

■ SQL Project Report – Sales Data Analysis

Project Title

Sales Data Analysis using SQL

Problem Statement

Businesses generate large volumes of sales and customer data daily. To make informed decisions, organizations need to analyze sales performance, identify top-selling products, track revenue trends, and understand customer behavior.

Objectives

- Analyze monthly revenue trends
- Identify top-performing products and categories
- Find loyal customers and customer demographics
- Track running revenue growth over time
- Support business decision-making with data insights

Tools & Technologies Used

- Database: MySQL (or PostgreSQL / SQLite)
- Language: SQL
- Dataset: Customers, Products, Orders, OrderDetails

Database Schema

Tables:

- Customers (CustomerID, Name, Region, Age, Gender)
- Products (ProductID, ProductName, Category, Price)
- Orders (OrderID, CustomerID, OrderDate, TotalAmount)
- OrderDetails (OrderDetailID, OrderID, ProductID, Quantity, LineTotal)

Relationships: Customers ↔ Orders ↔ OrderDetails ↔ Products

Key SQL Queries & Insights

Monthly Revenue

Insight: Revenue increased from January to March 2025.

Top 5 Best-Selling Products

Insight: Laptops and Headphones are the most purchased items.

Loyal Customers

Insight: Alice placed the most orders, showing high loyalty.

Revenue by Category

Insight: Electronics category generates the highest revenue.

Running Total of Revenue

Insight: Cumulative revenue reached \$4300 by March 2025.

Business Insights

- Revenue Growth: Consistent growth across months.
- Product Insights: Laptops and Headphones are the best sellers.
- Customer Insights: Alice and Eva are loyal customers.
- Category Insights: Electronics dominates sales, but Accessories can be promoted.

Conclusion

This SQL project demonstrates how raw sales data can be transformed into meaningful insights for business decision-making. With additional integration into Power BI/Excel dashboards, the analysis can be visually represented for management reporting.