

# SRS for Library Management System

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## 1. Introduction:

### 1.1 Purpose:

The purpose of this document is to define the requirements for the Library Management system. It ensures proper handling of books, members, borrowing/returning, fines and catalog search.

### 1.2 Scope:

The system will automate library operations including book issue, return, catalog search, fine calculation, and membership management.

### 1.3 Overview:

LMS will replace manual record-keeping with a digital system, enabling librarians and students to access resources efficiently.

## 2. General Description:

The system supports librarians, staff and members offering catalog browsing, issue/return tracking, overdue management, and report generation.

## 3. Functional Requirements:

- Book Management: Add, update and delete books. Maintain availability status.
- Member Management: Maintain member records, registration, and borrowing limits.
- Issue / Return System: Track borrowing/returning with due dates.
- Fine Calculation: Automatically calculate overdue.
- Search & Catalog: Search by title, author, ISBN.
- Reports: Generate reports on issued books, overdue items, and member activity.

#### 4. Interface Requirements:

- UI: Simple web-based and mobile interface.
- Integration: Barcode / RFID support for book issue / return.

#### 5. Performance Requirements:

Response time  $\leq 2$  seconds. Handle up to 500 concurrent users. Ensure real-time inventory update.

#### 6. Design Constraints:

- Relational DB, web based architecture with Java / Python backend.

#### 7. Non-Functional Requirements:

- Security: Role based access (admin, student)
- Reliability: 99% uptime.
- Scalability: Expandable for large university libraries.
- Portability: Accessible via web & mobile.

#### 8. Preliminary Schedule & Budget:

Development Duration: 4 months, Estimated budget: \$50,000