

Library Management System

1. Introduction

1.1 Purpose

This document outlines the functional and non-functional requirements for the development of a library management system. The purpose is to create a system that automates the management of books, users, and transactions within a library.

1.2 Scope

This document covers the core features, technical specifications and system architecture required for LMS. The system will manage book inventory, user reg, borrowing/returning transactions and reporting.

1.3 Overview

The LMS will allow lib staff to manage both collections and track borrowing activities, while members search for books, borrow and view their borrowing history. The system will ensure efficient library operations.

2. General description

manage book inventory, register users, track lending and returns. Search for books. generate reports, monitor system usage and manage users
calculate fine for late returns

3 Functional requirements

3.1 user management

Users must be able to register and login. Admin dashboard

3.2 Book catalog and inventory

Literary staff must be able to add, remove, update ~~new~~ book records
Users can search for book by title, author, genre

3.3. Borrowing and returning

Users can borrow books and view due dates

System calculates fine for late returns

3.4 reporting

Admins must be able to generate reports

4. Interface requirements

4.1 User interface

System must provide an easy way to use web interface for staff and members to perform tasks

4.2 External system interfaces

System should integrate with external databases for retrieving data

5. Performance requirements

5.1 System load

Support upto 1000 concurrent users

5.2 Response Time

Book searches and borrow operations must be produced within 2 sec

6. Design constraints

6.1 Platform

Cloud based to ensure scalability

6.2 Compliance

comply to data privacy standards

7. Non functional requirements

7.1 Security

Encrypt all user data

7.2 Reliability

99.9% uptime

8. Preliminary schedule and budget

8.1 Timeline

Requirement gathering: 1 month

Development: 4 months

Testing: 1 month

Deployment: 1 month

8.2 Budget

Development: \$100,000

Infrastructure and hosting: \$20,000

Annual maintenance: \$10,000