Software Requirements Specification

for

“Chapter Find”– Online Bookstore

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This Software Requirements Specification (SRS) outlines the software requirements for Chapter Find, an online bookstore platform. This document defines the full scope of the initial release, covering both front-end and back-end components that enable book browsing, recommendations, and purchasing. It serves as a guide for the development team and stakeholders, supporting the platform's design, development, and future enhancements.

1.2 Intended Audience and Reading Suggestions

The document is intended for developers, project managers, testers, stakeholders, and documentation writers. It provides an overview of the system requirements and is organized by functionality. Developers and testers may start with the functional requirements, while project managers and stakeholders may focus on the overview and scope sections.

1.3 Project Scope

Chapter Find is an online bookstore platform designed to enhance the book browsing and purchasing experience. Its purpose is to provide a curated selection of books, personalized recommendations, and detailed author profiles, catering specifically to book lovers. The platform aims to offer a seamless, user-friendly experience that combines the joy of discovering new books with the convenience of online shopping. By focusing on personalized content and building a community feel, Chapter Find aligns with the broader goal of creating a unique, engaging platform that stands out in the competitive online book market. This SRS defines the initial release of the system, which lays the foundation for future enhancements and expansion.

2. Overall Description

2.1 Product Perspective

Chapter Find is a self-contained online bookstore platform designed to enhance the book-buying experience. It is not a follow-on product or a replacement for an existing system, but rather a new product created to meet the needs of book enthusiasts. The platform will consist of a website with integrated features for book browsing, personalized recommendations, and user account management. It will also interface with a backend SQL database for storing and managing book, author, and user data. A simple architecture diagram of the system, including components such as the front-end, application layer, and database, will be included in the full design.

2.2 Product Features

Chapter Find will offer several key features to enhance the user experience:

1. ***Personalized Recommendations****: The platform will suggest books based on user preferences and browsing history.*
2. ***Detailed Author Profiles****: Each book will have an author profile, allowing users to learn more about the writer and their works.*
3. ***Shopping Cart and Checkout****: Users can add books to their cart, proceed to checkout, and manage their orders.*
4. ***User Accounts****: Users can create and manage accounts to track their orders and preferences.*

These features are organized to ensure a seamless, user-friendly experience for book lovers. A detailed flow diagram of these features will be provided in Section 3.

2.3 User Classes and Characteristics

There are several user classes for Chapter Find, each with distinct characteristics and roles:

- ***Regular Users****: Users who browse, search, and purchase books. They may have limited access to certain features, such as account creation and basic order management.*
- ***Registered Users****: Users who create an account to track orders, receive personalized recommendations, and participate in the community.*
- ***Admins/Staff****: Authorized personnel who manage the product catalog, process orders, and maintain user accounts. They will have full access to all system functionalities.*
- ***Guest Users****: Users who visit the site without logging in, with limited access to browsing and shopping features.*

Each user class will have different access levels and privileges, with more sensitive features restricted to authorized users.

2.4 Operating Environment

Chapter Find will operate on the following environment:

- ***Hardware Platform****: Web server hosting the application, with adequate capacity to handle traffic and database queries.*
- ***Operating System****: Windows Server or Linux-based systems for hosting the platform Based on the server.*
- ***Web Browser****: Compatible with modern web browsers such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.*
- ***Backend****: SQL Server for database management.*
- ***Frontend****: The application will be web-based and developed using HTML, CSS, and JavaScript.*

The system will ensure compatibility with common software and hardware platforms used by users and administrators.

2.5 Design and Implementation Constraints

- **Technology Stack**: The system will be developed using .NET Core (C#) for the backend, with Razor Pages for dynamic content and SQL Server for database management.
- **Security**: The platform must comply with industry-standard security protocols, such as data encryption, secure login mechanisms, and input validation.

- **Performance**: The system must be optimized for fast load times and handle a growing number of users without performance degradation.
- **Interoperability**: The system should be able to integrate with third-party payment gateways for secure transactions.

2.6 User Documentation

The following user documentation will be delivered along with the software:

- ***User Manual**: A comprehensive guide to using the platform, including browsing, purchasing, and managing user accounts.*
- ***Tutorials**: Step-by-step guides to assist new users in exploring the platform and making their first purchase.*
- ***FAQ**: A collection of frequently asked questions to help users troubleshoot common issues.*

The documentation will be provided in digital format (HTML/PDF) for easy access and updates.

