



STUDY OF MANAGEMENT SYSTEM FOR LIBRARIES

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Abstract:

As technology advances, all systems must be user-friendly. LMSs can digitize physical libraries. In traditional libraries, patrons/students must search for books, which is time-consuming, and issues/fines databases are poorly maintained. Slow progress makes it difficult to report. Bookstore librarians organize and categorize books. They must inspect and monitor the lend/borrow book's microscopic print. Multitasking is hard. The LMS will help librarians work. The LMS lets librarians handle all issues simultaneously. Consumers don't have to wait long to return or borrow library books. One PC has all info. Librarians must examine and enter the system. LMS helps the librarian find the book. The LMS lets librarians add, view, modify, and delete books and student information. Once in, they may modify any database data. The front end application was written in C# and the database in SQL server utilizing Dot Net technology. Access to the LMS system requires a user name and password. The LMS is user-friendly, so the administrator can activate it without expert help. SQL stores and retrieves all data securely. Our solution provides a new approach to digital library building.

Keywords: Net, SQL, Server, LAN, DBMS, Management, System.

Introduction

People may borrow books and other resources from a library. The institution's brain. It increases youngsters' exposure to intellectual and spiritual civilization. Books and research articles are encouraging kids to learn everything. It encourages youngsters to express their thoughts creatively. This material improves students' academic and personal abilities. Technology advances need a digital library structure. Numerous tedious processes diminish library efficiency. Activities at a normal library need physical help. The document records the book count and details for reference. The notebook stores all material for future citations. Reviewing data requires consulting the notebooks. During book distribution, the notebook must include the student ID, distribution and renewal dates, and book ID. Staff or librarians tag and identify each book. Tag, align, and stack the books. Librarians worry about stolen books. Before removing books from youngsters, they must verify consequences. Thus, staff get bored. The staff's delayed development disengages pupils. The Library Management System (LMS) would modernize the library. It automates labor for libraries and employees with one click. It organizes and directs library work. The LMS helps librarians add, examine, delete, and update library stock information. We connect the SQL server to the library's data here. The librarian enters student and book data into the database first. After that, the Library Management system lets them read, delete, or alter such information. The library is accessible 24/7. Librarians can assist with data. The database provides all data. User information shows the user's name, ID, book information, and penalty. They needn't write references down. Data manipulation might change the parameter. The librarian uses the automated system easily while writing the instructions. It lets librarians monitor library records and student transgressions. It tracks library books and gives book information. This gives students and librarians flexibility. LMS users need just basic computer capabilities. User-configurable

systems are beneficial in many businesses. We're LMS administration. LMS integration. Net technology is a new IT innovation. Integrating all aspects makes it appear on your computer's desktop.

As described, the database stores and protects data. Related data are properly stored. It lets users customize databases. Interface programs may change databases. The database management system (DBMS) alters the database's contents per the administrator's instruction. This action loads, retrieves, and modifies the database. A centralized DBMS lets many users access the database in a controlled manner from different places. Based on the DBMS scheme, the system may assign a view mode to each user, allowing authorized users to see the whole database while limiting access to others. It provides independent logical and physical truths. The Open Database Connectivity (ODBC) API allows client-side applications to communicate with the server-side DBMS.

SQL DATABASE

Standard Query Language, or SQL, is another name for the language that is used to communicate with databases. To run queries on the database and get data from the database, SQL statements are used. We can build a brand-new database, table, stored procedure, as well as edit, remove, and add table elements. We may configure permissions for the view, process, and table as well as examine the data.

