

Final Requirements Specification Document

Purpose

The purpose of this document is to define the functional and non-functional requirements for a web-based library management system. This system will assist in managing book inventory and tracking user borrowings efficiently.

System overview

The system will be a user-friendly web application designed for:

- Library staff to manage books and users
- Library patrons to search, borrow, and return books

The platform will improve efficiency, reduce manual work, and enhance user experience.

Functional requirements:

- Users can create an account (Login/out)
- Users can view books and details
- Users can search for what they want
- Users get suggestions based on previous borrowed books, and new arrivals
- Admin can add delete and change books and information
- Users can make secure payments
- Users can see deadlines for when they should return their books
- System keeps track of users borrowings and stock availability.
- Admins can see the data stored from all borrowings
- The system sends notifications to update the users on borrowed books and new releases
- System automatically blocks users that did not return books in time until an admin unblocks them.

Non-Functional requirements

- **The system should be user friendly**
- **The system should have a fast response time**
- **Secure login system**
- **Secure checkout system**
- **Sensitive data should be hidden and inaccessible to the wrong hands**
- **The system can be used on different types of devices: mobile, desktop, ios, Android, and more.**
- **The system should make it easier for users to borrow books**
- **Assist users in finding what they would like to read**
- **Assist the library with users not returning books**
- **The system must be available at all times (minimal downtime)**
- **Data must be stored securely and backed up regularly**

User roles:

- **Library Staff (Admin):** Manage inventory and users
- **Library Members (Patrons):** Search and borrow books

Data Requirements:

Book Data

- Book ID
- Title
- Author
- Category
- ISBN
- Availability status

User Data

- User ID
- Name
- Email

- Password
- Role

Borrowing Data

- Borrow ID
- User ID
- Book ID
- Borrow date
- Due date
- Return date

System Design Overview

Architecture

- Web-based client-server architecture

Database

- Relational database (e.g., MySQL)

Interface

- Web interface accessible via browser

Constraints and Assumptions

Constraints

- Limited budget for development
- Internet access required
- Limited technical skills of some users

Assumptions

- Users have basic computer knowledge
- Library has internet connectivity
- Staff will be trained to use the system

Acceptance Criteria

The system will be considered successful if:

- Users can register and log in successfully
- Users can search and borrow books
- Admin can manage books and users
- System accurately tracks all borrowing activities
- The interface is easy to use