

LAB - 2

→ Library Management

1. Introduction

1.1 Purpose

The purpose of this SRS document is to outline the requirements for the library management system. The LMS is intended to automate library operations.

1.2 Scope

The LMS will serve as a comprehensive platform for managing physical and digital library resources. The system will be used by library staff and library members.

1.3 Overview

This document covers the functional and non-functional requirements of the library management system.

2. General description

The LMS will be a standalone web-based application designed to manage library resource efficiently. The system will consist of several modules: Book management, Transaction management, search etc. It will provide role-based access.

3. Functional Requirement

1. User Authentication — user must be able to register with unique username & passwords.
2. Book management — Add, update or delete book records.
3. Issue, Return & Renewal — Issue books to members & update book status.
4. Search and catalog management — Advanced search filter and keyword-based search.
5. Fine & Penalty — automatically calculate fines for overdue books.

4. Interface Requirement

- User-friendly interface for both desktop and mobile browsers.
- The system should support integration with barcode scanners and receipt printers.
- Integration with backend databases like MySQL.

5. Performance Requirement

- The system should support large users.

- Avg response time for book ~~search~~ ^{search} operations should not exceed 2 sec.

6. Design Constraints

- The system must be developed using a three-tier architecture.
- Use a standardized coding convention

7. Non-functional attributes

- Security - data encryption for sensitive info.
- availability - The system should have 99.9% uptime
- maintainability - modular code design for easy updates.

8. Preliminary schedule and Budget

Budget estimate

- Development : \$50,000
- Testing : \$10,000
- Hardware & software : \$15,000
- Miscellaneous : \$5,000

Total estimated budget : \$80,000

Shelton, 1/2/2

