Online Retail Sales Database Project Report:

Introduction:

The Online Retail Sales Database is designed to manage e-commerce operations efficiently. It maintains records of customers, products, orders, and payments, ensuring smooth tracking of sales, inventory, and customer transactions. The database is normalized to reduce redundancy and improve data integrity.

Abstract:

This project demonstrates a fully functional **relational database system** for an e-commerce platform. It includes the creation of a normalized SQL schema, sample data insertion, and the execution of queries and views to generate meaningful reports such as customer order history, total sales, and best-selling products. The design supports scalability and can be extended to include categories, staff users, and delivery management.

Tools Used:

Database: MySQL

Schema Design: dbdiagram.io for ER modeling

Query Execution: MySQL Workbench

Steps Involved in Building the Project

Phase 1: Database & Schema Creation

- Create database ECOMMERCE.
- Define tables: Customers, Products, Orders, Order_Items, Payments.
- Apply primary and foreign key constraints for referential integrity.

Phase 2: Sample Data Insertion

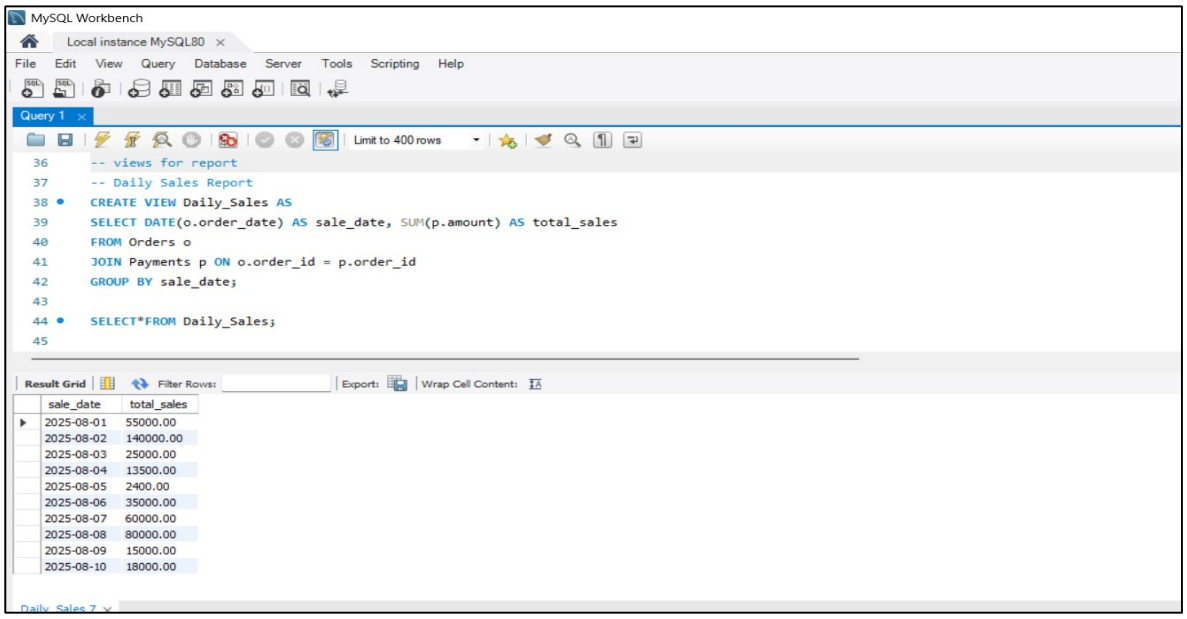
- Insert 5–10 rows in each table for realistic testing.
- Include diverse customers, product catalog, orders, and payments.

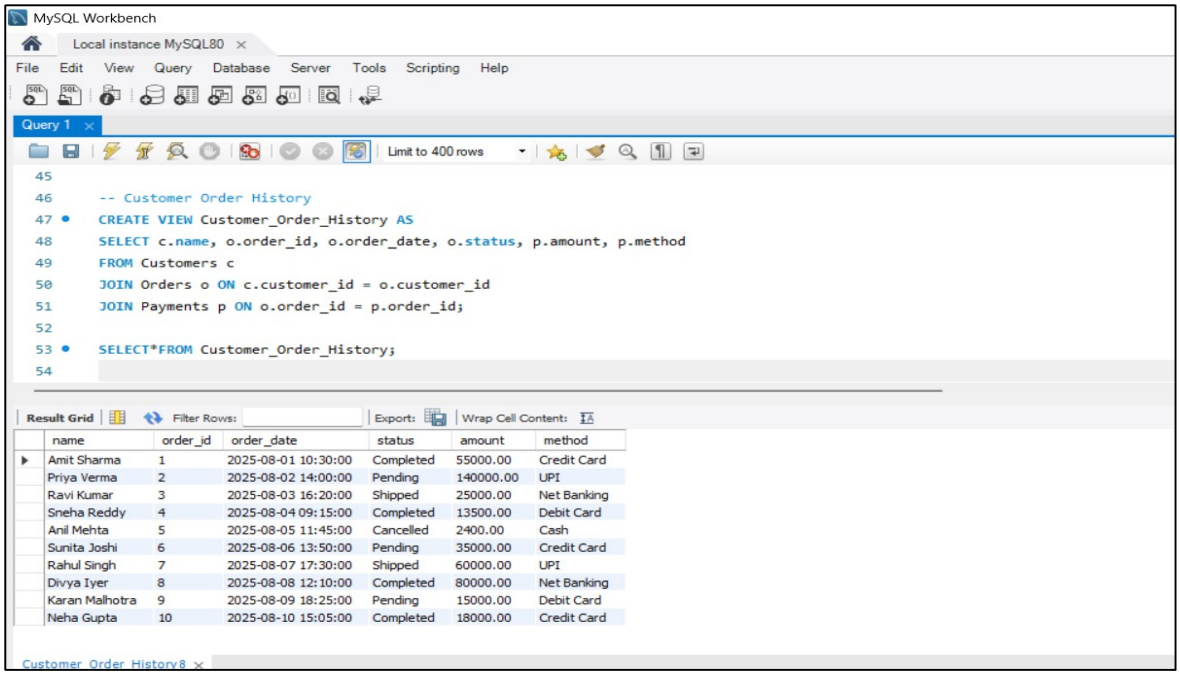
Phase 3: Queries & Views

- Simple Queries: List all products, all customers, and pending orders.
- JOIN Queries: Total spending per customer, best-selling products, sales by date.
- Views: Daily Sales Report, Customer Order History.

Phase 4: Reports

- Generate visual reports using query outputs (e.g., daily_sales.png, best_selling.png).
- Use views for recurring report generation.





Conclusion

The project successfully models an e-commerce platform with a *normalized database schema*, ensuring efficient data storage, retrieval, and reporting. The system supports operational needs such as order tracking, payment management, and sales analysis. With optional enhancements, it can evolve into a complete retail management system.