RELATED WORK

To meet student demand, Shasha et al. recommend upgrading the library management system [1]. Honghai et al. [2] demonstrate the wasting of money on book CDs. He provided cloud computing for data transfer to save library costs. Bao et al. reported on library prediction model development. He proposed the t-test and co-efficient of simple determination for process forecasting. This study shows that lending and reading are linked. They prioritize lending libraries while designing the model library. Eraxiang et al. [4] highlighted standard library management system problems. He fixed the issue by merging MVC with struts and hibernate frameworks. MVC refers to a multilayer tier of presentation, business, data persistence, and database layers. These aspects improve system maintainability and reusability. Zheng et al. presented a UML-based Library Management article [5]. UML's versatility inspired the LMS's design. After studying the fundamental LMS, case and analysis diagrams are made. Hitchense et al. discussed class flexibility [6]. He advised reusing classes in relevant situations. Yang et al. [7] detailed librarians' tedious manual method. He designed a VB LMS. Bretthauer et al. disclosed open-source library software [8]. He noted open-source software's drawbacks. Brave et al. [9] supplied open-source journal management, citation and knowledge management, and learning management systems. Albee et al. [10] examined staff perceptions of the open-source library. Singh et al. [11] recommended comparing open-source library expectations with experience. Huang et al. recommended a SQL database learning article [12]. It lets students test SQL queries.

Librarians may utilize our .Net LMS to enhance library management system layout and development. It solves present problems. Consumers succeed with the safe technology.

The essay's rest is illustrated. Section 3 briefly describes the proposed system. Section 4 describes the system's conclusion.

Methodology

Block Schematic

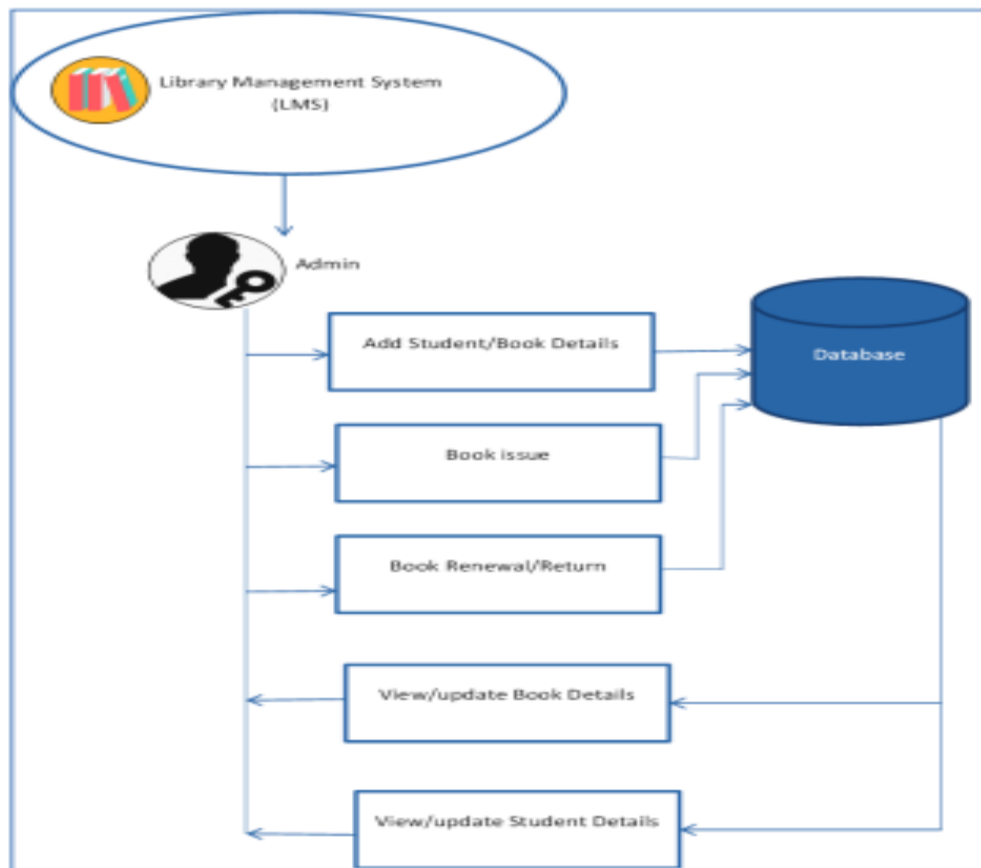


Fig 1: Block Diagram of Proposed system

shows the planned Library Management System's (LMS) block diagram. The LMS has an admin module that shows how to use the admin's functions. The administrator is the only one with permission to use the LMS system. He or she may use their user ID and password to log into the LMS system. When logging in, the system loads and opens the Home page, where the user must enter the Id and password that are shown.

