Retail Performance & Profitability Dashboard Report

1. Project Overview

This project analyzes retail sales data to evaluate performance and profitability across product categories, regions, and time periods. The data was sourced from SQL and CSV files, cleaned and processed using SQL queries and a Jupyter notebook.

2. Data Sources

- orders.sql: SQL scripts creating and populating the orders table, with 50 sample orders.
- orders1.csv: Supplementary dataset with order details.
- Retail_Sales.ipynb: Python notebook used for data analysis and dashboard generation.

3. Key Metrics

Sum of sales: 26,000

Sum of profit: 3,090

Sum of inventory days: 4,703

Average number of orders: 1,030

4. Insights

Profit by Sub-Category:

- Top profit drivers: Laptops, Sofas, Phones
- Low or negative profit sub-categories: Tables, Pens, Paper

Sales by Region:

- South: 35.51%
- West: 34.82%
- East: 15.54%
- North: 14.13%

Sales Trend (Monthly):

- February shows the highest average sales.
- A dip is seen in March before a slight rise in April.

Inventory & Orders:

- Average inventory days ~50, with variation across categories.
- Orders are well distributed, with technology and furniture dominating.

5. SQL Data Preparation

Cleaning steps:

- Removed records with NULL critical fields.
- Deleted entries with inventory_days <= 0 or stock_qty < 0.
- Standardized region names and trimmed whitespace.
- Adjusted outlier profits.

6. Conclusion

The dashboard provides actionable insights into retail sales and profitability by highlighting best-performing products and regions, guiding stock management, and pointing to potential areas for operational improvement.