2.7 Assumptions and Dependencies

The following assumptions and dependencies are identified for the Chapter Find platform:

- ***Third-Party Components**: The platform will rely on third-party payment gateways (e.g., Stripe, PayPal) for secure transactions. The functionality of these services must remain stable and supported throughout the project.*
- ***Web Hosting**: The system assumes that the web hosting environment (either Windows Server or Linux) will be configured correctly to support .NET Core and SQL Server.*
- ***User Access**: The system assumes that users will have internet access and use modern web browsers (Google Chrome, Firefox, Safari, Edge) to access the platform.*
- ***Database Integration**: The system depends on SQL Server for database management, and any issues with database hosting or performance could affect functionality.*
- ***Internal Resources**: It is assumed that the development team will have access to the necessary resources, including development tools (Visual Studio, SQL Server Management Studio) and a secure development environment.*

3. System Features

3.1 Book Browsing and Search

3.1.1 Description and Priority

*This feature allows users to browse and search for books by category, genre, author, or title. It is essential for the core functionality of the platform, enabling users to discover and view books of interest. This feature is of **High priority**, as it directly impacts user engagement and satisfaction.*

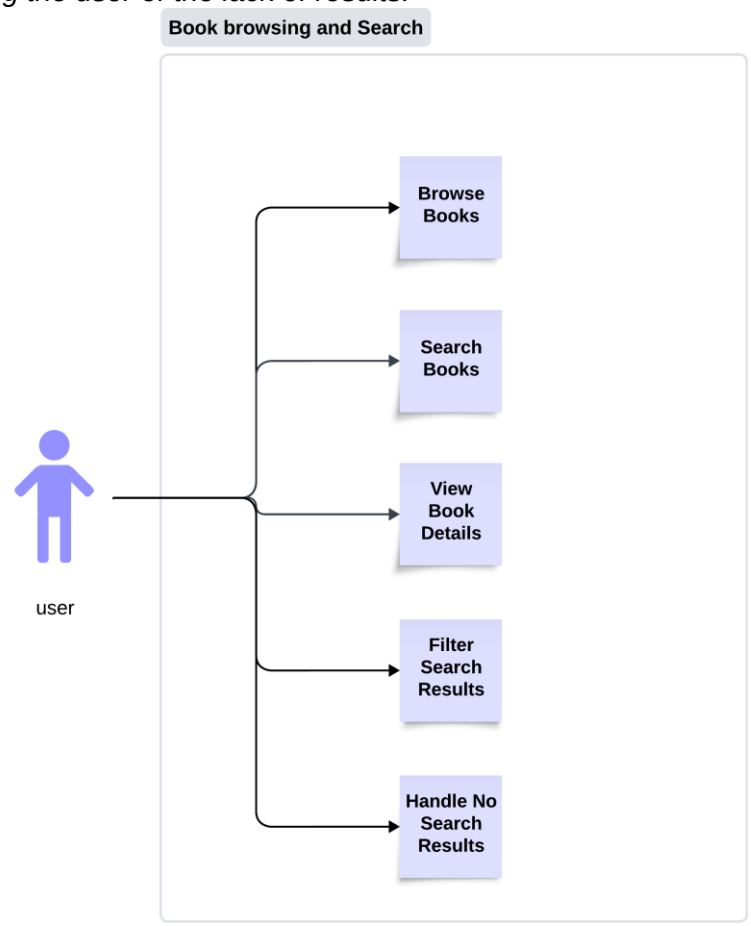
3.1.2 Stimulus/Response Sequences

- ***User Action:** The user enters a search term (e.g., book title, author name) in the search bar or selects a category from the browsing menu.*

- ***System Response:*** *The system displays a list of books matching the search criteria or within the selected category. The list includes book titles, authors, cover images, and brief descriptions.*
- ***User Action:*** *The user clicks on a book title.*
- ***System Response:*** *The system displays the book's detailed page, which includes a full description, author information, pricing, and an option to add the book to the cart.*

