

WebLib: A Web based Library Management System

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Abstract:

The proposed library management system intends to create an automated system to manage all of the library's everyday operations. This work includes several features that are normally absent from traditional library management systems, such as the ability for users and administrators to log in. It provides a facility for admin login. After logging into their accounts, it also has a function that allows students to view a list of the books they have been given, along with the date they were given and when they expire. In general, the goal of our work is to help the beneficiary students and the librarian run the library as efficiently as possible while also putting as little strain on human labour as feasible.

Keywords: Automated System, Librarian, Library Management System.

1. Introduction:

The term "Library Management System" refers to library systems, which are often modest or medium-sized. Using a computerized system, the librarian may keep track of a variety of transactions, including the lending out and returning of books as well as the adding of new books and students.

This system also includes modules for books and student maintenance that keep track of how many students registered in the library and provide a thorough profile of each one. There won't be any loss of

book records or member records with this computerized method, which typically occurs when a non-computerized system is employed.

All of these modules can assist librarians in managing the library more easily and efficiently.

The aims and objectives are as follows:

- Online Book Issue.
- Librarian can add new books.
- Librarian can see available books.
- Librarian can track issued book with book details and student details.
- Librarian can track student with his/her details, who registered in library management system.
- Student login page where student can see books issued by him/her and they can see date of issued and date of expiry with Active/Return update.

2. Literature Survey:

Plenty of works have been carried out in this field. Few of the work have been analyzed in below section. Shanmugam a P et al. proposed a library management system applying C#. It has feature of Add Student, Book Issue, Book Renewal, View Book details and View student details. [1]. In [2] a library management system was proposed which was developed using Java and the database was designed using Oracle. Sourabh Sharma et al. proposed a library management system. It has three modules - admin module, librarian module and student module. This application was developed using Java and MySQL [3]. In [4] a library management system was proposed by authors. The proposed application is user friendly with features like displaying books accordingly, search books, assigning books to students. In [5] another library management system was proposed which developed the features like Login, Archive, Add members, Add books etc. System testing, Integration testing, acceptance testing and unit testing were carried out and details were described in the paper also.

3. Methodology

A library manager can manage the everyday operations of the library electronically with the aid of a computerized system called a library management system. It lessens the chance of paper work-related risks such file loss, file damage, and time commitment. It can assist the user in managing the transaction or record more efficiently and quickly.

The issue that existed before to the computerized system includes:

File missing

When a computerized system is not used, files constantly disappear due to the human environment. There may occasionally be a loss of records as a result of human error.

Report Damage

Without a computerised system, it is common for data to be lost due to mishaps, such as when staff members accidentally pour water on them. In addition, natural disasters like fires or floods, to name just two, could damage the files.

Takes up space

If no computerised system is utilised, the quantity of physical storage space required for files and records grows as the number of records increases.

The cost is high.

Due to the lack of a computerised system, each record will require a paper addition, which will

A. Fundamental Features of the work

User Login

Description of feature

This feature used by the user to login into system. They are required to enter user id and password before they are allowed to enter the system. The user id and password will be verified and if invalid id is there user is allowed to not enter the system.

Functional requirements

- user id is provided when they register
- The system must only allow user with valid id and password to enter the system
- The system performs authorization process which decides what user level can access to.
- The user must be able to logout after they finished using system.

Register New User

Description of feature

This feature can be performed by all users to register new user to create account.

Functional requirements

-System must be able to verify information

-System must be able to delete information if information is wrong

Admin Module Features

Admin Dashboard

Admin can add book to library

Admin can view available books

Admin can issue new books

Admin can also update the details when student return book

- Admin can view issued book with all details
- Admin can also view student details

Students Module Features

Student can register and after registration they will get student id

After login student can view own dashboard.

Student can only view issued book and book return date-time.

Student can also view update Active/Return book.

The Dataflow diagram of the model has been shown in the figure 1 and 2.

