

Library Management System

1. Introduction

1.1 Purpose.

The purpose of this document is to specify the requirements for the Library Management System which automates the process of managing books, members, and transactions.

1.2. Document Convection

The document follows IEEE standards for software Requirements Specification.

1.3. Intended Audience.

This document is for developers, testers, librarians, and project stakeholders.

1.4 Project scope

The LMS provides functionalities for book cataloging, member registration, issuing, returning, and fine calculation. It improves efficiency and reduces manual errors.

1.5 References.

IEEE SRS format, Standard database practices, and sample library workflows.

2. Overall Description.

2.1. Product Perspective

The system replaces manual registers with a centralized computerized database.

2.2 Product functions.

It manages book records, user membership, transactions and report generation.

2.3 User classes.

Librarians, students and administrators.

2.4 Operating Environment

Web-based application, running on Windows/Linux servers with a SQL database.

2.5 Constraints

Access restricted by roles; transaction must be logged.

2.6 Documentation

User manuals and admin guides will be provided.

2.7. Assumptions and Dependencies.

Stable internet connection and functioning database server are assumed.

3. Specific Requirements.

3.1 Functional Requirements.

- Add, update, and delete book records.
- Register and manage members.
- Issue and return books with due-date tracking.
- Calculate and manage fines.

3.2 External Interface Requirements.

- Web interface for users and admin.
- Database connectivity.

3.3 System Features.

- Search books by title, author, or category.
- Generate reports on usage and fines.

3.4 Non-functional Requirements.

- Secure authentication.
- Response time < 2 seconds.

- Scalable to handle 10,000 + records

4. Appendices.

4.1 Glossary.

LMS - Library Management system, DB - Database.

4.2 Future Enhancements

Integration with e-books and digit library services.