Travel Data Insights Using SQL Window Functions1

Project Title:

Travel Data Insights Using SQL Window Functions1

Overview:

This project showcases practical and advanced SQL techniques using a dataset of travel routes between major Indian cities.

The goal is to extract business insights, clean duplicate data, and demonstrate SQL features like window functions, ranking, and recursive CTEs.

Skills Demonstrated:

- SQL Window Functions: ROW_NUMBER, RANK, LEAD, LAG, NTILE
- Recursive CTEs for indirect route discovery
- Data cleaning using ROW_NUMBER
- Route ranking and trend analysis
- Conditional logic using CASE and ISNULL

Key Highlights:

1. Identify one-way and round-trip routes.
2. Rank travel routes per city by distance.
3. Detect distance trends (Increasing/Decreasing/Flat).
4. Use recursive CTE to find all paths from Delhi.
5. Remove duplicate travel records.

File Descriptions:

- Travel_Route_Insights_SQL_Window_Functions_Vijay.sql: Full SQL code with explanatory comments.

- Project_Description.txt: Overview of the project and key concepts used.

Ideal For:

Clients seeking support with SQL-based data analysis, ETL logic, reporting, or backend database insights.