**Case Study: Library Management System**

**Section 1: Python Standalone Console Application**

Design and implement a standalone console application for a Library Management System using Python. The application should utilize collections, object-oriented programming (OOP), and exception handling to manage the inventory of books.

**Requirements:**

1. **Book Management**:
   * Implement the functionality to add, update, and delete books.
   * Each book should have attributes such as book\_id, title, author, genre, price, and quantity\_in\_stock.
2. **Library Operations**:
   * Implement the functionality to check the availability of a book.
   * Implement the functionality to update the quantity of books when borrowed or returned.
3. **Reporting**:
   * Implement the functionality to generate a report of books that are low in stock (quantity\_in\_stock < 5).

**Business Functionalities:**

1. **Add/Update/Delete Books**:
   * Create a class Book with attributes book\_id, title, author, genre, price, and quantity\_in\_stock.
   * Implement methods to add a new book, update existing book details, and delete a book from the library.
2. **Check Availability and Update Quantity**:
   * Implement a method to check the availability of a book by book\_id.
   * Implement a method to update the quantity of books when borrowed or returned.
3. **Low Stock Report**:
   * Implement a method to generate a list of books that are low in stock (quantity\_in\_stock < 5).

**Section 2: MySQL Database Management**

Design a MySQL database schema to support the Library Management System and provide solutions for the problem statements.

**Table Structures:**

1. **Books Table**:
   * book\_id: INT, Primary Key
   * title: VARCHAR(100)
   * author: VARCHAR(50)
   * genre: VARCHAR(50)
   * price: DECIMAL(10, 2)
   * quantity\_in\_stock: INT
2. **Borrowers Table**:
   * borrower\_id: INT, Primary Key
   * name: VARCHAR(100)
   * contact: VARCHAR(50)
3. **Borrowing Table**:
   * borrowing\_id: INT, Primary Key
   * book\_id: INT, Foreign Key References Books(book\_id)
   * borrower\_id: INT, Foreign Key References Borrowers(borrower\_id)
   * quantity\_borrowed: INT
   * borrowing\_date: DATE

**Problem Statements:**

1. Write a query to find the total quantity of each book borrowed.
2. Write a query to find the book title and total quantity borrowed for each book.
3. Write a query to find the titles of books that have never been borrowed.
4. Write a query to find the books that have been borrowed more than 10 times.
5. Write a query to find the book titles and their current stock levels for books that have been borrowed more than 20 times.