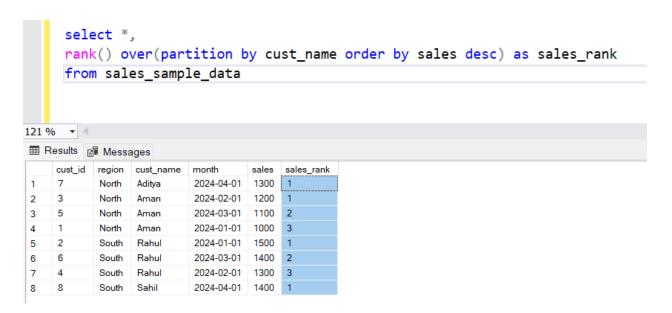


2) Rank() - Assign a rank to rows, with gaps for ties.

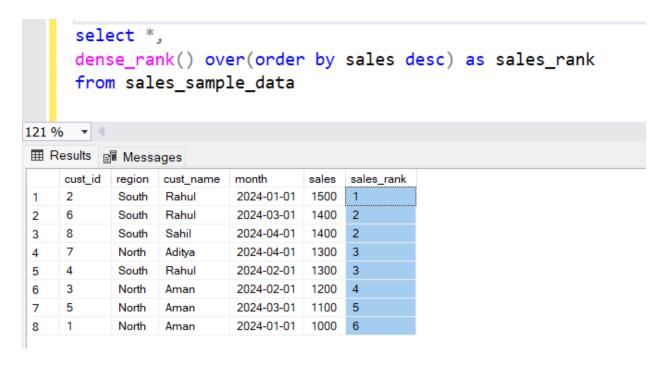
Scenario 1: rank each sales record based on the month.



Scenario 2: Rank customers based on their sales per month.

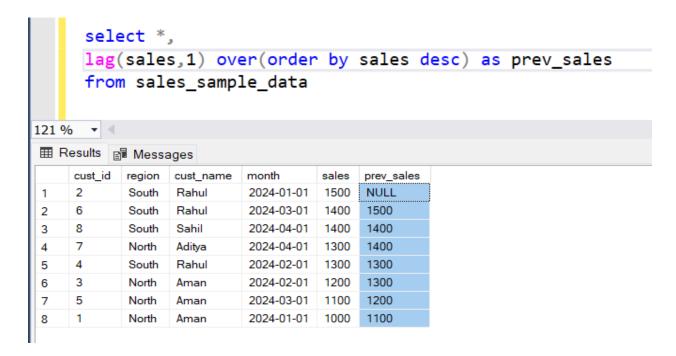


3) **DENSE_RANK()** – Assign a rank to rows, without gaps for ties.

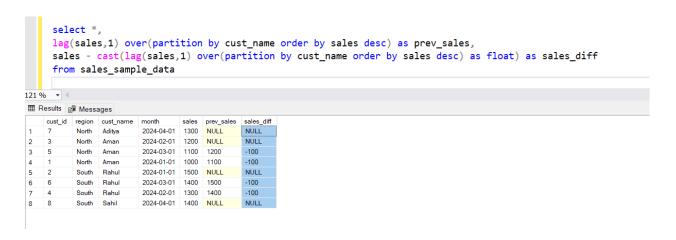


4) LAG() – Access the previous row's data.

Scenario 1: Compare the current month's sales with the previous month's sales.

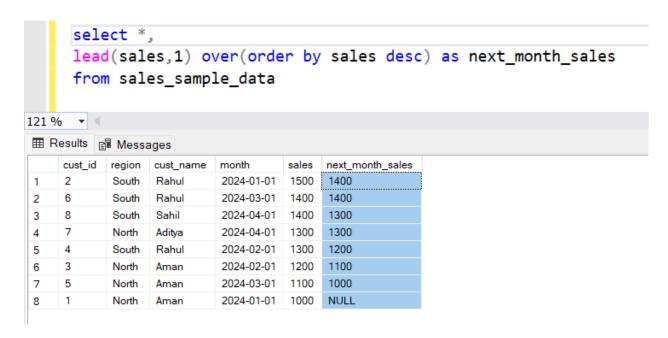


Scenario 2: Compare the Customer-wise current month's sales with the previous month's sales.



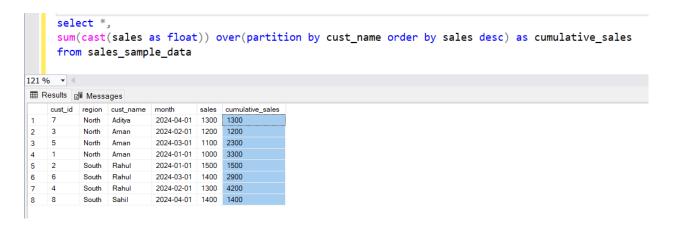
5) **LEAD()** – Access the next row's data.

Scenario: Compare the current month's sales to the next month's sales to track changes.



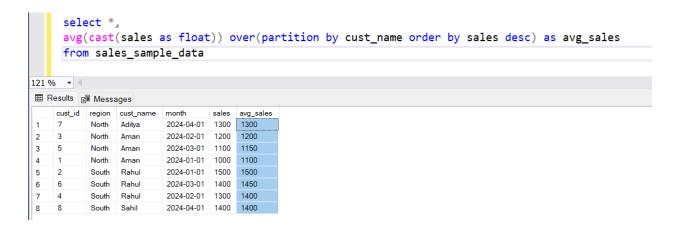
6) **SUM() OVER()** – Calculate a running total or cumulative sum.

Scenario: You want to calculate the cumulative sales by each Customer.



7) AVG() OVER() - Calculate an Avg sum.

Scenario: You want to calculate the average sales by each Customer.



8) **NTILE()** – Divide rows into a specified number of buckets. Scenario: Split sales into 3 performance groups based on sales.

