

LIBRARY MANAGEMENT SYSTEM

Aakash Jethani¹, Ayush Saxena², Shubham³, Prof. Gurpreet Kaur⁴

Department of Computer Science Engineering
Bhagwan Mahavir College of Engineering and Management, Sonipat, India

ABSTRACT: -

This project of "LIBRARY MANAGEMENT SYSTEM" of gives us the complete information about the library. We can enter the record of new books and retrieve the details of books available in the library. We can issue the books to the students and maintain their records and can also check how many books are issued and stock available in the library. In this project we can maintain the late fine of students who returns the issued books after the due date. I have used Java as frontend and MySQL as backend in this project every effort is made to use new technology. Java is a very popular programming language which is used to develop mobile apps, web apps, desktop apps, games and much more. Due to these exciting features of Java, we used Java as our frontend language. MySQL is an open-source relational database management system which is in backend of our project. This project along with educational environment also provides feature of record savings.

1.INTRODUCTION:

Library Management System is an application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc.

Books and student maintenance modules are also included in this system which would keep track of the students using the library and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non-computerized system is used.

All these modules are able to help librarian to manage the library with more convenience and in a more efficient way as compared to library systems which are not computerized.

1.1. TECHNOLOGY USED

FRONT END: JAVA

JAVA is a computer programming language that is concurrent, based, object, and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA), meaning that code that runs on one platform does not need to be recompiled to run on another. Java application are typically compiled to byte code (class file) that can run on any Java virtual machine (JVM) regardless of computer architecture. Java is, as of 2014, one of the most popular

programming languages in use, particularly for client-server web applications, with a reported 9 million developers.

There were five primary goals in the creation of the Java language.

- It should be "simple, object-oriented and familiar".
- It should be "robust and secure".
- It should be "architecture-neutral and portable".
- It should execute with "high performance".
- It should be "interpreted, threaded, and dynamic".

BACK END: MYSQL

MYSQL is an open-source relational database management system (RDMS). The MySQL Development project has made its source code available under the terms of the GNU General Public Licence, as well as under a variety of proprietary agreements. MySQL was owned and Sponsored by a single for-profit firm, the Swedish company MYSQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

2. OVERVIEW OF THE SYSTEM

This system is the one that is going to be automated, so that it is easy to retrieve the responses from the system fastly and updating the details once the response or services are provided to the end-users upon their request without any difficulty and saves time. Library is a place that caters to the needs of book lovers. Managing a library is no easy task due to advent of digital and web libraries it has become indispensable to use computers in management of a library.

2.1 Advantages over Existing System

- The proposed system is automated that is faster than the existing manually maintained system and can handle data easily.
- Computerization of the details of the members and books.
- The System allow administrator to control roles and accessibility of other users.
- Maintenance time and cost are greatly reduced.
- Accurate information can be generated easily and quickly at different levels.
- Report can be generated easily and quickly.

2.2 Modules:

Admin module - Has full access to all the modules of this system. Responsible for creating, modifying and deleting a member and book, admin can view the catalogs.

Book Management Module: in this module administrator can add, delete and modify the books and journals. And also he can add different type of category books with ISBN number.

Security and Authentication Module: System provides security with different kind of accessing levels. Admin can also take backup file to recover the data. This can check the login name and password against to the database to prevent unauthorized accessing. It provides the facility to change password.

