Final REPORT

on

LIBRARY MANAGEMENT SYSTEM

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PROJECT TITLE: Library Management System

ABSTRACT

The purpose of Library Management System is to automate the existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with.

Library Management System, as described above, can lead to error free, secure, reliable and fast management systems. It can assist the user to concentrate on their other activities rather than to concentrate on record keeping. Thus, it will help organizations in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim is to automate its existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. Basically, the project describes how to manage for good performance and better services for the clients.

INTRODUCTION

The "Library Management System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system. Moreover, this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error messages while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, by this all it proves it is user-friendly. Library Management System, as described above, can lead to error free, secure, reliable and fast management systems. It can assist the user to concentrate on their other activities rather than to concentrate on record keeping. Thus, it will help organizations in better utilization of resources.

Every organization, whether big or small, has challenges to overcome and manage the information of Books, Student, Librarian, Address, Member. Every Library Management System has different Student needs; therefore, we design eudusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning, and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executives who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources

PROBLEM STATEMENT

To develop secure, reliable, fast Library Management System

LITERATURE REVIEW

TITLE	LINK	AUTHOR	REMARKS
SQL IN C++	https://www.geeksforgeeks.org/sql-using-c-c-and-sqlite/	GIOVANNI DEZIO	It explains about to how to create the table in the database. Insertion and deletion of data in the database and the selection of the data from database.
FILE INPUT OUTPUT	https://press.rebus.community/programmingfundamentals/chapter/file-input-and-output/	KENNET LEROY BUSBEE	It explains about the how to create, open and close and file. Opening the file in the various other format and also tells about reading and writing in the file.
SEARCHING	https://www.geeksforgeeks.org/searching-algorithms/	GEEKSFORGEEKS	It explains about how the data can be retrieve from the collection of data and the various searching techniques that can be used.
SORTING	https://www.geeksforgeeks.org/sorting-algorithms/	GEEKSFORGEEKS	It explains about how the data can be arranged according to the following criteria and various sorting algorithms that can be used.

OBJECTIVES

The aim of proposed system is to develop a system of improved facilities.

The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work.

1-Security of data.
2-Ensure data accuracy's
3-Proper control of the higher officials
4-Minimize manual data entry
5-Minimum time needed for the various processing
6-Greater efficiency
7-Better Service
8-User friendliness and interactive
9-Minimum time required

METHODOLOGY

The only Programming language that will be used to make this project is C++ Programming Language, we will also make use of all the concepts that we know of or can learn through the resources that are available to us. The basic functions and working have already been described but this section will describe the step-by-step implementation of this project. Below are the steps for the implantation: -

1. **Create Admin login:** Admin is the one who administers the system by adding or removing e-books into and from the system respectively.
2. **Create User login:** Students have to register themselves into the system to create an account. After registering successfully, they can then login into the system by entering 10 digit mobile number and their email id.
3. **Create Functionality to Add and Update Books:** The admin can add books to the system by entering the details of the books and can even update the details.
4. **Add other features such as -**:

Add Searching functionality: Admin and Students can even search for books by entering the name of the book.

View Order-The admin can view order for the books.

Place order- The students can place order for the books and simultaneously the quantity of the book ordered will be decremented.

Calculate Fine- The student can view the issue and expiry date for the book issued and can even calculate fine.

Program Modules

Librarian Section:

