

Q.3

Library Management System

1. Introduction

1.1. Purpose of the document

The System will manage library operations such as book borrowing, returns, user registrations and catalog Management.

1.2 Scope of the document

This provides detailed overview of system's objectives, features and user interactions.

CMS will automate management of library resources, including cataloging, borrowing returning and tracking books.

1.3 Overview

The system will facilitate the operations of physical library by allowing librarians to track inventory, borrowers to borrow books, returned books, generate reports. It will support multiple user roles, administration, user, members, efficient platform to manage library digitally.

2. General Description

2.1 User characteristics

- Library staff :
- General Public

2.2 User Interface

- Easy to use & intuitive
- Secure & encrypted data transactions
- Support various functionalities.

2.3 Features

The system will function as a centralized platform for managing library's resources. It will enable users to search books etc.

Librarians, administrator's will have ability to add / update / remove books. System will also generate reports for library management. Easy tracking of book inventory.

3. Functional Requirements

- User registration , authentication : new users to register and existing users to log in using credentials.
- Book Catalog - administrator, can add, update and remove books.
- Books Searching & Borrowing
- Book Return , fine Calculation

- Notification System
- Report Generation

4. Interface Requirements

User Interface : System provides a easy web-based interface for both librarians & users.

API: System will have API's for integration
System will send reminders for users to return books on time.

5. Performance Requirements:

- Have least response time.
- Should be able to handle load.
- Should recover easily & quickly after a failure to reduce down time.

6. Design Constraints

- Security : Prioritize security measure to protect sys.
- Scalability : Future growth & increasing demand should be kept in mind.
- Integration: Must consider other lib sys & services

7. Non-Functional attributes:

- Easy to use
- Maintainability
- Interoperability
- Portability

8. Preliminary Schedule & Budget

- Schedule for this project is estimated as:

- Requirement Gathering & Analysis - (4-5 weeks)
- System Design - (2-3 weeks)
- Development - (8-10 weeks)
- Testing & Validation - (4-6 weeks)
- Deployment & Training - (2-3 weeks)

Total Estimated Weeks - (19-23 weeks)

- Estimated budget for this project is:

- Requirement documentation - (₹ 100000)
- Design & tools - (₹ 50000)
- Development - (₹ 100000)
- Testing - (₹ 50000)

Total Estimated budget - (₹ 300000)