Software Requirements Specification

Book vault : A Digital Library

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Chapter 1

Introduction

The Software Requirements Specification (SRS) for Book Vault provides a comprehensive description of the system that aims to manage, store, and retrieve books in a secure and organized digital environment. Book Vault is designed as a user-friendly platform for libraries or institutions to efficiently manage their collections, ensuring easy access and proper categorization of their books. This document outlines the functional and non-functional requirements, design constraints, and user interactions for Book Vault.

1.1 Purpose

1. **Centralized Book Management**: To allow users to store, organize, and manage their personal book collections digitally. Users can track books they own, have read, want to read or plan to purchase.

2. **Book Discovery and Recommendations**: To help users discover new books through personalized recommendations based on their reading history, preferences, or social circles.

3. **Sharing and Community Building**: To create a platform where readers can share book reviews, ratings, and discussions with other users, fostering a reading community.

4. **Tracking Reading Progress**: To help users log and track their reading progress, set reading goals, and get insights or statistics on their reading habits.

5. **Secure Storage**: To securely store information about books and provide access to user libraries across devices.

1.2 Intended Audience

- Developers
- Testers
- Management team

1.3 Intended Use

Developers

Developers can use this SRS to easily understand what the project is about, which part they should focus on more, which part to improve, and find if there is anything to add.

Testers

Testers can use this SRS to test the software as per requirements. This will make the testing more organized, as from SRS testers can easily get the idea where to look and what errors or bugs they should be looking for.

Management Team

The management team can use this SRS to get an idea about what they are going to manage and what the features of this project are, as well as how these features will help the clients or users.

1.4   Product Scope

Basically this web based application is for managing books to make a convenient environment for the readers. There are different website like this but none of them are well known due to lack of user friendly ecosystem.

Benefits of this web application:

1. User can search their required book.

2. User can track where they ended last and can further continue to read next.

3. User can add books to their wish list.

4. User can remove books.

5. User can review books.

6. User can share books with other users.

7. User will have their profile updated with a book list and can also track previously read books.

8. User will have similar book recommendations.

Objective:
Give a user-friendly interface to all book lovers.

Goals:

1. Our goal is to ensure that the book lovers can get their favorites in one place.

2. They can manage and share books with other enthusiastic reader

3. Users can review books so that it can help users to know about it.

Chapter 2

Overall Description

Book Vault is a website where book enthusiasts can find many books according to their taste and can enhance their reading experience by managing their book reading efficiently. This website also gives a platform for readers to rate and share their opinions of a particular book.

2.1 User Classes and Characteristics

We are making a website for a book management system, where there will be 2 main classes.

Service Seekers:

- Book lovers, who love to read and explore new books online.

- Writers who want to publish their book on an online platform.

Service Provider:

- Website admins offer readers an enhanced experience for managing and tracking their books.

2.2 User Needs

This project will allow readers to look for books by different authors and genres, ensuring that every reader's needs and tastes are considered. It will also have an easy-to-operate interface that allows users to easily search for and organize their reading schedules. User can make their wishlist of the books they are planning to read. Individuals will also be able to track their reading progress and also can rate and share reviews of a particular book. All these functionalities ensure that readers can easily find books they are interested in, organize their reading activities, and even give opinions about the books to other people's networks without much hassle.

2.3 Operating Environment

Accessibility: The website should be accessible on any device that supports web browsing.
Database: To create a database of the readers and books, we will use MySQL as a database management system.
Platform: The website will be built using HTML, CSS, Python, and Flask.

2.4 Constraints

- To use the review or ratings functions, Users must need to log in.

- Users can give 1 rating or review per book, and they must do it within a certain word limit.

- The rating interface should be limited to 1-5 star rating for ease of use.

- When there is a lot of traffic, the system should not slow down.

- We have to develop the project within 2 months.

- User end operating environment must be Windows.

2.5   Assumptions

- Users can use computers with a basic knowledge and have a stable internet connection.

- Users are comfortable reading online versions of books.

- Users have a good command over basic languages.

- Users can rate and review books once they finished reading a particular book.

- The platform will be accessible on mobile and desktop.

- Each User will have only one account.

Chapter 3

Requirements

The requirements of this project are divided into two parts - functional requirements and non-functional requirements

3.1   Functional Requirements

1. **Sign Up:**
   As a User
   I want to create an account
   so that, I can navigate through this website in order to read my desired books, manage my book list, give ratings, and share my own personal thoughts and opinions regarding a particular book.

   Confirmation:

   - While trying to create an account, there should be visible input fields in order to input credentials like (Email, Password etc.)
   - While trying to enter passwords, display: "Password should contain special characters".
   - Once User enters a valid Email address, send a verification message to that address and once confirmed display: "Thank you for verifying".
   - After entering the necessary credentials, display: "Your account has been created successfully!"

