3. Library Management System

Problem Statement: To develop a software solution that can efficiently manage day to day options of library including circulation of books, managing user account, tracking, inventory and generating reports.

System should be user friendly, secure and scalable for future growth.

This system automates many manual process such as book issue/return, overdue fines, updates, etc.

SRS

1. Introduction

1.1 Purpose : To define the functional & non-functional req by ensuring effective library management. It serves as roadmap for development that can improve operation that'll enhance customers/student's experience and ease the staff's work.

1.2. Scope : To run and ensure that library function as smooth as possible. Development time depends on how complex management system has to be built.

1.3 Overview : Application is developed to optimise library operations, leading to increased efficiency.

2. General Description

The library management system is divided into different modules that handles different function of library like cataloguing, circulation, acquisition and administration.

It's used to organize and maintain database including books, magazines, etc. Handles lending and returning of books.

Manages library's inventory, and purchasing. Budgeting, staff management, etc are also some use of our system.

3. Functional Requirements

- Cataloging: allows librarian to easily organize all-types of books, journals, magazines, etc.

- circulation: should provide ability to manage circulation of materials including checkin/out, renewals, holds, etc.

- Should allow librarian to take user registration, verification and authentication. They can also track the activities.

- should have robust security features to ensure safety and integrity of library data.

4. Interface requirements

- system should have user friendly interface that's easy to navigate even for user.

- system should have responsive design that adapts to different screen sizes & devices.

- system should be accessible to all users.

- System should provide user with customization options to change preferences.
- Multilingual support should be provided keeping different user in mind.
- Help and support should be available.

5. **Performance Requirement**

- System should respond quickly to user's request such as searches & checkouts.
- should be able to handle increasing no. of users and responses
- System should be available 24X7.
- System should be reliable with high degree of uptime.
- System should be secure with appropriate access control, data encryptions, etc.

6. **Non-functional Requirement**

- It should be user friendly and intuitive with clear interface.
- Should respond faster with scalable architecture and high availability.
- System should be easy to maintain and update
- It should be able to integrate with other library systems.
- should follow relevant laws like copyright issues, etc.

7. <u>Design constraint:</u>

- Hardware constraint: system has to be neatly integrated within the already built library infrastructure.

- Software limitations: constraint on amount of data that can be processed and stored and the speed of data

- Time constraint: should be developed fast

- Security: must adhere to security regulations and protect users credentials.

8. <u>Preliminary schedule 4 Budget</u>

Schedule:

   Planning: 75 days
   Development: 4 months
   Testing: 1 month
   Deployment: 15 days

Budget:
   Hardware: $100000
   Training: $35-40,000