3.1.3 Functional Requirements

- *REQ-1: The system must allow users to search for books by title, author, genre, and category.*
- *REQ-2: The search results must be displayed within short time of the user's query.*
- *REQ-3: The system must allow users to filter search results by price range, rating, and publication date.*
- *REQ-4: If no books match the search criteria, the system must display a message informing the user of the lack of results.*



3.2 Shopping Cart and Checkout

3.2.1 Description and Priority

This feature allows users to add books to their shopping cart, review the items, and proceed to checkout. It is a ***High priority*** *feature as it directly impacts the user's ability to complete a purchase.*

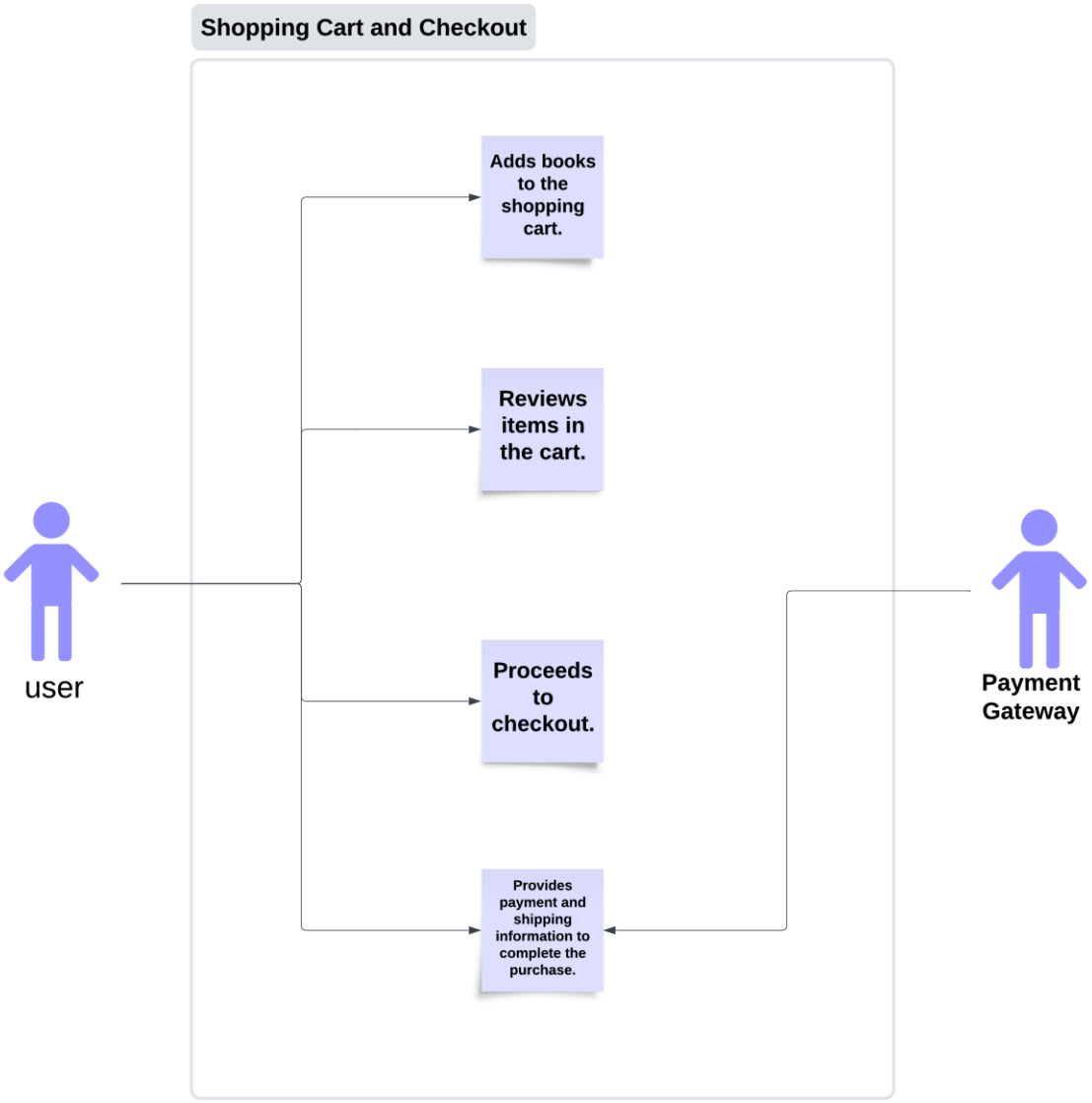
3.2.2 Stimulus/Response Sequences

- ***User Action:*** *The user clicks the "Add to Cart" button on a book's details page.*

