LIBRARY MANAGEMENT SYSTEM

1.0 Introduction

1.1 Purpose of this Document

This document defines the requirements and specifications for a Library management System (LMS). It provides clarity on objectives, scope and deliverables.

1.2 Scope of this Document

The library management System will automate the process of cataloging, borrowing, returning and maintaining records in a library. It will reduce manual effort, increase efficiency, and provide real-time tracking of resources.

1.3 Overview

The LMS will allow librarians to manage books, members, and transactions. It will support book search, online reservations, fine management and reporting.

2. **General Description**

The system will be used by librarians, students and administrators. Features include catalog management, transaction tracking, and user access control.

3. **Functional Requirements:**

3.1 **Catalog Management**
 o Add, update and remove books and journals.

3.2 **Member Management**
 o Maintain profiles of students / faculty.

3.3 **Book Issuing & Returning**
 o Track issuing and return with due dates.

3.4 **Fine Calculation**
 o Automatically calculate late fees.

3.5 **Search**
 o Provide book search by title, author, ISBN or category

3.6 **Reports**
 o Generate daily / weekly monthly reports.

4. Interface Requirements
4.1 Simple, Interface for Librarians and Students

4.2 Integration:
- Barcode Scanning support and Integration with student portal

5. Performance Requirements

5.1 Scalability:
- Support 500 concurrent users.

5.2 Response Time:
- Search results displayed within 2 seconds

6. Design Constraint
- Compatible with existing library hardware (computer, barcode scanner).
- Database: mysal/postgresol

7. Non-Functional Attributes

7.1 Security:
User authentication for librarians and members.

7.2 Reliability
- Backup system to avoid data loss.

7.3 Scalability
- Support addition of new branches

8. Schedule and Budget
The development is estimated to take 6 months with a budget of $ 80,000.