

Project Title: Online Bookstore

Objective:

Build a backend system for an online bookstore. The system should handle user authentication, book management, and shopping cart functionality.

Requirements:

User Authentication:

Implement a user authentication system with features like registration, login, and logout.

Ensure password hashing and security best practices.

Book Management:

Create APIs for managing books, including features like adding, editing, and deleting books.

Include information such as title, author, genre, price, and availability status.

Search and Filter:

Implement search functionality to allow users to search for books based on title, author, or genre.

Include filtering options to display books by genre or other relevant criteria.

Shopping Cart:

Develop APIs for managing a user's shopping cart.

Users should be able to add books to their cart, view the contents, and proceed to checkout.

Order Processing:

Implement order processing functionality. When a user checks out, create an order with details like items, total amount, and shipping information.

Update the availability status of books after an order is placed.

Database Integration:

Use a relational database (e.g., MySQL, PostgreSQL) to store user information, book details, shopping cart contents, and order history.

RESTful API Design:

Design a clean and RESTful API architecture for the backend.

Use appropriate HTTP methods for different actions.

Middleware:

Implement middleware for authentication to secure the APIs.

Implement logging middleware to log relevant information about incoming requests and responses.

Error Handling:

Implement proper error handling for various scenarios, providing meaningful error messages.

Security:

Implement security measures to protect against common web vulnerabilities (e.g., SQL injection, cross-site scripting). Ensure that sensitive data is handled securely.