System Requirements Document

December 2, 2024

Contents

Functional Requirements

- **FR-001: User Registration and Login**
  Users must be able to sign up with an email address, username, phone number, and password.

- **FR-002: View Book Recommendations**
  Users must be able to view book recommendations on the homepage.

- **FR-003: Search for Books**
  Users must be able to search for books by title, author, or keywords.

- **FR-004: Sort and Filter**
  Users must be able to sort search results by price and filter results by genre and buy/rent preference.

- **FR-005: View Book Details**
  Users must be able to click on a book and view its details, including author name, description, price of rent or buy, and reader's score.

- **FR-006: Add Books to Cart**
  Users must be able to add books to their cart for checkout.

- **FR-007: Checkout**
  Users must be able to complete the checkout process for books in the cart.

- **FR-008: Put Books for Rent**
  Users must be able to list a book for rent by providing details like title, author, price, ISBN number, duration, and description.

- **FR-009: Put Books for Sell**
  Users must be able to list a book for sale by providing details like title, price, ISBN number, and description.

- **FR-010: View and Edit Profile**
  Users must be able to view and edit their profile information (name, e-mail, contact number).

- **FR-011: Reader's Score**
  Users must be able to score another user based on the condition of the book rented or bought.

- **FR-012: Transaction History**
  Users must be able to see a log of their past transactions (rented books, books rented out, books bought, and books sold).

- **FR-013: Logout**
  Users must be able to log out of their accounts.

- **FR-014: Buy/Rent Books**
  Users should be able to buy or rent books that they have viewed.

- **FR-015: Wishlist**
  Users should be able to add books that they might want to buy or rent in the future to their wishlist.

Non-Functional Requirements

Performance

- **NFR-001:** The website must handle up to 1,000 concurrent users without performance degradation.

- **NFR-002:** Pages should load within 2 seconds for 90% of users under normal traffic conditions.

Usability

- **NFR-003:** The website should have a responsive design, accessible and functional on desktops, tablets, and smartphones.

- **NFR-004:** All features must comply with basic usability standards (e.g., clear navigation, intuitive design).

Scalability

- **NFR-005:** The system must support a 50% increase in user base annually without requiring a complete redesign.

Reliability

- **NFR-006:** The website must ensure 99.5% uptime, with no single downtime exceeding 1 hour.

Accessibility

- **NFR-007:** The website must comply with WCAG 2.1 Level AA standards to ensure accessibility for users with disabilities.

Maintainability

- **NFR-008:** The codebase must be modular to allow new features to be added with minimal disruption to existing functionality.

- **NFR-009:** All system logs must be accessible to the admin panel for debugging and maintenance purposes.

User Stories

Sr. No	User Story	Acceptance Criteria	Failure
1	As a user, I want to search for books by title, author, and genre, so that I can quickly find the books I'm interested in.	Search bar allows users to input keywords for book searches. Search results display relevant books with basic information (title, author, genre).	Search functionality does not return relevant books or fails to load.
2	As a user, I want to view detailed information about a book, so that I can decide if I want to rent or lease it.	Book details page shows synopsis, author, price, availability, and reviews.	The book details page fails to load completely, showing an error or blank screen.
3	As a user, I want to leave a rating for the user who gave the book on rent, so that I can share my feedback and help other users choose who to rent the book from.	Users can rate a book owner and leave a numerical rating. Ratings are displayed on the book's detail page for other users.	User attempts to rate without a successful rental transaction. Unregistered user tries to leave feedback.
4	As a user, I want to view my past rental history, so that I can keep track of the books I've rented.	Users can see a list of previously rented books with details (title, author). History should be available for at least the past 12 months.	Books rented/bought more than 12 months ago will not be displayed.
5	As a user, I want to cancel a rental before it is shipped, so that I can change my mind without being charged.	Users can cancel a rental order if it hasn't been shipped yet. A confirmation email is sent after cancellation.	The user cannot find the cancellation option on the rental details page, even though the rental is still in the "Pending" or "Unshipped" status.
6	As a user, I want to rent a book for a specific duration, so that I can read it without purchasing the book outright.	Users can select a book and choose a rental duration (e.g., 1 week, 1 month). After selection, the book is added to the cart with rental details and pricing.	Selected book is not available for the specified rental duration. User inputs an invalid rental duration (e.g., exceeding the maximum allowed rental period).

7	As a user, I want to list my book for rent on the website, so that I can share it with others and earn money.	Users can access the book listing feature from their profile. Users can enter the book's details (title, author, genre, condition, rental price).	Required information about the book (title, author, condition, price, rental period) is missing or invalid. User not logged in to an account.
8	As a user, I want to log in to my account on the website, so that I can access personalized features, manage my rentals, and view my profile.	Users can access the login page from the homepage. Users can enter their email address and password to log in.	User enters incorrect login credentials. Session times out during the login process, then asks the user to re-enter the credentials.
9	As a new user, I want to create an account on the website, so that I can rent or lease books and manage my profile.	Users can access the registration page from the login page. Users can enter required information (name, email, password).	Required fields (e.g., name, email, password) are missing or invalid (e.g., weak password). Entered email address is already associated with an existing account.
10	As a user, I want to reset my password if I forget it, so that I can regain access to my account.	Users can request a password reset by entering their email address. Users receive a password reset link via email.	User enters an unregistered email address or username during the password reset process. Password reset link expires before the user completes the reset.
11	As a user, I want to extend the rental or lease period of a book, so that I can keep the book for a longer time if needed.	Users can request an extension from their profile or rental/lease page. Users can select the additional duration and see the new cost.	If the book is not available for an extended rental period (e.g., another user has reserved it). If the requested extension exceeds the maximum allowable rental period.
12	As a user, I want to update my profile information, so that my account details are current and accurate.	Users can access the profile settings page from their dashboard. Users can update personal information (name, email, password, address).	The new entries are invalid (e.g., weak password, blank space in username, etc.).