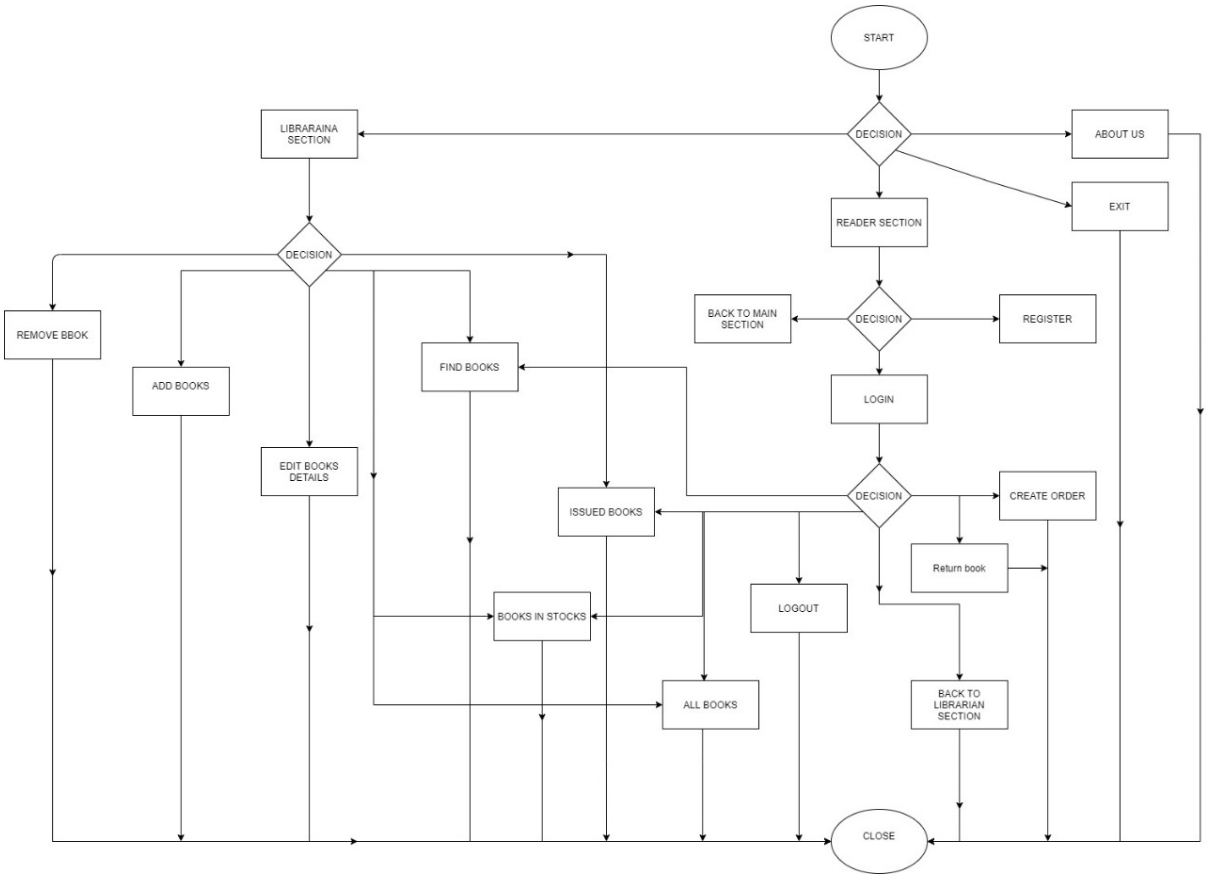
1) Find Book: Librarian can find their books with four different categories Name, Category, Type, and Author.
2) Issued Books: Through this function librarian can check how many books and which books were sold.
3) Books in stock: It shows the book that is in the stock that means the quantity of the book is more than zero.
4) All books: It shows all the books in the database.

5) Add new Book: This is used to add new book in the database.
6) Edit book details: It is used to edit any book contents.
7) Remove Book: It allows librarian to delete any book from the database.

Reader Section:

1) Reader register login: Here a new user can register and then login to issue books or an existing user can login with the credentials to issue books.
2) Issue Book: Here the reader can choose the books, not more than 3 books and specify the number of days between 8 to 40 days for which reader wants to issue book. Also, the issue date and the due date is calculated.
3) Find Book: Reader can find their books with four different categories Name, Category, Type, and Author.
4) Issued Books: Through this function, Reader can check how many books and which books were sold.
5) Books in stock: It shows the book that is in the stock that means the quantity of the book is more than zero.
6) Return Book: This function allows the user to return the books and fine alert is also shown.
7) All books: It shows all the books in the database.
8) Logout: This allows the user to logout from the reader section.

Flowchart



ALORITHM

1. Start
2. Check if user is accessing librarian section or reader section or about us or exit
3. If(librarian)
    a. Find Book.
    b. Issued Books.
    c. Books in Stock.
    d. All Books.
    e. Add New Book.
    f. Edit Book details.

g. Remove Book.

h. Back to Library Main Section.

