

3. Library Management System.

1. Introduction

1.1 Purpose.

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

1.2 Document Conventions

The document follows IEEE standards for Software Requirements Spec. Specification.

1.3 Intended audience and leading suggestions.

The 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 effort.

1.5 References

IEEE SRS format, standard database design practices, and sample library workflows.

2. Overall Description

2.1 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 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 servers 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.
- * Data base connectivity.
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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 digital library services.~~