- ***System Response:*** *The system adds the book to the shopping cart and displays a confirmation message along with an updated cart count.*
- ***User Action:*** *The user clicks on the shopping cart icon to view their cart.*
- ***System Response:*** *The system displays all items in the cart, including book titles, quantities, prices, and the total price.*
- ***User Action:*** *The user proceeds to checkout and enters payment information.*
- ***System Response:*** *The system processes the payment and provides a confirmation of the purchase.*

3.2.3 Functional Requirements

- *REQ-1: The system must allow users to add books to the cart and view the cart contents at any time.*
- *REQ-2: The cart must display the book title, author, price, and quantity for each item.*
- *REQ-3: The system must calculate the total price of items in the cart, including applicable taxes and shipping fees.*
- *REQ-4: The system must provide an option for users to edit the quantity or remove items from the cart.*
- *REQ-5: The system must process user payments securely, using a third-party payment gateway.*
- *REQ-6: If the payment fails, the system must display an error message and allow the user to retry.*



3.3 User Account Management

3.3.1 Description and Priority

*This feature allows users to create and manage their accounts, including logging in, updating personal information, and viewing order history. It is a **High priority** feature as it supports personalized experiences and facilitates order tracking.*

3.3.2 Stimulus/Response Sequences

- ***User Action:** The user clicks on the "Sign Up" button and enters their personal information (e.g., name, email, password).*
- ***System Response:** The system creates a new user account and sends a confirmation email to the user.*
- ***User Action:** The user clicks on "Login" and enters their email and password.*
- ***System Response:** The system authenticates the user and redirects them to the homepage with access to personalized recommendations and account features.*
- ***User Action:** The user updates their personal information (e.g., email or password) in the account settings.*
- ***System Response:** The system updates the user's information and confirms the changes.*

3.3.3 Functional Requirements

- *REQ-1: The system must allow users to register by providing an email address and password.*
- *REQ-2: The system must securely store user credentials using hashing for password storage.*
- *REQ-3: The system must allow users to log in with their registered email and password.*
- *REQ-4: The system must send a confirmation email to users after successful account creation.*
- *REQ-5: The system must allow users to reset their password.*
- *REQ-6: The system must provide users with the ability to update their personal information (e.g., name, email, password).*

3.4 Author Profiles

3.4.1 Description and Priority

*This feature allows users to view detailed author profiles, which include biography, other works, and links to related books. It is of **Medium priority**, enhancing the browsing experience and encouraging users to explore more books by the same author.*

