

Q Generate the SRS document for Library management system

1. Introduction

1.1 Purpose of this document

→ This document defines the system that will manage library operations such as book borrowing, returns, user registrations and catalog management.

1.2 Scope of the document

→ This document provides detailed overview of system's objectives, features and user interactions. Library Management System 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, return books, generate reports. It will support multiple user roles administration, user, member, efficient platform to manage library digitally.

2. General Description

2.1 User characteristics

→ Library staff

→ General public

2.2 User Interface

→ Easy to use and intuitive

→ secure and encrypted data transactions

→ support various functionalities

2.3 Features

→ The system will function as a centralised platform for managing library's resources.

→ It will enable users to search books etc

→ librarians, administrators 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

- Book searching and borrowing

- Book return and fine calculation

- Notification system

- Report generation.

4. Interface Requirements

- User Interface - System provides an easy web based interface for both librarians and 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 and quickly after a failure to reduce down time

6. Design Constraints

- security - Prioritize security measures to protect system
- scalability - Future growth and increasing demand should be kept in mind
- Integration - must consider other library system and services

7. Non Functional Attributes

- Easy to use
- Maintainability
- Interoperability
- Portability

8. Preliminary Schedule and Budget

- Estimated schedule for the project is

- Requirements gathering and analysis - (4-5) weeks
- System Design - (2-3 weeks)
- Development - (8-10 weeks)
- Testing and validation - (4-6 weeks)
- Deployment and training - (2-3 weeks)

Total estimated weeks - (19-23 weeks)

→ Estimated Budget for the project is

- Requirement documentation - ₹ 10000
- Design and Tools - ₹ 50000
- Development - ₹ 100000
- Testing - ₹ 50000

Total estimated budget - ₹ 300000