

# Library Management System

## 1. Introduction :

### 1.1 Purpose of this Document :

This document outlines the design of a library management system, intended to automate the management of books, members and transactions in a library.

### 1.2 Scope of this Document :

The system will streamline library operations, improving book issuance, return processes, and inventory management. The project is estimated to complete in 4 months within a moderate budget.

### 1.3 Overview :

The system automates the cataloging of books, user registrations, and transactions management, allowing both library staff and members to easily access and manage resources.

## 2. General Description :

The system provides functionality for managing books, member details, and transaction like book issuance and returns. It aims to enhance user satisfaction by providing an efficient and user-friendly interface for both



Staff and library members.

### 3. Functional Requirements:

- Books cataloging & inventory management.
- Member registration & account management.
- Issuance, renewal and return of books.
- Overdue fine calculation & notifications.

### 4. Interface Requirements:

The system will feature a dashboard for librarians to manage books and transactions while members can search and reserve books through a web-based interface. Real-time data updates ensure accuracy in inventory.

### 5. Performance Requirements:

The system should allow fast book searches and transactions processing within 2-3 seconds, with 99.5% system uptime and accurate data handling for all transactions.

### 6. Design Constraints:

The system must integrate with the existing library infrastructure and database. The project is constrained to a 4-month timeline and must operate within a fixed budget.

### 7. Non Functional Attributes:

Key, Non-functional features include security for user data, scalability for future expansion, reliability, and portability for multi-platform access.

### 8. Preliminary schedule and Budget:

The project will be completed in 4 months with a budget of INR 3,09,000 covering development, testing, and deployment.