

Software Requirements Specification Document

ONLINE BOOKSTORE MANAGEMENT SYSTEM
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1. Introduction

1.1 Purpose

The purpose of this document is to outline the requirements for the development of an Online Bookstore Management System.

1.2 Scope

The Online Bookstore Management System will allow two types of roles: Admin and Customer. The system will enable users to register, login, perform CRUD operations for Books, add books to a shopping cart, complete orders, and search for books based on various criteria.

1.3 Definitions, Acronyms, and Abbreviations

- **CRUD:** Create, Read, Update, Delete
- **API:** Application Programming Interface

1.4 References

- React: JavaScript library for building user interfaces.
- Node.js: JavaScript runtime for server-side programming.
- MySQL: Relational database management system.

1.5 Overview

This document will provide a comprehensive description of the Online Bookstore Management System, including its functionality, user roles, and system requirements.

2. Overall Description

2.1 Product Perspective

The Online Bookstore Management System will consist of a React-based frontend, Node.js backend/API, and MySQL database. It will provide an intuitive user interface for both Admin and Customer roles.

2.2 Product Functions

Admin Functions:

- Register and login
- Perform CRUD operations for Books (Create, Read, Update, Delete)

Customer Functions:

- Register and login
- View book list
- Add books to shopping cart
- Complete orders
- Search for books based on keywords, titles, authors

2.3 User Classes and Characteristics

- **Admin:** Responsible for managing books and system settings.
- **Customer:** End-users who browse, purchase, and manage their orders.

2.4 Operating Environment

- The system will be deployed on a web server with support for Node.js and MySQL.

2.5 Design and Implementation Constraints

- The system should be built using React for the frontend.
- Node.js will be used for the backend/API.
- MySQL will be used as the database management system.

2.6 User Documentation

- User documentation will include user manuals and guides for both Admin and Customer roles.

2.7 Assumptions and Dependencies

- Users will have access to a modern web browser.
- The system will require internet connectivity.

3. Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

- The user interface will be designed to be intuitive and user-friendly for both Admin and Customer roles.

3.1.2 Hardware Interfaces

- The system will interact with standard web browsers and internet-enabled devices.

3.1.3 Software Interfaces

- The system will integrate with React for the frontend, Node.js for the backend/API, and MySQL for the database.

3.1.4 Communication Interfaces

- Communication between the frontend and backend will be handled through HTTP requests.

3.2 Functional Requirements

- **Admin**
 - **Register:** Admins can register by providing necessary details.
 - **Login:** Admins can log in using their credentials.
 - **CRUD Operations**
 - **Create:** Admins can add new books to the system.
 - **Read:** Admins can view the list of books.
 - **Update:** Admins can modify book details.
 - **Delete:** Admins can remove books from the system.
- **Customer**
 - **Register:** Customers can register by providing necessary details.
 - **Login:** Customers can log in using their credentials.
 - **View Book List:** Customers can browse the list of available books.
 - **Add to Cart:** Customers can add books to their shopping cart.
 - **Complete Order:** Customers can finalize their purchase.
 - **Search:** Customers can search for books based on keywords, titles, or authors.

3.2.1 Use Case Diagram

[Include the use case diagrams here]

[Textual description of functional requirements continues...]

3.2.2 Sequence Diagrams

[Include sequence diagrams corresponding to each use case here]

[Textual description of functional requirements continues...]

3.2.3 Activity Diagrams

[Include activity diagrams corresponding to each use case here]

[Textual description of functional requirements continues...]

3.4 Non-Functional Requirements

3.4.1 Performance Requirements

- The system should respond to user actions within 2 seconds.
- The system should support concurrent user sessions.

3.4.2 Security Requirements

- User authentication and authorization are required for accessing system features.
- Passwords should be stored securely using hashing algorithms.
- Secure communication protocols (HTTPS) should be used for data transmission.

3.4.3 Reliability Requirements

- The system should be available 99.9% of the time.
- Data integrity should be maintained during all operations.

3.4.4 Availability Requirements

- The system should be available 24/7, with minimal downtime for maintenance.

3.4.5 Scalability Requirements

- The system should be able to handle a growing number of users and books without performance degradation.

3.4.6 Maintainability Requirements

- The system should be easy to maintain and update with new features.
- Code should be well-documented and follow best practices for readability and maintainability.

4. Appendices

- Appendices may include mock-ups, diagrams, and additional technical details.

4.1 Class Diagram

[Include the class diagram here]

[Additional appendices and technical details continue...]

5. Index

- The index provides quick navigation to sections within the document.

This concludes the Software Requirements Specification (SRS) document for the Online Bookstore Management System.