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Software Requirements Specification (SRS) Report

Project Title: Online Bookstore

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1. Introduction

The Online Bookstore project aims to develop a web platform that serves as a one-stop solution for users to browse, search, purchase, and manage orders for various books. The platform will be built using React.js for the frontend, Node.js and Express.js for the backend, and MongoDB for the database. The project will include features such as browsing and searching for books, managing a shopping cart, user account management, an admin panel for managing books and orders, and order management functionalities.

2. System Overview

The Online Bookstore system will consist of the following components:

- Frontend: Developed using React.js, this component will provide a user-friendly interface for browsing books, managing the shopping cart, creating user accounts, and placing orders.

- Backend: Built using Node.js and Express.js, this component will handle HTTP requests from the frontend, interact with the database, and perform business logic operations.

- Database: MongoDB will be used to store book details, user information, shopping cart items, and order information.

- Admin Panel: An interface for administrators to manage books, view orders, and perform other administrative tasks.

3. Functional Requirements

3.1 Browse and Search

- FR 1: Users can browse books by categories such as genre, author, or publication.

- FR 2: Users can search for books by title, author, or keywords.

3.2 Shopping Cart

- FR 3: Users can add books to their shopping cart.

- FR 4: Users can view their shopping cart, update quantities, and remove items.

3.3 User Account

- FR 5: Users can create an account, log in, and log out.

- FR 6: Users can view their order history and manage their profile.

3.4 Admin Panel

- FR 7: Admins can add, edit, and delete books from the inventory.

- FR 8: Admins can view and manage orders placed by users.

3.5 Order Management

- FR 9: Users can place orders for books in their shopping cart.

- FR 10: Users receive confirmation emails upon successful order placement.

- FR 11: Admins can mark orders as processed, shipped, or completed.

4. Non-functional Requirements

- NFR 1: Performance: The system should respond to user actions within 2 seconds under normal load conditions.

- NFR 2: Scalability: The system should be scalable to handle a large number of concurrent users and books.

- NFR 3: Security: User passwords should be securely hashed and stored in the database. HTTPS should be used to encrypt data transmitted between the front end and back end.

- NFR 4: Usability: The user interface should be intuitive and easy to navigate, with clear labels and instructions.

5. User Interface Mockups

User interface mockups provide a visual representation of how the application's interface will look and function. These mockups serve as a reference for designers and developers during the development process. Below are the mockups for the key pages of the Online Bookstore application:

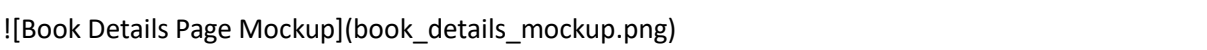
5.1 Home Page

- The home page serves as the entry point for users and displays featured books, promotions, and navigation options.
- It includes a prominent search bar at the top to allow users to search for books quickly.
- Featured books are displayed in a grid layout with images, titles, authors, and prices.

5.2 Browse Books Page

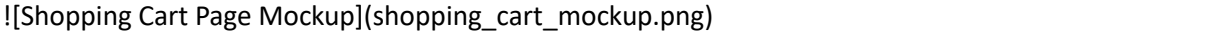
- The browse books page allows users to explore books by categories such as genre, author, or publication.
- Categories are listed on the left sidebar for easy navigation.
- Book listings include thumbnails, titles, authors, genres, and prices.

5.3 Book Details Page



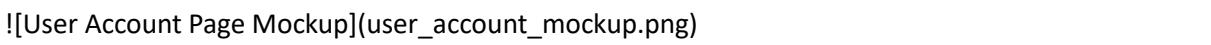
- The book details page provides comprehensive information about a specific book.
- It includes the book's title, author, genre, description, price, and additional details.
- Users can add the book to their shopping cart or proceed to purchase directly from this page.

5.4 Shopping Cart Page



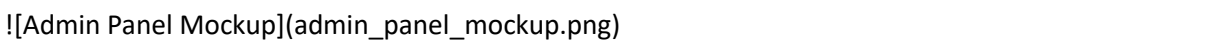
- The shopping cart page displays a summary of the items added to the cart.
- Each item includes its image, title, price, quantity selector, and subtotal.
- Users can update the quantity of items or remove them from the cart.

5.5 User Account Page



- The user account page allows users to manage their profiles, view order history, and update account settings.
- It includes sections for profile information, order history, and account settings.
- Users can edit their profile details, view past orders, and change account settings such as password and email.

5.6 Admin Panel



- The admin panel provides administrators with tools to manage books, orders, and users.
- It includes sections for book management, order management, user management, and system settings.
- Admins can add, edit, or delete books, view and process orders, manage user accounts, and configure system settings.

These mockups provide a visual guide for designing and implementing the user interface of the Online Bookstore application. They ensure consistency in design and functionality across different pages of the application.

6. Glossary

- React.js: A JavaScript library for building user interfaces.

- Node.js: A JavaScript runtime environment for executing JavaScript code outside of a web browser.

- Express.js: A web application framework for Node.js used for building web applications and APIs.

- MongoDB: A NoSQL database for storing and retrieving data in JSON-like documents.

7. References

- React.js Documentation: https://reactjs.org/docs/getting-started.html

- Node.js Documentation: https://nodejs.org/en/docs/

- Express.js Documentation: https://expressjs.com/en/starter/installing.html

- MongoDB Documentation: https://docs.mongodb.com/

8. Data Flow Diagrams

8.1 Context Diagram

The context diagram provides an overview of the system and its interactions with external entities.

Context Level DFD for Online Book Store

8.2 Level 0 Data Flow Diagram (DFD)

The level 0 DFD illustrates the main processes within the system and their interactions.

8.3 Level 1 Data Flow Diagrams (DFDs)