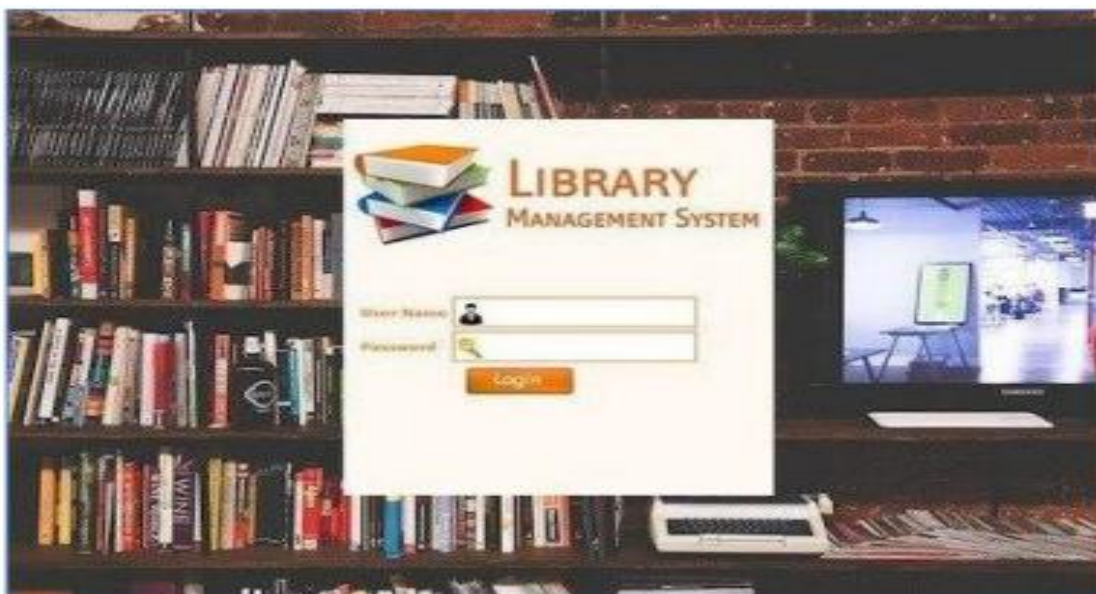


Fig 2: Login Page of Library Management System

He or she may view and edit the system's data after logging in. The administrator may add student and book details, issue and return books, view and update books, and view and update

student information.



Fig 3: Adding students to LMS

When uploading a student's information to the LMS, we include the registration number, name, date of birth, blood type, email address, cellphone number, and gender, among other facts. Similarly, when adding a new book, we enter the information that is shown for the book's ID, author, copies, pricing, etc.

