Executive Summary:

Walmart Sales Analytics (SQL + Excel):

Problem Statement

Walmart sales data contains valuable insights across products, customers, branches, and time, but raw transactional data is not directly usable for decision-making. The challenge is to transform this data into **structured, insight-ready analytics** using industry-relevant tools.

Project Objective

The objective of this project was to:

- Perform end-to-end sales analysis using **SQL as the primary analytics engine**
- Convert SQL insights into an **interactive Excel dashboard**
- Demonstrate real-world analytics practices used in SaaS and BI environments

Approach & Skills Used:

SQL Analytics Layer

SQL was used for data cleaning, transformation, and analysis.

Key SQL Work

- Database and table creation
- Feature engineering (time_of_day, day_name, month_name)
- Exploratory Data Analysis across product, sales, and customer dimensions
- Creation of reusable **SQL Views** for reporting
- Use of **CTEs (WITH clause)** to structure complex queries
- Use of **Window Functions** (RANK, ROW_NUMBER, AVG OVER) for comparative and branch-level analysis

SQL Skills Demonstrated:

- Aggregations: SUM, AVG, COUNT
- GROUP BY, HAVING
- CASE WHEN
- Date & time functions
- Subqueries
- CTEs and Window Functions
- View-based analytics design

Excel Analytics & Dashboard Layer

Excel was used as the reporting and visualization layer.

Excel Work & Skills

- Importing SQL views as structured tables
- KPI-driven dashboard design
- Interactive charts and slicers
- Business-focused data storytelling
- SaaS-style dashboard layout using summarized datasets

Outcome

This project demonstrates a complete **SQL-to-Excel analytics workflow**, reflecting how real-world teams separate data processing from reporting. It highlights strong SQL querying skills combined with effective Excel-based visualization and business insight delivery.