Retail Inventory & Sales System
Project Summary

Overview:
This project demonstrates the design and implementation of a relational database for a retail company. The system tracks customers, employees, suppliers, products, orders, and order details. It includes a normalized schema, sample data population, and analytical SQL queries to support decision-making.

Entity-Relationship Design:
The database consists of the following tables:

- Customers
- Suppliers
- Products
- Employees
- Orders
- OrderDetails

Relationships:

- A Customer can place many Orders
- An Order has many OrderDetails
- A Product can appear in many OrderDetails
- A Product belongs to one Supplier
- An Employee processes many Orders

The schema was implemented in MySQL using foreign keys to enforce referential integrity.

Data Population:
Each table was populated with realistic sample data. For example:

- Customers: Alice Wong, Brian Nguyen, Carla Davis
- Products: Laptop, Wireless Mouse, Bluetooth Speaker
- Suppliers: Acme Electronics, Global Gadgets
- Employees: Jordan Smith, Maria Lopez
- Orders and OrderDetails link customers to the products they bought, handled by specific employees.

Query Examples and Business Insights:

1. Total Sales by Product (Query_1_Total_Sales.png)

Description:
Calculates the total revenue generated by each product. Demonstrates data aggregation, use of joins, and practical business intelligence skills.

2. List All Customers and What They Ordered (Query_2_Customer_Order)

Description:
Displays all customers and their purchases with quantity. Shows ability to join multiple related tables and extract meaningful transactional data.

Screenshots:
Screenshots were taken throughout the process to document:

- Table creation
- `SHOW TABLES;` command
- Inserted data using `SELECT * FROM Customers;`
- Results of business queries (Total Sales by Product, Customer Orders)

Skills Demonstrated:

- Relational schema design
- SQL table creation and data types
- Use of foreign keys and referential integrity
- Writing analytical SQL queries (JOIN, GROUP BY, aggregation)
- Using MySQL interface for development

Tools Used:

- MySQL
- Screenshots captured on system