SQL Window Function Demo — Student Marks

This mini-project demonstrates the difference between normal aggregate functions and window functions in SQL using a simple mark table.

What this project contains:

- Database and table creation

- Sample data insertion

- Use of GROUP BY aggregate function

- Use of WINDOW FUNCTION (OVER / PARTITION BY)

- Comparison of outputs

Concept Highlight — Window Function:

A window function performs calculations across a set of rows related to the current row without reducing the number of rows.

In this project:

- GROUP BY returns one row per student

- WINDOW FUNCTION returns all rows and adds a calculated column

Example used:

SUM(marks) OVER(PARTITION BY s_name) AS total_marks

This calculates the total marks for each student name, but keeps every original row in the result.

Learning Outcome:

- Understand partitioning using PARTITION BY

- See difference between GROUP BY vs WINDOW FUNCTION

- Learn how totals, rankings, and running aggregates can be shown beside original data