



PROJECT PROPOSAL

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Submitted to:

Sir Hamas Fayyaz

Project team:

Farzam Asad	[258]
Manahil Hanif	[259]
Ali Sultan	[232]
Amna Liaquat	[251]
Muhammad Nouman	[228]

“Library Management System”

Introduction

A library is a place where huge collection of books and resources are available which can be accessible by the users.

The purpose of this proposal is to address the need for an efficient and user-friendly Library Management System. The proposed system will automate various tasks involved in library operations, such as cataloging, book circulation, and resulting in increased efficiency and improved user experience.

Working Criteria

The Library Management System will be developed in C++ using OOP concepts. OOP allows for **modular and organized code structure**, making it **easier to manage** and **maintain the system**. File handling will be utilized to **store** and **retrieve data**, ensuring **storage of library information** such as books, patrons, and borrowing history.

❖ Resource Management:

The LMS will provide functionality to add new books, update book details, and store them in a file for easy retrieval. Each book will have attributes like title names, book authors, serial numbers and availability status etc.

❖ Patron Management:

Patrons can borrow and return books through the LMS. The LMS will maintain a database of library patrons, including their personal information and borrowing history. It will allow for easy search and retrieval of patron details.

Example Procedure for Using LMS

The procedure for using our LMS is rather easy to use. **However only admins are able to make changes in the records**. It is only possible if the user has admin privileges. All of the LMS is protected through a **Password-protected System**. An example procedure for using our LMS is given under:

a. Searching for a Book:

Enter the book's title or author name in the search bar. The LMS will scan the catalog file and display matching results. Select the desired book to view its availability and other details.

b. Borrowing a Book:

Provide the required details to the librarian. The librarian will check the availability of the requested book in the LMS. If available, the librarian will update the borrowing records, set a due date, and provide the book to you.

c. Returning a Book:

Present the borrowed book to the librarian. The librarian will update the borrowing records and return the book to the catalog.

Model

In this proposed system, we use variety of concepts and structures:

- ❖ Data encapsulation
- ❖ Data structures
- ❖ Classes and Structures
- ❖ Data and Function members
- ❖ Go-to functions
- ❖ Single linked lists
- ❖ Nodes management
- ❖ Pointers for nodes

Benefits

Here are some benefits enlisted....

1. Library administration made **simple and easy to operate**.
2. Increase librarians' efficiencies
3. It saves **time**
4. Customized reports for better management.
5. **Remove manual processes** to issue books and maintain records efficiently.

Drawbacks

1. It may be having **limited features**.
2. There may be performance and compatibility issues
3. The system may only work on certain platforms or devices
4. Customization options and advanced reporting capabilities may be missing
5. Therefore, not suitable for **wide scale usage**.

However, these limitations can be addressed through careful planning and collaboration within the project's limitations.

Conclusion

We believe that this Library Management System will be a valuable addition and will contribute to its success in managing library resources effectively.

Thank you for considering this proposal. We look forward to discussing this opportunity further and addressing any questions or concerns you may have.