

# Bookstore

## Description:

The Bookstore Management System is a comprehensive web application designed to streamline the operations of a bookstore by effectively managing its inventory and facilitating customer interactions. This system provides a user-friendly interface for customers to browse, search, and purchase books, while empowering administrators with efficient tools to manage books, users, and orders.

## Functional Requirements:

### User Management:

- Sign up: Users can create new accounts by providing the required information.
- Login: Registered users can securely log in using their credentials.
- Logout: Users can log out of their accounts to ensure privacy and security.

### Search Functionality:

- By Category: Users can search for books based on categories such as fiction, non-fiction.
- By Author: Users can search for books by specific authors.
- By Description: Users can search for books based on keywords found in the book descriptions.

### Cart Management:

- Add Item: Users can add books to their shopping carts for future purchase.
- Delete Item: Users can remove books from their shopping carts if they change their minds.
- View Cart: Users can review the contents of their shopping carts before proceeding to checkout.

### Book Request:

- Users can submit requests for books that are currently unavailable in the inventory, allowing the bookstore to consider stocking requested titles.

**Admin Panel:**

- Admin Login: Authorized administrators can securely log in to the system using their credentials.
- Admin Logout: Administrators can log out of the system to protect sensitive information.

**Manage Books:**

- Add Book: Administrators can add new books to the inventory, including details such as title, author, price.
- Update Book: Administrators can modify existing book details, ensuring accurate and up-to-date information.
- Delete Book: Administrators can remove books from the inventory, keeping it organized and relevant.

**Manage Users:**

- Add User: Administrators can create new user accounts, enabling a seamless registration process.
- Delete User: Administrators can deactivate or remove user accounts, ensuring proper user management.

## Non-Functional Requirements:

**Performance:**

- The system should deliver prompt responses to user actions, ensuring a smooth and efficient user experience.
- Database queries should be optimized for efficient data retrieval and manipulation, enhancing system performance.

**Security:**

- User passwords should be securely stored using strong hashing algorithms, safeguarding user credentials.
- Sessions should be managed securely to prevent unauthorized access to user accounts.
- Admin functionalities should be accessible only to authorized administrators, ensuring system integrity.

**Scalability:**

- The system should be designed to handle increasing numbers of users and books without significant performance degradation, allowing for future growth.

### User Interface:

- The user interface should be intuitive and user-friendly, enhancing user satisfaction and ease of navigation.

### Scope Architecture:

The Bookstore Management System will be developed using a three-tier architecture:

- 1. Presentation Layer:** This layer will encompass the user interface, enabling users to interact with the system. It will be built using React to ensure responsiveness and visual appeal.
- 2. Application Layer:** The application layer will handle the core business logic of the system. It will be implemented using a server-side programming language Java, along with a web framework Spring Boot.
- 3. Data Layer:** The data layer will manage data storage and retrieval from the database. It will utilize a relational database management system MySQL to store information related to books, users, orders.

By adopting a three-tier architecture, the system will be modular, facilitating easier maintenance and scalability. This approach will also ensure separation of concerns, resulting in a well-organized and understandable codebase.