Project Title: Library Management System

CATEGORY: Web Application

PURPOSE

The purpose of developing this web app is to provide ease of accessibility to the students as many times, when students go to the library, the books are not available and they have to go multiple times to the library for the same book.

SCOPE

It will help the students to know about the availability of the books in the library from the hostel itself and go to the library for issuing the same when available.
Also, the library management can keep records of which books are issued, are not available. Books can be added into the library, and can be removed too.
This can also be implemented on a larger scale as well. We can build such an application on which various libraries/ institutions can use it so that they can maintain/ create an online inventory of books and also people can access the books available in the library remotely.

INTRODUCTION

Proposed System:

The Library Management System aims to give the students a hassle-free experience of using the library. There are obviously many advantages of this system to the student as well as the teacher and the associated educational institution. The system after certain analysis contains 2 segments - Students and Admin(library management). Each segment will have a different interface and different features accordingly.

Students :

- Each student can change their details or password whenever they want.
- They can login and check which books are available.
- They can see their history of issuing books.
- They can also download the soft copies of books if available.

Admin:

- Each admin member can add or delete the books.
- Edit the details such as quantities of the books.
- Remove or edit the Student's profile.
- Edit their own profile.
- Have full control over all the records.

Advantages for Students

- **Time-saving:** Students can easily check the availability of the books in the library without much hassle or can directly download the soft copy if the book is not available.
- **Accessibility:** Students will be able to see whether a book is available or not in the library and can then proceed to issue that in the library. Also keep track of their previously issued books.
- **Flexibility:** Students can change their password or details anytime they want.

Advantages for Admin

- **Tracking:** Admin can keep track of which books are issued and which are available in the library.
- **Record Log:** Admin can access all the records regarding the books.
- **Ease of adding books:** Admin can easily add or remove books from the library.

FUNCTIONAL REQUIREMENTS

1. Users must have a valid User ID and password to login thus creating their individual profiles.
2. Separate interface for Admin and Students.
3. Students can check the availability of the books in the library.
4. Admin can add or remove any book from the library.
5. Admin can block Students' profiles for eg. if the fine exceeds too much.
6. Admin will have full access to the records.
7. Admin and Student can search for books.
8. Download the Pdf of the book(if available).

NON FUNCTIONAL REQUIREMENTS

1. The flexible service-based architecture will be highly desirable for future extensions.
2. Maximum uptime.
3. User-friendly interface.

SOFTWARE TOOLS

Database: MySQL
Client: Browser / App
Tools: VS Code
Language: HTML, CSS, JavaScript

DEPLOYMENT

Operating System Server: Node.js

HARDWARE SPECIFICATION

Processor: i7 10th Gen
RAM: 16 GB
SSD: 1 TB