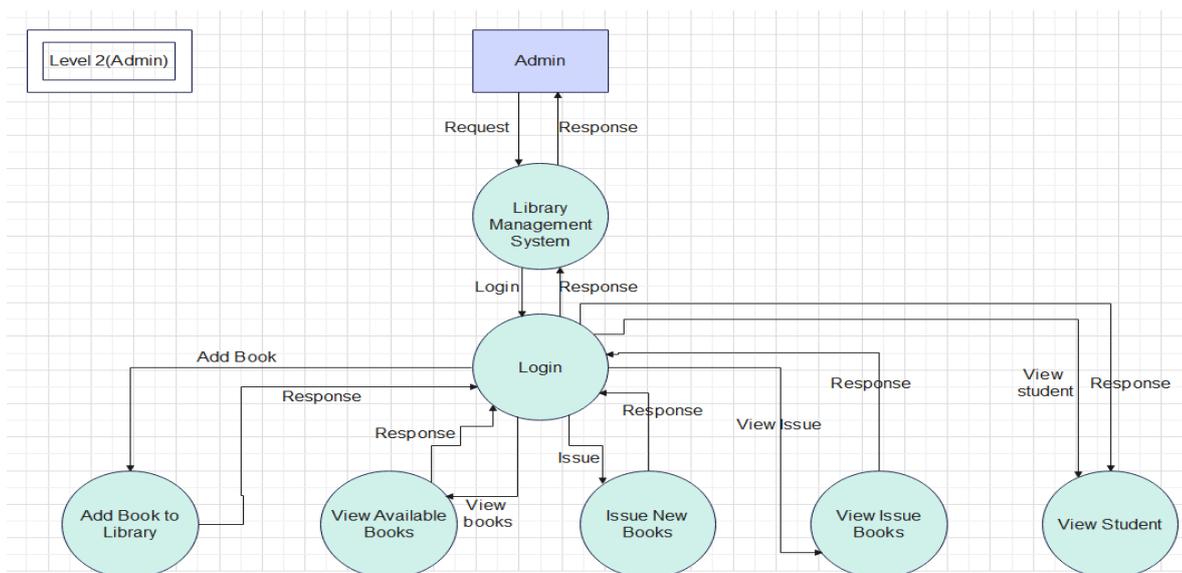


Fig 1: Level 2 DFD for Admin

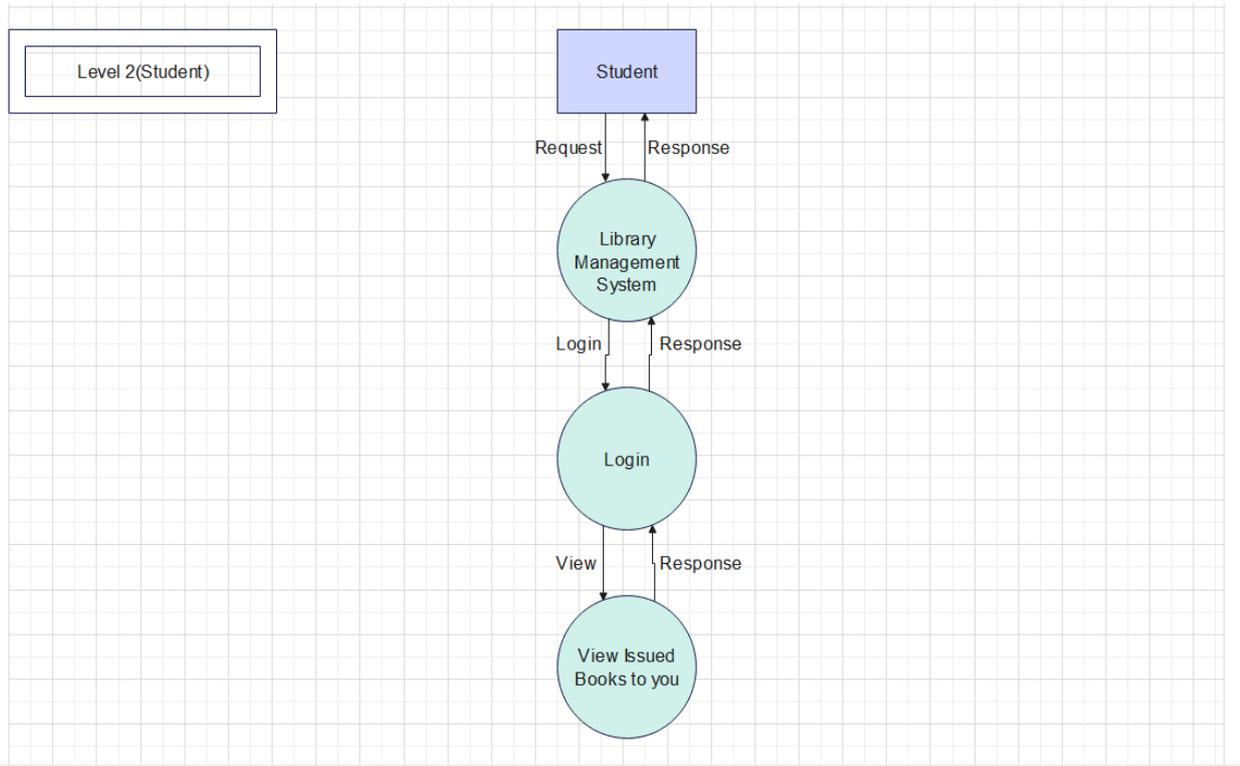


Fig 2: Level 2 DFD for Students

4. Result Analysis

In below figures sample run of the model has been shown .

