

Library Management System

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ABSTRACT: Library Management System is a web-based program that identifies the creation of an automated library system that is integrated with the day-to-day library function. This function has many advantages that are not readily available in an integrated library system, resources such as different workspaces for different users with different values. It also has an admin login. With this, the controller can monitor the entire system. In this application, users can view the list of books they have downloaded and the date of issue, the return date and can store the books online. The amount of the charge is made by the robot accurately. The application is designed to assist clients in the maintenance and editing of the library. It includes a clear, well-thought-out, and attractive UI combined with solid search. power of input and reporting. In general, our work is designed to help students and staff maintain the library in the best possible way and to reduce human effort. While SQL server is being used as a database. All data is stored and retrieved in the SQL database, making it more secure.

KEYWORDS: Management system, SQLserver

I. INTRODUCTION

Modern Generation will be trusted on a computer and run Software on a computer. So, we are learning java which is why we created an application to manage a library program using java. By using this, we can store student information, publish books, and store student information in the library. Specifically, these apps are used by Library administrators. Libraries are important in the process of giving citizens access to information. In the digital age they are more needed than ever. In our country, library programs are written which is why we use paper so much. By making paper we cut down trees. It is very dangerous in our area. In our area, we are taking

this step to reduce this. The aim of this project is to develop a system that can manage and manage the activities involved in the library in an efficient and reliable way. Slight management staff and easy access to search & Upgrade user database. Develops a system that can replace the library management system. Managing a user profile is a major goal of this project as well as an attractive navigation environment for the user system. Creates a user-friendly location. The administrator or librarian must have access. Provides a reliable search site for users. It also provides book details as well. Library Management System is an application that refers to library systems that are usually small or medium in size. It is used by the librarian to manage the library using a computer program where it can record various events such as book releases, book retrieval, addition of new books, addition of new readers etc. Books and student care modules have also been included in this program which will follow the student's use of the library and a detailed description of the library's contents. With this computer program there will be no loss of record book or member record which usually occurs when using a non-computer program. All of these modules are able to help the librarian to manage the library more easily and efficiently compared to non-computerized library systems. The program is designed to address existing problems and library problems. The system can add a user, authenticate the user and has no interruptions. After the computer system is installed, fewer people will be needed to maintain the library and thus reduce the total cost. The librarian can search the record using a few mouse clicks and a few search keywords thus saving valuable time. The librarian will be able to provide a detailed description of the ongoing forums in the college and nearby colleges. Teachers have space to upload talk notes in pdf file. As the economic

growth increased the peoples are led to the higher aspiration to excel in education and work through better access to information and knowledge. Technologies for building user-centred digital library environments and making computer-user interactions more intelligent should be explored

[1]. Earnshaw discussed in his article about the old libraries and its drawbacks to keeping records. A book provided an irreducible deposit of information that could be read, reviewed, criticized, as well as providing the basis for the development of its ideas into further volumes

[2]. Information is no longer exclusively library-centric but is also network-centric. The centre of gravity has moved from information provision to information access. Online search (via engines such as Google) is replacing physical search. Combining the best of both worlds i.e., the traditional library and the online search – to meet the developing requirements of users is a key challenge for the future

[3]. In this article, the author discussed the digital media consideration, the initial development in digital libraries and the long-term preservation of digital data. As mentioned in this article digital library is a repository where a significant proportion of content is in the digital form. Which can be indexed and searchable via electronics means which is an advantage over the paper-based information

[4]. The difficulty and expense of preserving digital information is a potential impediment to digital library development. Preservation of traditional materials became more successful and systematic after libraries and archives integrated preservation into the overall planning and resource allocation. Digital preservation is largely experimental and replete with the risks associated with untested methods. Digital preservation strategies are shaped by the needs and constraints of repositories with little consideration for the requirements of current and future users of digital scholarly resources. This article discusses the present state of digital preservation, articulates requirements of both users and custodians, and suggests research needs in storage media, migration, conversion, and overall management strategies. Additional research in these areas would help developers of digital libraries and other institutions with preservation responsibilities to integrate long-term preservation into program planning, administration, system architectures, and resource allocation.

II. PURPOSE

- Library Management System Software is designed to manage all library operations.

Helps library staff maintain a database of new books and due for members and their deadlines.

- This program automatically performs all the functions of your library. The best way to manage, organize, and manage many books is to use a library management software.
- The library management system is used to keep library records. It keeps track of the number of books in the library, how many books have been issued, or how many books have been returned or renewed or late fines, etc.
- You can get books instantly, download / re-book books quickly, and manage all data efficiently and systematically using this program. The purpose of a library management program is to provide fast and accurate data on any type of book, thus saving a lot of time and effort.

III. SCOPE

The Library Management System is a website used to provide information about books in user library.

Each user will be given a different set permission for each library module which includes basic searches, permissions, previews booking etc. the user can use his/her required documentation until the time appointed for him. When he breaks the time limit, he may face penalty. The controller must perform Daily\weekly\monthly reports, including details of letters, issued, returned, fined collection etc.