Else if(reader)

a. Create Order.

b. Find Book.

c. Issued Books.

d. Books in Stock.

e. All Books.

f. Back To Library Main Section.

g. Return Book

h. Logout

Else if(about us)

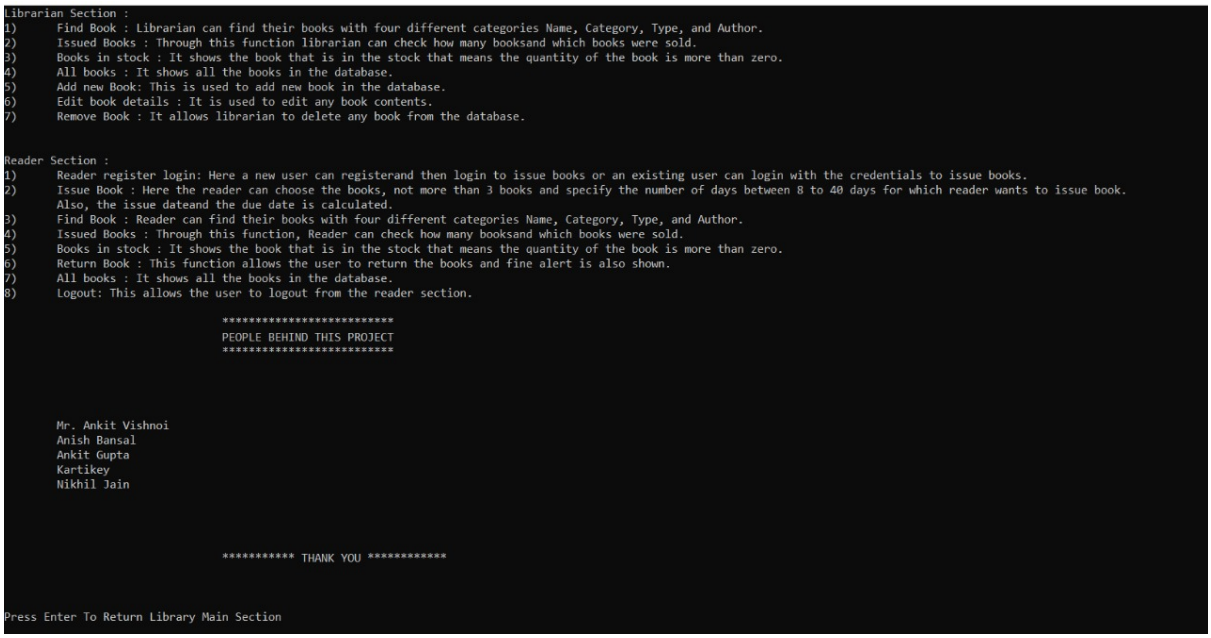
Display about us

Else

Exit

4. End

OUTPUTS

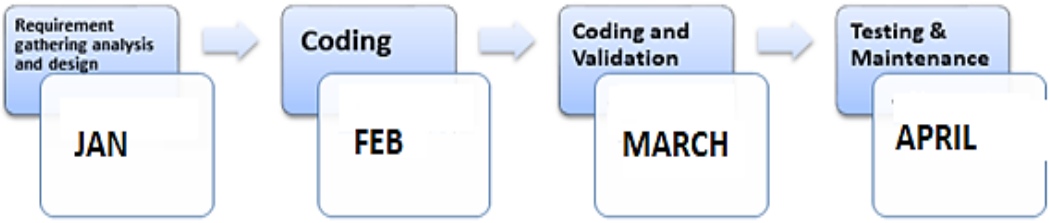


SYSTEM REQUIREMENTS

1) Software requirement:
   - Windows, Linux
   - Browser - Any

2) Hardware requirement:
   - Processor - Pentium III 630MHz
   - RAM - 128 MB
   - Hard disk - 20 GB

SCHEDULE (pert chart)



CONCLUSION

- Successfully added different functionalities required in library management system such Searching Books, calculating total cost of books reader has to pay, keeping track of books available in the stock and the books issued.
- Also provided other functionalities which librarian can perform such as Adding, Deleting, and editing Books' content in the database.
- Provided separate interface for the librarian and the reader, which comprises of different functions based upon their requirements.
- Designed the system, which saves our time and effort of manual maintenance of records.

REFERENCES

1) https://www.geeksforgeeks.org/sql-using-c-c-and-sqlite/
2) https://press.rebus.community/programmingfundamentals/chapter/file-input-and-output/
3) https://www.geeksforgeeks.org/searching-algorithms/
4) https://www.geeksforgeeks.org/sorting-algorithms/

Thank You