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Library Management System

1. Introduction

1.1 Problem Statement

The library management system is an eventual software that automate the management of library operations. The primary issue faced by the library staff is the manual and time-consuming process of managing books which may lead to errors. this problem can be resolved by developing a software system that can automate the processes and improve the overall efficiency of the library operations.

1.2 Scope:

The document outlines the requirements for the development of a web-based library management system to automate book lending, tracking, and inventory management.

1.3 Overview

the Library Management system will be designed to be user-friendly, fast and scalable to accomodate a large number of users and books. It will be developed using Java programming language, with a relational database management system and will ensure the security of data through user authentication.

2) General Description:

It will be a web based application accesible to library staff and users with a valid login. The system will provide features such as book lending, book tracking, inventory management and users management. All data is stored in a central database.

3) Functional Requirements:

The library management system will have the following functional requirements like i) Book lending - Library staff can lend books to users and track the book's status, including due date and return date
ii) Book tracking - Track the location of the books.
iii) Inventory Management. the system should allow library staff to manage the inventory including the addition and removal of books from the library.

4) Interface Requirement:

The Library Management system should have a user-friendly interface for both staff and users.

i) User interface : Should allow users to browse the library catalog, reserve books and check their browsing history.

ii) Staff interface: Staff interface should allow library staff to manage books, users, inventory etc.

5) Performance Requirements

The LMS must be fast and responsive. The system should have a response time of not greater than 2 seconds and should be scalable to accomodate a large number of users and books.

6) Design Constraints

The LMS must be developed on a web-based platform using Java with a RDMS.

7) Non-Functional Attributes

The LMS should be user-friendly, reliable and ensure the security of user

8) Preliminary Schedule and Budget:

The development of the LMS is expected to take approximately six months with a budget of $50,000.