

③ Software Requirements Specification for Library Management System.

1. Introduction

- Purpose : The purpose of this document is to define the requirements for a library management system. The system will help libraries manage book collection, member records, lending and return efficiently.
- Scope : The system will support library staff in managing book collection, tracking member activity, and issuing books. It will also allow members to search for books and view their borrowing history. The system is designed for use by small and large libraries alike.
- Overview : The library management system will consist of modules for book cataloging, member management, book issuance, return tracking, fine calculation, and reporting. It will be accessible via desktop or mobile devices.

2 General Description:

- Product Perspective : The system will integrate with current library hardware and software systems, allowing staff to manage both physical and digital

- collections in one platform.
- user characteristic : were include staff and members. The interface will be simple and user-friendly.
- System constraints :
The system must be operational during library hours and support multiple concurrent users.

3. Functional Requirements

- catalog management for books
- Member registration and management
- Book issuance and return tracking
- Late fee calculation
- Search functionality for books by title, author, and genre.
- Report generation for inventory and member activity.

4. Interface Requirements

- Graphical user interface for staff
- Web-based portal for members.
- Barcode Scanner integration for book issuance / return.

5. Performance Requirements

- must handle 200 concurrent user.

6. Design constraints.

- must support integration with existing library barcode scanning system.
- modular design to allow easy future update for digital collections management.

7. non-functional attributes.

- Security : protect member personal details and borrowing history with encryption.
- Scalability : must scale for up to multiple branches.
- Reliability : 99.9% uptime during library hours.

8. Preliminary Schedule and Budget

- Development Timeline : 5 months.
- Estimated Budget : \$80,000.