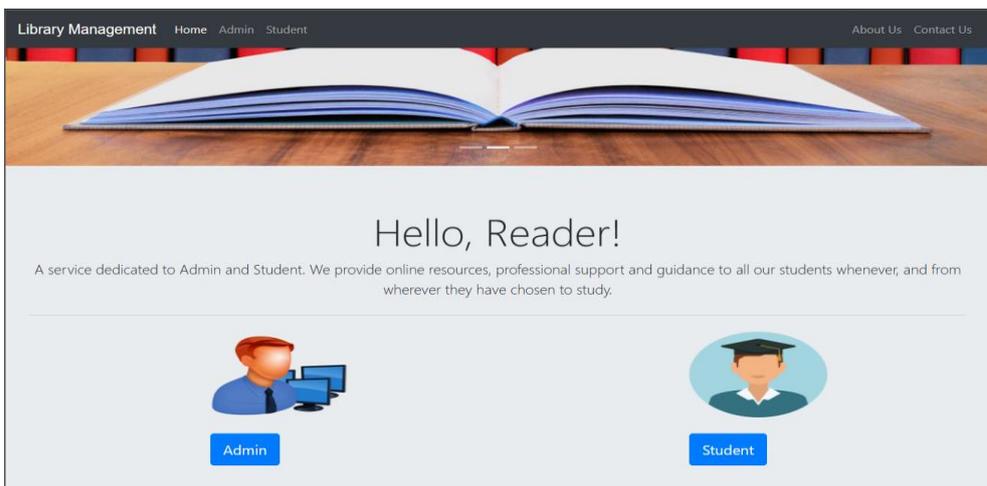


Fig 3: Welcome Page

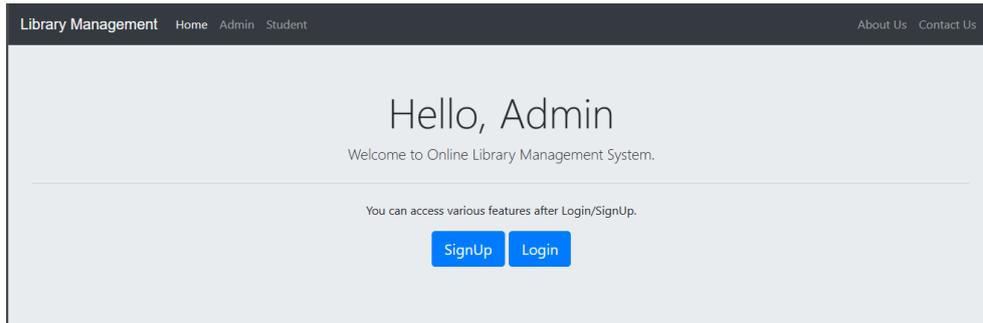


Fig 4: Admin Login Page

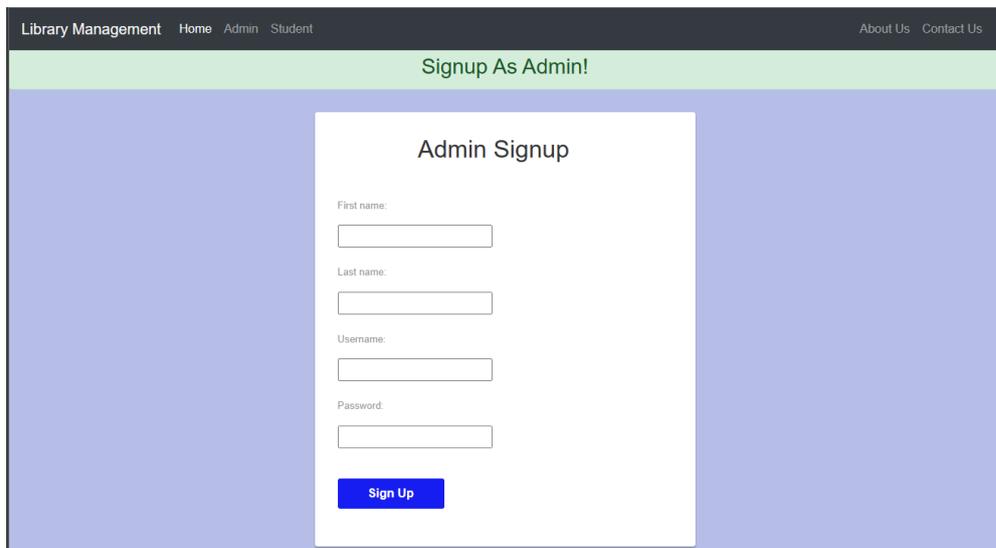


Fig 5: Admin Sign Up page

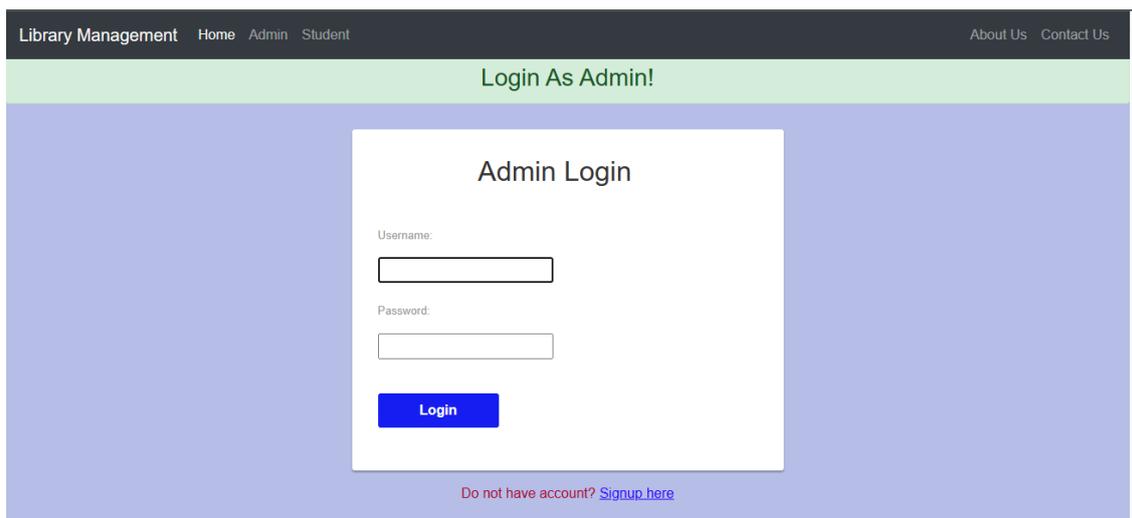


Fig 6: Admin Login Page

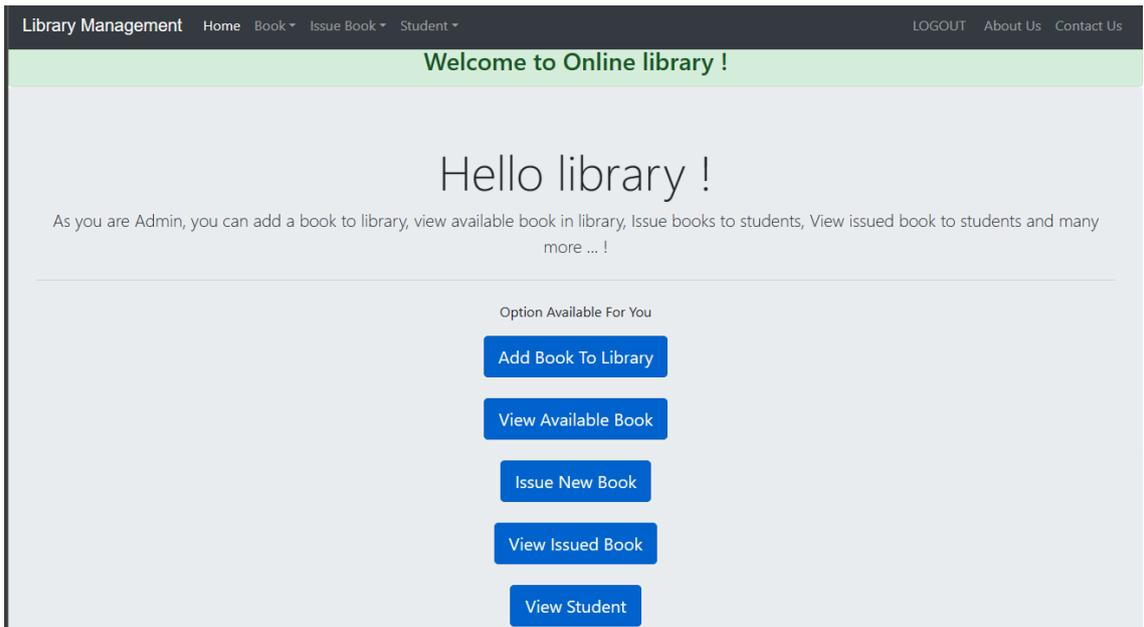


Fig 7: Activity Page

5. Conclusion and Future Scope

This work offers a computerized library management system that will be useful to both library workers and students. The entire procedure is done online, allowing students to locate books and employees to create reports and transact with books. Additionally, it offers a feature that allows students to log in and monitor the status of the books they have been issued as well as request books or make suggestions. It contains a feature that allows teachers to log in so they may add lesson notes, make essential library suggestions, and post information about seminars or events taking place at our college or adjacent colleges on the online notice board. Future plans for this facility include adding many more services including online seminars.

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