2. **Log in:**
   As a User
   I want to log in to my account
   so that, I can save my progress and manage my reading

   Confirmation:

   - When I navigate the login page, I should see input features to log in. For example, email and password.
   - When I enter login after filling up the input features, the system must authenticate my identity. If I am right, I should be able to log in; otherwise, the email or password I entered is wrong.
   - The system should provide an option to reset my password if I cannot remember my password

3. **Add Books As a** User
   I want to add books
   so that, I can start reading the books I want to read.

   Confirmation:

   - Users can add books if they want to start reading.

4. **Track progress**
   As a User

I want to track my progress of currently reading books
so that, I can try to finish some of the books I am reading.

Confirmation:

- Users can track the percentage of a book he has read.

- if the percentage is 100 percent, it will go to completed books.

5. **Completed Books:**
   As a reader
   I want to make a list of the books I finished reading
   so that, I can keep track of which books I completed reading and start a new one.

   Confirmation:

   - When the reading progress of a currently reading book will be 100 percent, it will be added to the completed books.

6. **Wishlist:**
   As a reader
   I want to create my wishlist of books
   so that, I can remember which books I plan to read.

   Confirmation:

   - There will be an option "Add to wishlist" in every book. The reader will click on "Add to wishlist" of the books they are interested in reading in the future.

7. **Book rating**
   As a User
   I want to rate the books that I have read as a registered User of the website
   so that, I can provide feedback to others and help in recommending good books as well as help them choose good books.

   Confirmation:

   - User must need to login in order to give rating using their required credentials.
   - The rating should be recorded by the system within the given rating interface.
   - After the rating is recorded, one confirmation message like "Your rating has been submitted successfully!" should pop up on the screen.
   - If the User tries to modify their given rating, the system should notify them with a message like "Your rating has been updated".
   - The system should prevent any user from giving rating for the same book twice and show a message, "You already rated this book once!"

8. **Book review:**
   As a User
   I want to write and post reviews of the books I have read
   so that, I can share my thoughts and opinions about a particular book with the reader's community.

   Confirmation:

   - After submitting a review, display: "Thanks for your review!"
   - "Your review has been updated" or "Your review has been removed" should appear on screen when User tries to edit or delete a particular review.
   - If any User tries to write or post a review without logging in, display: "Please login in order to submit a review"
   - If User tries to exceed word limit 1000, display: "Review too long"

9. **Category-wise display of books**
   As a User
   I want to view books organized by specific categories,
   so that, I can easily find books within genres or categories that interest me.

   Confirmation:

   - When the user selects a specific category , the system will display a list of books belonging to that category.
   - Categories can include:Genre,Author,Publication year,Language
   - Each book in the category listing must display key details, such as:Book title,Author name,Cover image.

10. **Display Book Details**
    As a User
    I want to view detailed information about a specific book,
    so that, can learn more about the book's content, author, and other relevant information before deciding to read, purchase, or review it.

    Confirmation:

    - When the user selects a book from the book list or search results, the system will display a detailed view of the book.
    - The detailed view includes Book title, Author(s), Genre(s), and Publication date.

11. **Book sharing**
    As a User of the Book Vault website,
    I want to share my books with other users
    so that, I can help fellow readers discover new titles

    Confirmation:

    - When the user selects a book from the book list or search results, the system will display a detailed view of the book.
    - There will be a share option where users can share the books with other users by clicking their enrolled user ID.

12. **User profile**
    As a User user of the Book Vault website,
    I want to create and manage my profile,
    so that, I can showcase my book collection, share reading preferences, and connect with other readers.

    Confirmation:

    - Users can easily edit their profile information
    - Profiles can be public, private, or viewable only by connections, providing flexibility in how users engage with the community.
    - Users can list their favorite genres and authors.

3.2 Non Functional Requirements

Performance Requirements:

- The website should be able to load and work with any functionalities within 3 seconds.
- The website system must be able to handle a large number of users.
- The error rate of the functions should be as minimized as possible.
- The website should be optimized enough.

Security Requirements:

- Database must be secured and encrypted.

- User sessions should be secured.

- Users' personal information must be protected.

Error Handling:

- The system should be able to handle all the errors that can lead to data loss and leakage of the user's sensitive information.

- Incorrect information from the user must be managed. For example, wrong password.

Safety Requirements:

- System must be able to provide safety to users.

- Ensure successful communication between the user and the website.

Chapter 4

Glossary

SRS: A software requirements specification (SRS) describes a software system to be developed. The software requirements specification lays out a software system's functional and non-functional requirements. It is used as a tool to connect developers, clients, managers, and everyone related to the software.