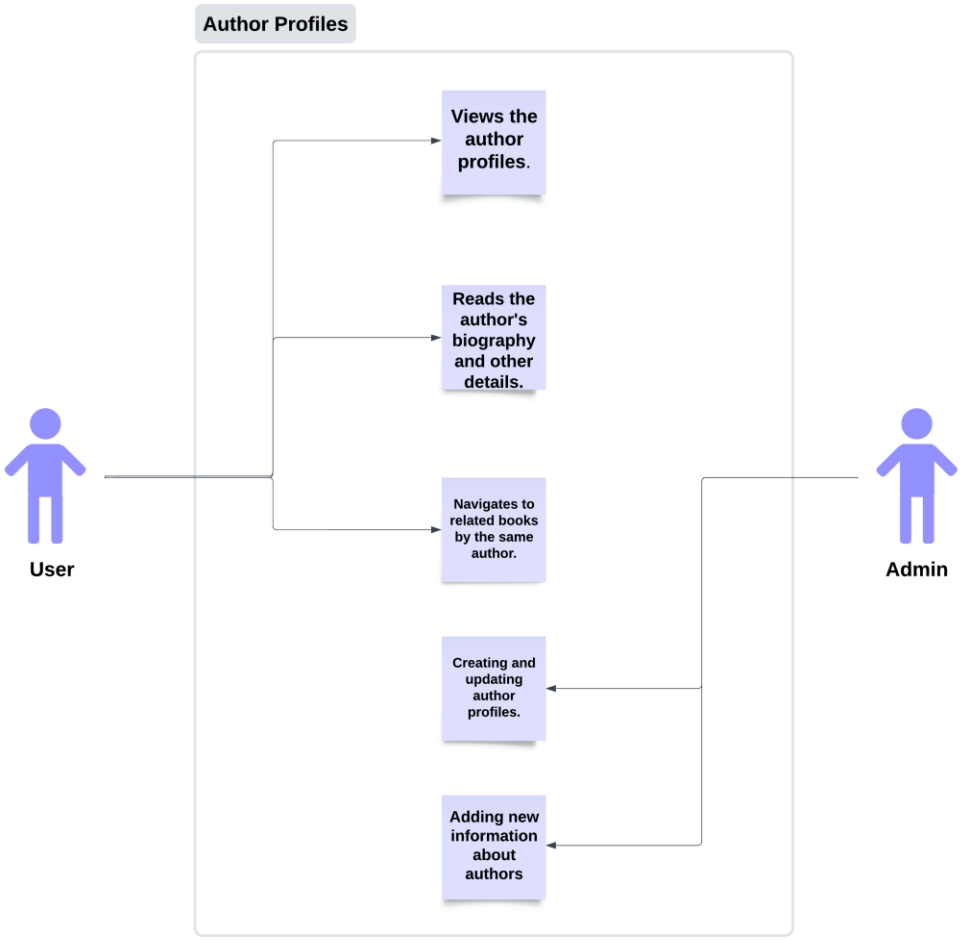
3.4.2 Stimulus/Response Sequences

- ***User Action:** The user clicks on the author's name from a book's detail page.*
- ***System Response:** The system displays the author's profile page, which includes a biography, list of books, and links to similar authors.*
- ***User Action:** The user clicks on a book title listed on the author's profile.*
- ***System Response:** The system displays the details of the selected book.*

3.4.3 Functional Requirements

- *REQ-1: The system must display an author's biography, including their background and writing style.*
- *REQ-2: The system must list all books written by the author, with links to each book's details page.*

- *REQ-3: The system must allow users to click on related authors or books to explore similar content.*
- *REQ-4: The system must display the author's profile in a clear, readable format with relevant information.*



3.5 Order Management

3.5.1 Description and Priority

*This feature enables users to manage their orders, including viewing order history, tracking order status, and canceling orders. It is a **High priority** feature, as it supports the user's ability to track and manage their purchases.*

3.5.2 Stimulus/Response Sequences

- ***User Action:** The user clicks on the "Order History" section in their account.*
- ***System Response:** The system displays a list of past orders, including the order number, date, status, and total amount.*
- ***User Action:** The user clicks on a specific order to view details.*
- ***System Response:** The system displays detailed information about the order, including items purchased, shipping address, and tracking information.*
- ***User Action:** The user cancels an order before it is shipped.*
- ***System Response:** The system confirms the cancellation and updates the order status.*

3.5.3 Functional Requirements

- *REQ-1: The system must allow users to view their past orders, including order details and status.*
- *REQ-2: The system must allow users to track their order status and shipping progress.*
- *REQ-3: The system must allow users to cancel orders before they are shipped and provide a confirmation message.*
- *REQ-4: The system must display a message if the order cannot be canceled (e.g., if it is already shipped).*

3.6 Search History

3.6.1 Description and Priority

*This feature allows users to view their previous search queries, making it easier to find books they have previously looked for. It is a **Medium priority** feature that enhances the user experience by simplifying book discovery.*

3.6.2 Stimulus/Response Sequences

- ***User Action:** The user enters a search term in the search bar.*
- ***System Response:** The system stores the search term and displays it in the "Search History" section.*
- ***User Action:** The user clicks on a past search term.*
- ***System Response:** The system performs the search again and displays the results based on the previous query.*

3.6.3 Functional Requirements

- *REQ-1: The system must store the last 10 search queries entered by the user.*
- *REQ-2: The system must display the search history in the search bar or in a dedicated section on the user's account page.*
- *REQ-3: The system must allow users to delete individual search history items or clear the entire history.*

3.7 Admin User Features

3.7.1 Description and Priority

*This feature set focuses on the administrative functionalities required for managing the online bookstore. Admin users have a higher level of access to manage the system's content, users, and orders. It is a **High priority** feature since it ensures that the admin can effectively oversee and control the platform.*

