Retail Business Performance & Profitability Analysis

Introduction: This project analyzes retail transactional data to identify low-performing categories, optimize inventory turnover, and suggest strategic actions to improve profitability.

Abstract: Using SQL and Python (Pandas, Seaborn), this project performs EDA, computes profit margins, and visualizes seasonal trends. The output helps stakeholders prioritize actions for slow-moving and low-margin products.

Tools Used: SQL (MySQL/Postgres), Python (Pandas, Matplotlib, Seaborn), Tableau or Power BI for dashboards (optional).

Steps Involved:

1. Data collection and cleaning: Import transactions.csv and handle missing values.
2. SQL aggregation: Compute total sales and profit by category and product.
3. Feature engineering: Calculate sales and profit columns in Python.
4. Analysis: Identify top/bottom categories, slow-moving items, and seasonality.
5. Visualization: Create monthly trends and category-level dashboards using Tableau or Power BI.

Conclusion: The analysis provides actionable insights — remove or discount low-margin items, optimize reorder points for slow-moving SKUs, and run targeted promotions during peak months to improve turnover and profitability.