3. MYTHOLOGY

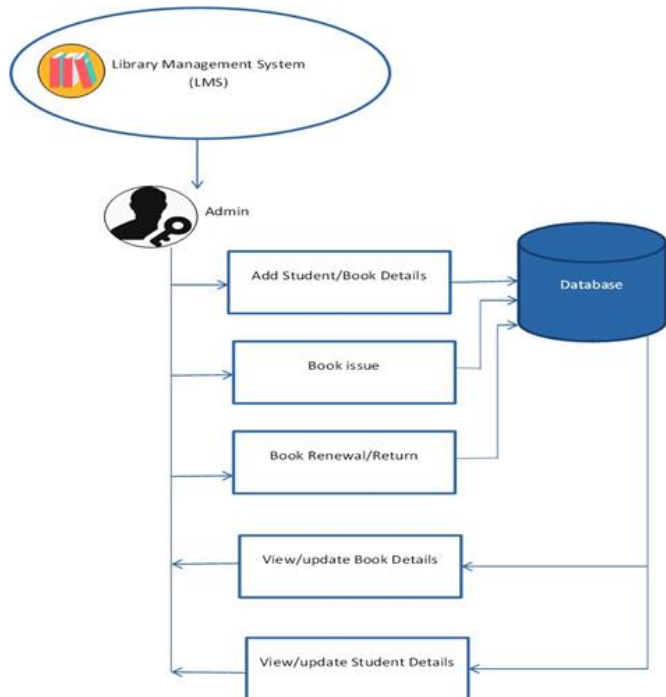


Fig 3.1: Block Diagram of Proposed system

LMS contains an Admin module where it demonstrates the activates of the admin. Admin is considered as the authorized person to access the LMS system. He/she can access the LMS system through their user id and password. At the time of login, the system is loaded and opens the Home page where he/she has to enter the Id and password which is illustrated in fig 3.2.

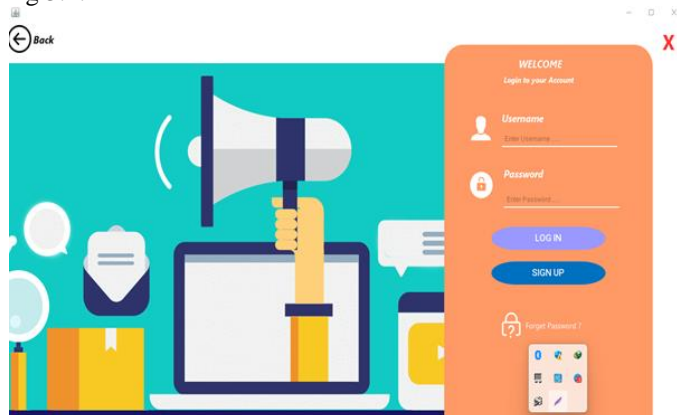


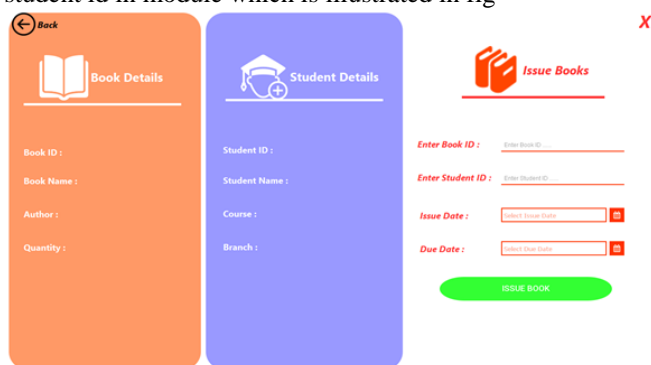
Fig 3.2: Login Page of Library Management System

Once he/she login to the system, then they can access/modify the data in it. The Admin can add students/Book details, issues the book, return the book, view/update the book, and view/update the student details.

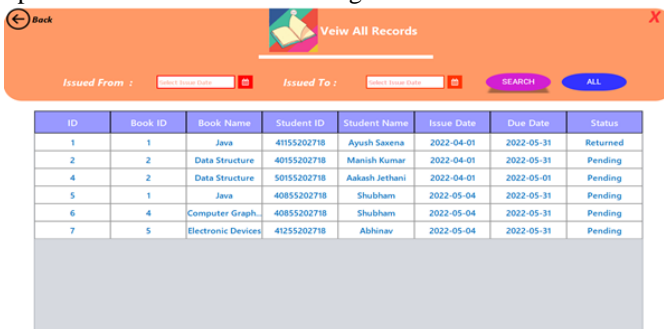


Fig 3.3: Adding students to LMS

In LMS, while issuing book he/she needs to enter book id , student id in module which is illustrated in fig



Those adding data can be view/update/delete through Admin. The Admin can view and search any book through search option in LMS is illustrated in fig 3.5.



REFERENCES

- Java
 - <https://www.javatpoint.com/jsp-tutorial>
 - <https://docs.oracle.com/javase/tutorial>
 - <https://www.javatpoint.com/java-tutorial>
 - <https://www.w3school.in/java>
 - Database Management System
 - <https://www.tutorialspoint.com/mysql/>