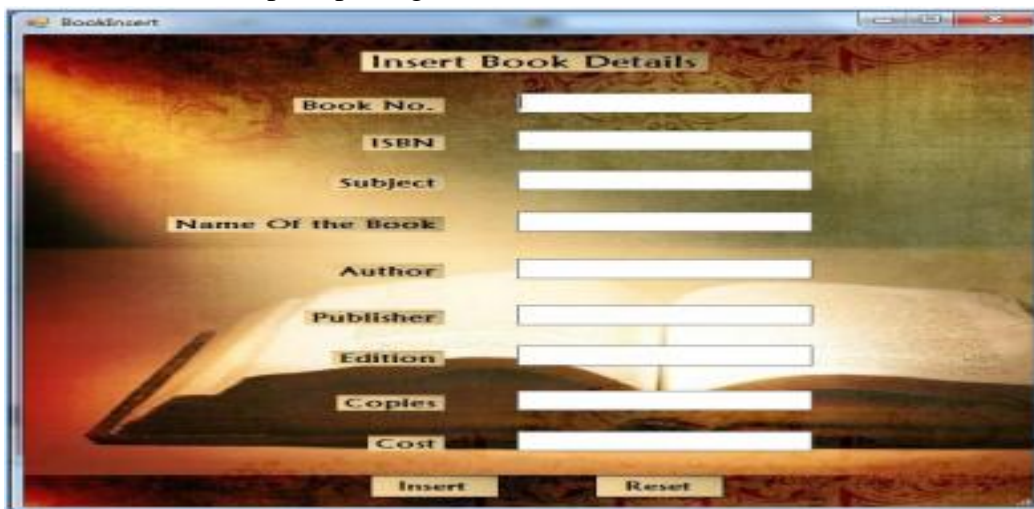


Fig 4: Adding new book to LMS

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.



Fig 5: Searching book details in LMS

We developed the library management system using SQL as the back end and .Net as the front end. Because the record will be in a notebook that may be rewritten, users can unlawfully modify the entry's date under the current system. The LMS system gets around these drawbacks. The librarians will be able to work quickly and effectively with the help of this technology. The LMS will be updated with all the information, so that they can confirm all of the book's facts. For the librarians, the old system's awkwardness is eliminated. LMS gave them access to a user-friendly setting. As a result, the system takes library administration to a new level. As a result, the library makes quick progress and sees a large increase in the number of visitors. The database may be checked to see whether a book is missing, thus the librarian must correctly examine and maintain the database.

CONCLUSION

It is promoted for libraries to have simple access by identifying the difficulties and problems with the conventional library. The librarian may add, amend, or delete student and book information from the database in the library management system. Each student has a unique ID that they may use to check out any book from the library. The librarian may check the user information, fine payment, and book information using the ID. The LMS streamlines processes and improves system performance. In our future work, we intended to improve the LMS by fusing it with the LAN, which would boost the system's effectiveness.

REFERENCES

- [1].HonghaiKan,Zhimin Yang, Yue Wang, Nana Qi, "Research on Library Management System for CDs Attached to Books Based on Cloud Computing", in *Proceedings of the 14th International Conference on Computer Supported Cooperative Work in Design 2010*.
- [2].Bao Sun, JiangweiFeng and Ling Liu, "A Study on How to Construct the Prediction Model of Library Lending of University Library", *International Conference on Information Science and Technology March 26-28, 2011 Nanjing, Jiangsu, China*.
- [3].Erxiang Chen,Minghui Liu,"Research and Design on Library Management System Based on Struts and Hibernate Framework", *WASE International Conference on Information Engineering 2009*.
- [4].JianhuZheng, YunqingFeng, Yun Zhao, "A Unified Modeling Language-Based Design and Application for a Library Management Information System", in *cybernetics and information technologies*.
- [5].Michael Hitchens, Andrew Firmage,"The Design of a Flexible Class Library Management System", in



IEEE conference 1998.

[6]. Weihong Yang, "Design and Implementation of Library Management System", *International Conference on Management Science and Innovative Education (MSIE 2015)*.

[7]. Bretthauer, D. "Open source software in libraries. *Library Hi Tech News*, 18 (5), 8-9(2001).

[8]. Barve, S., & Dahibhate, N. B., "Open source software for library services", *DESIDOC Journal of Library & Information Technology*, 32(5)(2012).

9]. Albee, B. & Chen, Hsin-liang, "Public library staff's perceived value and satisfaction of an open source library system". *Electronic Library*, 32(3), 39-402(2014).

[10]. Singh, V., "Expectation versus experience: librarians using open source integrated library systems", *The Electronic Library*, 32 (5), 688-709(2014).

[11]. Ching-yu Huang and Patricia A., "Morreale A Web-based, Self-Controlled Mechanism to Support Students Learning SQL" *IEEE Integrated STEM Education Conference (ISEC) 2016*.