Bookstore Sales Analysis Report

1. Project Overview

Bookstore Sales Analysis project focuses on analyzing transactional data from an online bookstore using **SQL (MySQL)**.
The goal of this project is to understand **sales performance**, **customer purchasing behavior**, and **inventory status** by querying a relational database.

This analysis helps answer common business questions such as:

- Which books and genres perform best
- How customers place orders
- How much revenue the bookstore generates
- How inventory changes after sales

The project is designed to demonstrate **practical SQL skills** used in real-world data analytics scenarios.

2. Dataset Description

The dataset represents a simplified online bookstore system and consists of **three main tables**:

📚 Books Table

Contains information about books sold by the bookstore.

- Book ID
- Book Title
- Author
- Genre
- Published Year
- Price
- Available Stock

This table helps analyze **pricing**, **genre distribution**, and **inventory levels**.

👥 Customers Table

Stores details about customers who place orders.

- Customer ID
- Customer Name
- Email
- Phone Number
- City
- Country

This table is used to understand **customer demographics** and **location-based insights**.

🛒 Orders Table

Captures transaction-level details for each order.

- Order ID
- Customer ID
- Book ID
- Order Date
- Quantity Ordered
- Total Amount

This table is central to **sales analysis**, **revenue calculation**, and **customer spending behavior**.

3. Database Design Overview

The database follows a **relational structure**:

- Each order is linked to a customer through Customer_ID
- Each order references a book using Book_ID
- Quantity information is stored directly in the Orders table for simplicity

This design allows efficient analysis using **JOIN operations** across tables.

4. Analysis Objectives

The main objectives of this project include:

- Analyzing book sales across different genres
- Identifying high-value customers
- Measuring overall revenue generated
- Understanding ordering patterns
- Evaluating remaining inventory after sales

Both **basic** and **advanced SQL queries** were used to achieve these objectives.

5. Key Analysis Performed

The following types of analysis were conducted:

- **Sales Analysis**
  - Total revenue generated from all orders
  - Orders with high transaction values
  - Most frequently ordered books
  - Genre-wise sales performance
- **Customer Analysis**
  - Customers who placed multiple orders
  - Customers purchasing more than one book per order
  - Highest spending customer
  - Customer distribution by city and country
- **Inventory Analysis**
  - Total stock available in the bookstore
  - Books with low stock levels
  - Remaining stock after fulfilling all customer orders

6. Key Insights

Some important insights derived from the analysis include:

- Certain genres contribute more significantly to overall sales
- A small group of customers accounts for higher spending
- Popular books require better stock management to avoid shortages
- Inventory levels reduce noticeably after fulfilling frequent orders

These insights can help improve **sales strategy**, **customer targeting**, and **inventory planning**.

Business Value

The insights generated from this analysis can support data-driven decision-making by identifying high-performing books, valuable customers, and inventory risks. This helps businesses improve pricing strategies, customer engagement, and stock management.

7. Tools & Technologies Used

- **SQL**
- **MySQL Workbench**

All queries were written and executed using **MySQL Workbench**.

7.1 Key SQL Concepts Used

• SELECT, WHERE, ORDER BY
• GROUP BY and HAVING
• Aggregate functions (SUM, COUNT, AVG)
• JOIN operations
• Subqueries

8. Project Outcome

This project successfully demonstrates the use of SQL for:

- Data filtering and aggregation
- Joining multiple tables
- Business-focused data analysis

- Extracting actionable insights from structured data

The analysis reflects real-world scenarios commonly handled by **data analysts** and **business analysts**.

9. Conclusion

The **Bookstore Sales Analysis** project provides a clear understanding of how SQL can be used to analyze sales data effectively.
By working with a relational database and realistic business questions, this project highlights essential SQL skills required for data analytics roles.

The project can be further extended by integrating visualization tools such as **Power BI** or **Tableau** for deeper insights.

10. Future Enhancements

- Add time-based trend analysis
- Visualize sales and customer data
- Expand the database with additional tables
- Perform advanced analytical queries