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Useful window
functions
to know in

SQL

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1

`ROW_NUMBER()`

Assigns a unique sequential number to each row within a partition.

Ex: Can be used for order tracking and identifying the latest order for each customer.



2

CUME_DIST()

Calculates the cumulative distribution of a value within a partition as a value between 0 and 1.

Ex: Can be used to calculate the cumulative distribution of a product's sales within a partition.

3

NTILE()

Divides the rows within a partition into specified numbers of groups or "tiles" based on a given expression. Each row is assigned a group number.

Ex: Can be used to segment customers based on their ratings for targeted marketing campaigns.



4

`NTH_VALUE()`

Retrieves the value from a specific position within a partition based on a specified order.

Ex: Can be used to retrieve the response of a specific participant in a particular question.

5

LAG() and LEAD()

LAG accesses values from previous rows, while LEAD accesses values from subsequent rows within a partition.

Ex: Can be used to compare the current and previous and current period sales data.

6

`RANK()` and `DENSE_RANK()`

Assign ranks to rows based on a specified order within each partition. `RANK` leaves gaps for ties, while `DENSE_RANK` does not.

Ex: Can be used to assign ranks to participants in a competition.

7

FIRST_VALUE() and LAST_VALUE()

Retrieve the first or last value within a partition based on a specified order.

Ex: Can be used to retrieve the opening and closing stock price