13	As a user, I want to view the expiry date of my book lease and have options to renew, so that I can decide whether to extend or return the book.	Users can see the expiry date of their leased books in their profile or lease history. Notifications are sent as the lease expiry date approaches, with renewal instructions.	Notifications about expiry or renewal options fail to appear. Users cannot renew or return the book on time.
14	As an admin, I want to add, update, or remove payment methods, so that users can have secure and current payment options for rentals and leases.	Admins can access the payment methods management section. Admins can add new payment methods, update existing ones, or remove outdated ones.	If there's a backend error while saving changes, show: "Couldn't save changes. Please try again later."
15	As a user, I want to receive notifications for important actions (e.g., book rentals, returns, payment confirmations), so that I can stay informed about my account activities.	Users receive notifications for successful transactions, due dates, and returns. Notifications are displayed on the user's dashboard and sent via email.	Unauthorized user tries to access notifications, redirect them to login. Duplicate notifications are created for the same event.
16	As a user, I want to filter book listings by genre, author, and language, so that I can find books that match my preferences more easily.	Users can apply filters by genre, author, and language on the book listing page. The system displays only the books that match the selected filters.	Filters do not work correctly or fail to show relevant books.
17	As a user, I want to sort book listings by price and reader's score, so that I can quickly find affordable books or top-rated ones.	Users can choose to sort books by price (low to high, high to low) or reader's score (best to worst). The book listings are re-ordered based on the selected sorting criteria.	Sorting options fail to update the listing order. Sorting criteria are not displayed or not applied correctly.
18	As a user, I want to receive book recommendations based on the reviews I leave, so that I can discover books similar to those I've enjoyed.	The system analyzes user reviews and recommends books with similar themes, genres, or authors. Recommendations are displayed in the user's profile or sent via notifications.	Recommendations fail to load or display duplicates of the same book.

19	As a user, I want to log out of my account, so that I can secure my account after using the platform.	Users can log out from their profile or any page. Logging out redirects the user to the homepage. A message confirms the user has logged out successfully.	User's session is not properly terminated, leaving the account still active or accessible.
20	As a user, I want to view my reader's score on my profile, so that I can see how others have rated my interactions on the platform.	The reader's score is displayed on the user's profile page. The score is updated based on recent ratings from other users.	Users do not see their updated score or are not notified of changes.
21	As an admin, I want to verify publisher accounts, so that only legitimate users can list books for sale.	Admins receive notifications when new publisher accounts are created. Verification steps include reviewing business details and identification on the basis of the ISBN number.	Verification fails, preventing publishers from listing books. Publishers are not notified about verification status.
22	As a renter, I want to report any damage to a rented book, so that I am not held responsible for damage I didn't cause.	Users can report book damage by submitting a form through their rental history. Photos and a description of the damage can be uploaded with the report.	Problems uploading photos (e.g., unsupported file type or file size limits exceeded). User has not currently rented the book.
23	As an admin, I want to be able to manage the books/content in the system, so that I can ensure inappropriate or outdated content is removed or updated.	The admin can view a list of all books, filter them by genre, author, language, etc., and remove inappropriate books.	System errors prevent the admin from updating or removing content, leaving outdated or inappropriate material visible.
24	As a user, I want to purchase a book, so that I can own it and read it anytime.	The user can add books to the cart and proceed to checkout to finalize the purchase. The system calculates the total cost, including taxes if applicable.	User is not logged in. User does not enter valid address details or payment information.

25	As a user, I want to update the information of a book I listed, so that I can correct or improve the details to attract more renters.	Users can access their listed books and edit details (e.g., price, description, condition). Changes are saved and reflected immediately.	Edits are not saved due to system errors. Invalid input for fields (e.g., empty or invalid values).
26	As a user, I want to add books to a wishlist, so that I can easily find and rent or purchase them later.	Users can add any book to their wishlist from the book detail page. The wishlist is accessible from the user's profile.	User is not logged in. Book already exists in the wishlist.
27	As a publisher, I want to list books for sale on the platform, so that I can reach potential buyers.	Publishers can access the "Sell a Book" feature from their profile, input book details, and successfully list the book for sale.	Publisher cannot access the book listing form due to system errors. Required fields are missing or invalid.
28	As a user, I want to track my book sales, so that I can monitor my earnings and sales performance.	Users can view a sales dashboard showing their books' performance, including total sales, earnings, and books sold.	Dashboard data does not load correctly or is inaccurate. Filters do not work as expected.
29	As a user, I want to remove a book from the listings, so that it is no longer available for purchase or rental.	Users can access the book listing management page and remove books with a "Remove" button. Removed books no longer appear in search results.	Removed books still appear in search results or listings due to backend errors. Confirmation email is not sent.
30	As a publisher, I want to offer a discount on my books, so that I can attract more buyers.	Publishers can apply a discount to any book, set its duration, and see the updated price on the listing.	Discount application fails, or confirmation is not provided, leaving the original price unchanged.