3.7.2 Stimulus/Response Sequences

- ***User Action:** The admin logs in using valid credentials.*
- ***System Response:** The system authenticates the admin and redirects them to the admin dashboard.*
- ***User Action:** The admin selects "Manage Users" from the dashboard.*
- ***System Response:** The system displays a list of registered users with options to edit, deactivate, or delete user accounts.*
- ***User Action:** The admin selects "Manage Orders" to view customer orders.*
- ***System Response:** The system displays a list of customer orders with details such as order status, payment status, and shipping details.*
- ***User Action:** The admin adds or removes books in the catalog.*
- ***System Response:** The system updates the book catalog and displays changes in real-time.*

3.7.3 Functional Requirements

- *REQ-1: The system must allow admin users to log in securely with a username and password.*
- *REQ-2: The system must provide a dashboard for admins to view an overview of key platform statistics, such as user activity, sales, and inventory.*
- *REQ-3: The system must allow admins to manage orders, including viewing order details, changing order statuses (e.g., processing, shipped, completed).*
- *REQ-4: The system must allow admins to manage the product catalog, including adding new books, editing book details (e.g., price, description, availability.*
- *REQ-5: The system must allow admins to manage book categories and author profiles, including the creation and modification of categories or author pages.*
- *REQ-6: The system must ensure that only users with admin privileges have access to the admin panel.*

3.8 Book-Specific Discounts

3.8.1 Description and Priority

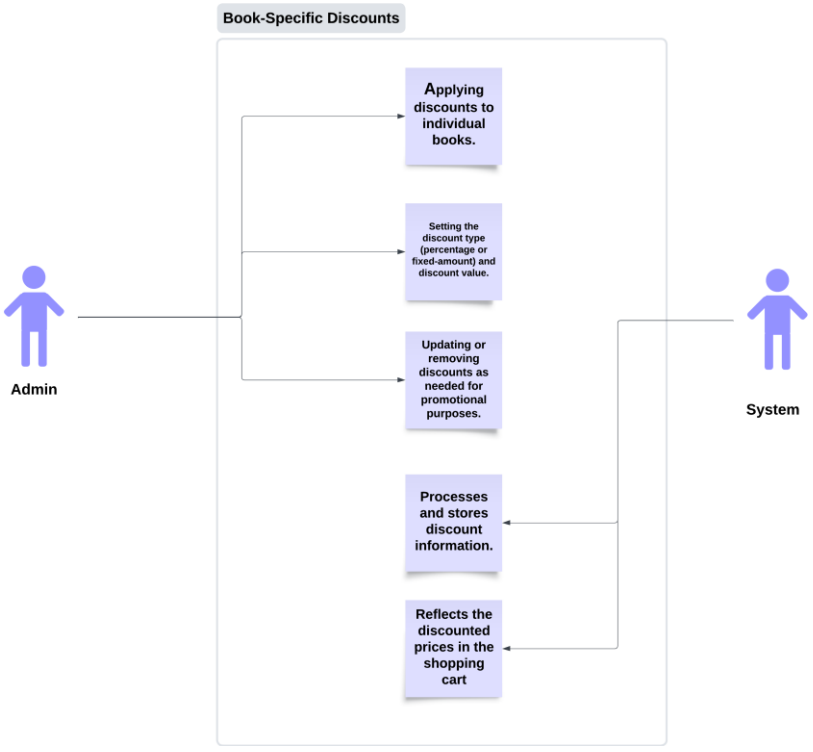
This feature allows admins to apply specific discounts to individual books, either as a percentage or fixed-amount discount. It is a Medium priority feature, enabling promotional flexibility to boost sales of certain books.