IV. ADVANTAGE OF LIBRARY MANAGEMENT SYSTEM

- Minimize the annoying way of archiving library library manuscripts and specify accurate information for automatically downloaded or added books.
- Easy and Easy to use, save library manager time, and make you ready for another important task.
- It is accessible remotely via cell phone
- Reduce extra costs and library operating costs
- Students can easily search and find books and download them accordingly.

V. METHODOLOGY

The LMS contains a management module in which it displays the administrator function. The administrator is considered an authorized person to access the LMS system. They can access the LMS system with their user id and password. During

login, the system loads and opens the home page where it must enter the Id and password shown in fig. Once logged in, he can access / modify the data in it. The supervisor can add students / book details, extract the book, return the book, view / review the book, and view / review student details. In LMS, while adding student details we register the registration number, name, date of birth, blood group, email id, mobile number, and gender, etc. Similarly, to add a new book we register the book id, author name, copies, prices etc. Those who add data can view / update / delete via Admin. The administrator can view and search for any document by using the search option in the LMS displayed. We have developed a library management system on .Net for front end and SQL at the end. In the current system, users can illegally change the installation date because the entry will be in a notepad. This is worse than the LMS system. This program will support professionals to work faster and more efficiently. All details will be updated in the LMS. So, they can verify every detail of the book in it. Existing system credentials have been removed from library staff. The LMS provided them with an easy-to-use location. Thus, the system improves library management to another level. It thus creates a rapid progression in the library that makes a lot of things that enthusiasts put in libraries. Lack of book can also be detected by confirming the site, the librarian should check and maintain the site properly.

VI. BENEFITS OF LIBRARY MANAGEMENT SYSTEM

- **Update:** This keeps track of books, magazines, or other items available in the library according to their categories. Adding or removing books is easy as the software updates the records in one piece.
- **Student Involvement:** Students can access and browse the various books available in the library, it is one easy way to search and leads to more student engagement in the library.
- **Record Keeping:** Borrower details will be kept and maintained, and the repayment date is set based on categories and the calculation of the penalty starts when the due date is exceeded.
- **Web Interface:** The school library is accessible to students as they have access to a web site where they can easily check credit history, apply for renewals, set dates, and view fines. It promotes a better climate at school because students feel more connected to the information that is accessible to them.

- **Continuity:** An online library and textbook management that proves as a step towards educational growth leading to school development.
- **Get Easy Access:** It is easy to check the library at any time as the records are maintained by the most efficient and easily accessible software.
- **Powerful Reports** It is easy to maximize library functionality through dynamic reports, graphs, and charts to review or track progress to make better decisions.
- **Free From Errors** The school's automatic library management system is robust, easy to use, and built with an easy way to enter data, making the operation of the library completely error free.

VII. MODELLING AND ANALYSIS

- a) **User Login:** This feature used by the user to login to the system. They are required to enter the user id and password before they are allowed to enter the system. The user id and password will be verified and if the invalid id is there the user is allowed to not enter the system.

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



- b) **Register New User:** This feature can be performed by all users to register a new user to create an account.

Functional requirements: The System must be able to verify the information. The system must be able to delete information if the information is wrong.

- c) **Register New Book:** This feature allows for adding new books to the library.

Functional requirements: The System must be able to verify the information. The system must be able to enter many copies into the table. The system must be able to not allow two books having the same book id.

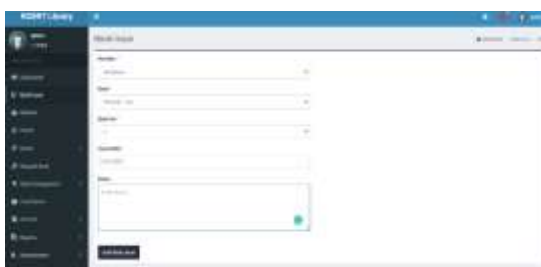
- d) Search Book: This feature is found in the book maintenance part. We can search for books based on book id, book name, and publication or by author name.

Functional requirements: -System must be able to search the database based on select search type. The system must be able to filter the book based on the keyword entered. The system must be able to show the filtered book in table view.



- e) Issue Books and Return Books: This feature allows us to issue and return books and view reports of the book issued.

Functional requirements: The System must be able to enter issue information in the database. The system must be able to update several books.



- f) Event Addition: This feature allows the Librarian and student to add information about various workshops being conducted in college and colleges nearby.

Functional requirements: -System should be able to add detailed information about events. The system should be able to display information on the notice board available on the homepage of the site.



- g) Fine Calculation: This feature allows both librarians and students to calculate the late fine from the date of expiry and onward.

Functional requirements: The System must be able to keep track of the issue and expiry date information from the database. The system must be able to calculate the fine onwards of the expiry date.

VIII.CONCLUSION

This website provides a computerized library management system that will benefit students and library staff. It makes the whole process online where the reader can search for books, staff can generate reports and make book transactions. It also has a student entrance area where the student can enter and see the status of the published books and the book request or make specific suggestions. It has a teacher's entry area where they can add lecture notes and provide the necessary suggestion in the library and add information about workshops or events that take place at our college or college nearby on the online bulletin board.

There is a future scope for this centre where many features such as online video tutorials can be added by the teacher as well as the posting of online assignments. This project has thus made it more user-friendly and has a project that meets the needs of individual users in the most practical way possible.

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