

# LAB 3 - SRS Document for

## Library Management System

### 1. Introduction

#### 1.1 Purpose of this Document

The purpose of this document is to define the requirements and specifications for the development of a Library Management System. It aims to provide clarity on the system objectives, scope and deliverables to ensure efficient management of library resources.

#### 1.2 Scope

This document outlines the functionalities of the Library Management System, including book cataloging, member management, circulation and reporting. It also specifies the development cost and estimated timeline.

#### 1.3 Overview

The Library Management System is a software solution designed to automate library operations, such as book issuance, returns, catalog management, and fine calculation.



## 2 General Description

The system will support librarians, members and administrators by offering functionalities like book search, user registration, transaction management and reporting.

## 3 Functional Requirements

### 3.1 Catalog Management

- Maintain a digital catalog of books and resources
- Support search and filtering by author, title, subject or ISBN.

### 3.2 Member Management

- Register and manage library members with personal details.
- Track borrowing history and membership validity.

### 3.3 Circulation Management

- Allow issuing and returning of books.
- Calculate overdue fines and send reminders

### 3.4 Reporting

Generate reports on issued books, overdue items and inventory status.



## 4. Interface Requirements

### 4.1 User Interface:

- simple and intuitive design for librarians and members.
- Accessible via web and desktop applications.

### 4.2 Integration interfaces:

- Integration with barcode scanners for quick book transactions.
- option to integrate with external databases for e-resources.

## 5 Performance Requirements

- System response time under 2 seconds
- Support up to 500 concurrent users
- Maintain data integrity across all operations.

## 6. Design constraints

- Must run on standard library hardware (computers, barcode scanners, printers)
- use relational databases (eg. MySQL/PostgreSQL)



## 7 Non Functional Attributes

- Security: Authentication for staff and members
- Reliability: Ensure availability during library working hours
- Scalability: Expandable to multiple branches
- Usability: Easy navigation and search options

## 8 Preliminary Schedule and Budget

The development is estimated to take 4 months with a budget of \$60,000 including planning, coding, testing and deployment