



Window Functions (10 Scenarios)

Rank employees by salary

Find cumulative sales over months

Show previous and next month's sales

Assign row numbers partitioned by department

```
SELECT Name, Department, ROW_NUMBER() OVER(PARTITION BY Department ORDER  
BY Name) AS RowNum FROM Employees;
```

Calculate moving average of sales

Find difference between consecutive sales

NTILE for performance buckets

Find max salary in each department without GROUP BY

Find percentage of total sales

Cumulative average salary by department

CTEs (10 Scenarios)

CTE to get top performers

WITH Top AS (

SELECT Name, Score FROM Results WHERE Score > 90

)

SELECT * FROM Top;

Recursive CTE to generate numbers 1 to 10

CTE with aggregate summary

Chain multiple CTEs

CTE for employees earning above department average

CTE to filter repeated names

CTE with window function

Recursive CTE for factorial

Filter top 5 salaries per department

CTE for sales growth YoY

GROUP BY with Aggregates (10 Scenarios)

Average salary by department

Count of employees by city

Max and Min sales per region

Total orders per customer

Count of distinct products sold

Sum sales by month and year

Top-selling product per category

Average order value per customer

Total revenue by store

Employee count and average salary per location