3.8.2 Stimulus/Response Sequences

- ***Admin Action:*** *The admin selects a book from the catalog and applies a discount.*
- ***System Response:*** *The system updates the book's price, displaying the original price, discount, and discounted price on the book's detail page.*
- ***User Action:*** *The user views the book's page and sees the discounted price.*
- ***System Response:*** *The system applies the discount in the cart if the book is added, showing both the original and discounted price.*

3.8.3 Functional Requirements

- *REQ-1: The system must allow admins to set discounts for individual books, either as a percentage or fixed amount.*
- *REQ-2: The system must display the original price, discount, and final price on the book's detail page for discounted books.*
- *REQ-3: The system must automatically apply the discount when the user adds the book to their cart and reflect it in the total.*
- *REQ-4: The system must allow users to see discounted prices wherever the book appears in search results or category listings.*



3.9 Category Showcase Page

3.9.1 Description and Priority

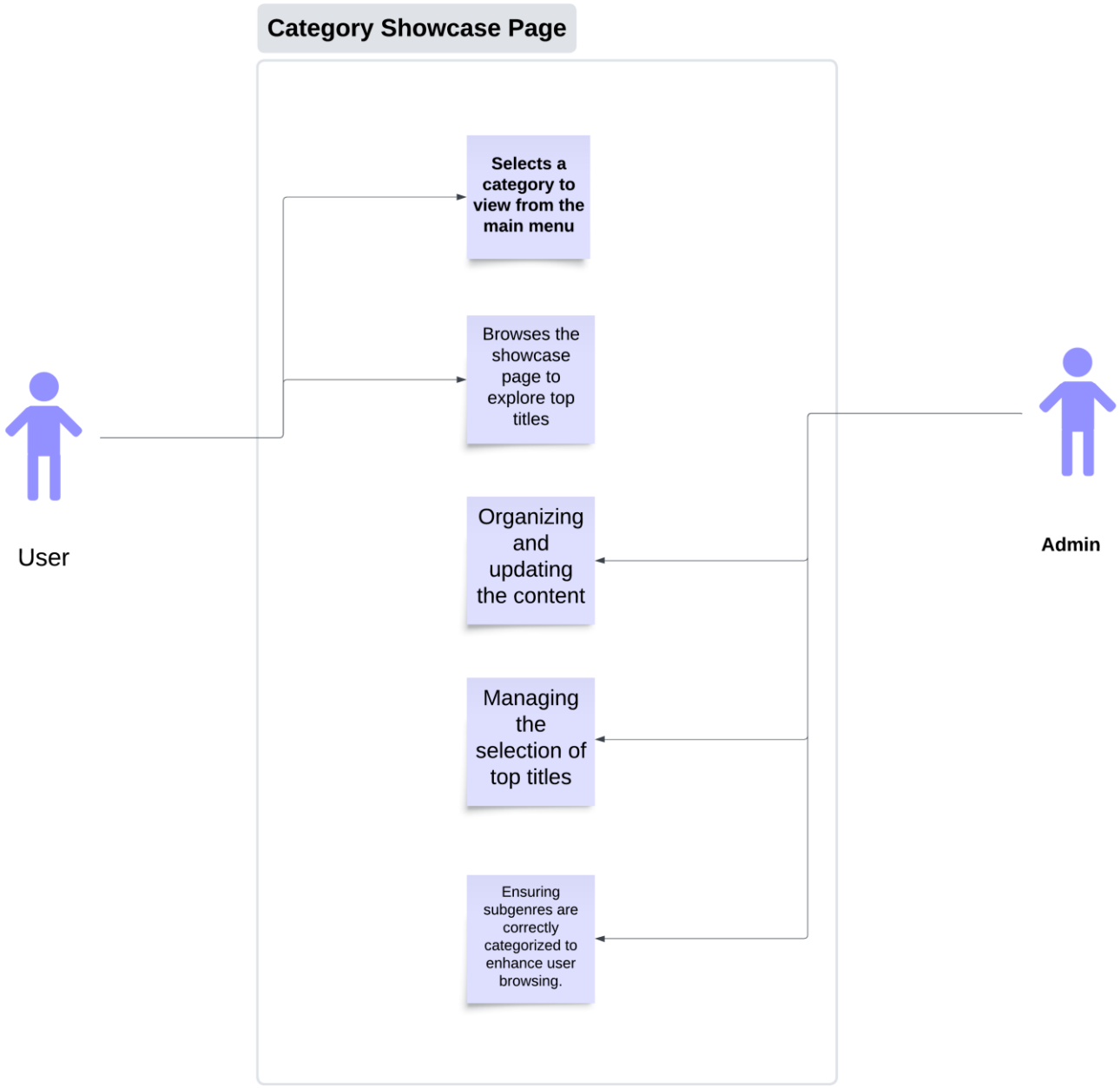
*This feature offers a dedicated showcase page for each book category, providing users with an overview of each category's top titles, subgenres, and bestsellers. It is a **High priority** feature, enhancing the user's ability to browse and discover books within specific interests.*

