**Case Study: Online Bookstore Management System**

**Section 1: Python Standalone Console Application**

Design and implement a standalone console application for an Online Bookstore Management System using Python. The application should utilize collections, object-oriented programming (OOP), and exception handling to manage book inventory and customer orders.

**Requirements:**

1. **Book Inventory Management**:
   * Implement the functionality to add, update, and delete book records.
   * Each book should have attributes such as book\_id, title, author, genre, price, and stock.
2. **Customer Orders**:
   * Implement the functionality to process customer orders.
   * Each order should have attributes such as order\_id, customer\_id, book\_id, quantity, and order\_date.
3. **Reporting**:
   * Implement the functionality to generate a report of books with low stock (stock < 5).

**Business Functionalities:**

1. **Add/Update/Delete Books**:
   * Create a class Book with attributes book\_id, title, author, genre, price, and stock.
   * Implement methods to add a new book, update existing book details, and delete a book from the inventory.
2. **Process Customer Orders**:
   * Create a class Order with attributes order\_id, customer\_id, book\_id, quantity, and order\_date.
   * Implement methods to process a new customer order and update the stock accordingly.
3. **Low Stock Report**:
   * Implement a method to generate a list of books with stock less than 5.

**Section 2: MySQL Database Management**

Design a MySQL database schema to support the Online Bookstore Management System and provide problem statements for querying the database.

**Table Structures:**

1. **Books Table**:
   * book\_id: INT, Primary Key
   * title: VARCHAR(100)
   * author: VARCHAR(100)
   * genre: VARCHAR(50)
   * price: DECIMAL(10, 2)
   * stock: INT
2. **Customers Table**:
   * customer\_id: INT, Primary Key
   * name: VARCHAR(100)
   * email: VARCHAR(100)
3. **Orders Table**:
   * order\_id: INT, Primary Key
   * customer\_id: INT, Foreign Key References Customers(customer\_id)
   * book\_id: INT, Foreign Key References Books(book\_id)
   * quantity: INT
   * order\_date: DATE

**Problem Statements:**

1. Write a query to find the total sales amount for each book.
2. Write a query to find the names of customers and their total order amounts.
3. Write a query to find the titles of books that have not been ordered.
4. Write a query to find the customers who have placed more than 5 orders.
5. Write a query to find the book titles and their current stock levels for books with stock less than 5.