3.9.2 Stimulus/Response Sequences

- ***User Action:** The user clicks on a category (e.g., "Science Fiction") from the main menu or search results.*
- ***System Response:** The system displays the category showcase page, including new arrivals books in the selected category.*

3.9.3 Functional Requirements

- *REQ-1: The system must provide a dedicated page for each book category.*



3.10 Book Series Display

3.9.1 Description and Priority

*This feature organizes books that belong to a series, allowing users to view all books in a series. It is a **Low priority** feature but enhances the experience for readers interested in series collections.*

3.9.2 Stimulus/Response Sequences

- ***User Action:** The user clicks on a series.*
- ***System Response:** The system displays information about the series, including other books in the series**.***

3.9.3 Functional Requirements

- *REQ-1: The system must display all books in a series on the book's detail page, listed in reading order.*
- *REQ-2: The system must allow admins to assign books to specific series and designate reading order.*
- *REQ-3: The system must enable users to add the entire series to their cart at once.*

4. External Interface Requirements

4.1 User Interfaces

*The **user interface (UI)** for the online bookstore should be clean, intuitive, and responsive, following modern design principles. The key features of the UI are as follows:*

- ***Layout**: A user-friendly navigation bar at the top of each page with links to Home, Books, Categories, Cart, Profile, and Contact Us. The main content area should display book listings, categories, or the user's cart in a grid layout. The footer should contain links to communication links, phone number and social media.*
- ***Standard Buttons and Functions**:*
  - ***Search Bar**: Prominent search functionality to find books by title, author.*
  - ***Buttons**: Standard action buttons like "Add to Cart," "Buy Now," and "Checkout" should have a consistent design and position across the platform.*
- ***Responsive Design**: The website should adapt seamlessly to different screen sizes (desktop, tablet, mobile), ensuring usability on all devices.*

4.2 Hardware Interfaces

The software does not require any specific hardware beyond standard desktop and mobile devices that support internet browsers.

4.3 Software Interfaces

The software interacts with various software components, including databases, libraries, and external services:

- ***Database**:*

  - ***SQL Server**: The platform will use SQL Server for data storage (books, user accounts, orders, etc.). The software will interface with the database via SQL queries for CRUD operations.*
- ***External Services**:*
  - ***Payment Gateway**: Integration with payment processors (e.g., Stripe, PayPal) for secure transactions. The platform will handle payment information through API requests to process payments.*
- ***Web Browser**: The platform is accessible via popular web browsers like Google Chrome, Firefox, and Safari, and requires no special browser plugins.*
- ***Operating System**: The system will run on servers using Windows Server or Linux-based OS for the backend infrastructure.*

4.4 Communications Interfaces

The platform will use the following communication interfaces for user interactions and data transfers:

- ***Web Protocols**:*
  - ***HTTP/HTTPS**: The website will communicate over HTTP/HTTPS for secure data transmission. HTTPS will be mandatory for all interactions involving sensitive user information, including login and checkout.*
- ***Email**:*
  - ***SMTP/Email**: The platform will send transactional emails (e.g., order confirmation, shipping updates) via SMTP servers.*

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- *Response Time: The system should respond to user actions within an acceptable time frame, ideally within a few seconds under normal usage.*
- *Scalability: The system should be able to handle an increasing number of users or data load over time without performance degradation.*
- *Availability: The platform should be available for use at all times, with minimal downtime for maintenance or troubleshooting.*

5.2 Safety Requirements

- *Data Protection: The system must implement safeguards to protect user data from unauthorized access and ensure that no sensitive information is lost in case of system failure.*

5.3 Security Requirements

- *Authentication: Users must be securely authenticated before accessing personal or sensitive information.*

- *Data Encryption: Sensitive data should be encrypted during transmission and storage to ensure privacy and security.*
- *Access Control: The system should have controls in place to ensure only authorized users can access certain functions or data.*

5.4 Software Quality Attributes

- *Usability: The system should be easy to use and navigate.*
- *Testability: The system should be built in a way that allows for easy testing of different components and functions to ensure they work as expected.*