



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Library Management System SQL

Guide:

Prof Surbhi Purwat

Poul Nikita
BIT, Barshi

Shinde Pratiksha
BIT, Barshi

Pandhre Rohini
BIT, Barshi

Abstract:-

With the advancement of technology, it is imperative to exalt all the systems into a user-friendly manner. The Library Management system (LMS) acts as a tool to transform traditional libraries into digital libraries. In traditional libraries, the students/user has to search for books which are hassle process and there is no proper maintenance of database about issues/fines. The overall progress of work is slow and it is impossible to generate a fast report. The librarians have to work allotted for arranging, sorting books in the book sells. At the same time, they have to check and monitor the lend/borrow book details with its fine. It is a tedious process to work simultaneously in different sectors. LMS will assist the librarians to work easily. The LMS supports the librarians to encounter all the issues concurrently. The users need not stand in a queue for a long period to return/borrow a book from the library. The single PC contains all the data in it. The librarians have to assess the system and provide an entry in it. Through LMS the librarian can find the book in the bookshelves. The LMS is designed with the basic features such as librarian can add/view/update/delete books and students' details in it. Once he/she ingress into the system they can modify any data in the database. The complete model is developed in Dot net technology, whereas the SQL server is exploiting as database. The authorized person can only access the LMS system, they have to log in with their user id and password. As aforementioned that the LMS is designed in a user-friendly manner, so the admin can smoothly activate the system without expert advice. Every data is storing and retrieving from the SQL database so it is highly secure. Thus our system contributes its new approach towards the digital library setup.

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

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

- 25+ million members
- 160+ million publication pages
- 2.3+ billion citations

Join for free

Introduction:-

We understand there are so many social networking sites are available on internet, that different social networking sites has their own

Literature Review:-

One of the first things to note when performing a literature review on LMS is that there are no independent literature reviews solely on this area. Instead, LMS has now become an integral part of standard literature reviews for acquisitions processing, collection development and management, cataloging and classification, and serials management. At the same time, there are areas of LMS that sit outside of these traditional functioning areas in libraries. This makes performing a literature review on LMS more of a challenge. From the field of library acquisitions, the issues most readily identified in recent years have been the switch from print processing to LMS and the continued struggle to find management tools that work within the local library context. For further understanding of the study, the researches made use of different reading materials related to the OLMS. These materials such as books, magazines and other web articles are essential in broadening their knowledge of these researches. These will also guide the researches to achieve their target objectives by getting ideas on other related studies and make improvement as possible. The information gathered by the researches focuses on the development of e-commerce or online marketing and its advantages to the economy, consumers and businesses. Security measurement information in terms of payment and customer's privacy to be considered in developing an online system are also obtained. The researchers also sum up the different techniques on how to gain web visitors and eventually convince them to purchase the products based on some surveys gathered by the past studies. Some of the programming background skills needed to create a website is also being discussed to further understand why the researches

chose PHP5 as front end and MySQL as backend of the proposed system.

SQL DATABASE:-

SQL is also known as Standard Query Language which is used as a medium for communicating with the database. SQL statements are utilized to execute the queries against the database and retrieve data from the database. We can create a new database, table, stored procedure and update, delete and add items to the table. We also can view the data and set permission to the view, procedure, and table.

Analyze the literature

A literature library management system using SQL typically manages book records, member information, and loan transactions. The system leverages SQL to create tables, insert data, update records, and query information efficiently. Key SQL concepts like PRIMARY KEY and FOREIGN KEY constraints are used to ensure data integrity and relationships between tables.

Key Components and Functions:

Tables:

- **Books:** Stores book details like title, author, ISBN, availability, etc.
- **Members:** Contains member information like ID, name, address, contact details, etc.
- **Loans:** Tracks loan transactions, including member ID, book ID, loan date, return date, etc.
- **Categories:** Stores book categories (e.g., fiction, non-fiction)
- **Data Manipulation Language (DML):** Used for inserting, updating, and deleting data within the tables.
- **Data Definition Language (DDL):** Used for creating, altering, and dropping tables and database structures.
- **Data Query Language (DQL):** Used for retrieving data from the database using SELECT statements.
- **Data Control Language (DCL):** Used for managing user access and permissions.

SQL Operations:

- **Creating Tables:** Defining the structure of tables with specific columns and data types.
- **Inserting Records:** Adding new book, member, or loan data into the respective tables.
- **Updating Information:** Modifying existing data, such as updating a book's availability status or a member's address.

- **Querying Data:** Retrieving specific information, like listing all available or retrieving book details by ISBN, books, finding a member's loan history,

Benefits of using SQL:

- **Data Integrity:** Primary and foreign key constraints ensure data accuracy and consistency.
- **Efficient Data Management:** SQL's structured approach allows for efficient storage and retrieval of data.
- **Scalability:** SQL databases can scale to accommodate large amounts of data as the library's collection grows.
- **Automated Operations:** SQL can be used to automate tasks like generating reports, sending overdue notices.

Methodology:-

Software development methodology engineering is a framework that is used to structure, plan, and control the process of developing an information system. A software development process also known as software development life-cycle (SDLC), is a structure imposed on the development of a software product. The main idea of the SDLC has been to pursue the development of information systems in a very deliberate, structured and methodical way, requiring each stage of the life cycle from inception of the idea to delivery of the final system, to be carried out rigidly and sequentially within the context of the framework being applied. As a noun, a software development methodology is a framework that is used to structure, plan, and control the process of developing an information system. This includes pre-definition of specific deliverables and artifacts that are created and completed by a project team to develop or maintain an application. In OLMS we have used iterative model. In iterative model we do not need to start with a full requirement. We can make changes time by time where problem comes in software. Unlike waterfall, process can be repeated time to time in iterative model. The following is the diagram of iterative model.

Writing the review

User authentication is still heavily reliant on the use of passwords, and the security problems associated with passwords are becoming more and more serious. The main causes of these problems are the prevalence of password sniffing and the difficulty of password management due to the increased number of accessible systems. In this paper, we propose a personal password management system called "One Touch Logon", which replaces the annoying password-based authentication systems with a simple touch-and-login method.

The effectiveness of the proposed system is demonstrated by implementing it on widely-used legacy systems such as Microsoft Windows and Web site logons.

This mechanism is easy to implement and integrate with current password-based systems through the use of an inexpensive consumer electronic device allowing for fingerprint recognition.

Scope and Objectives

The goal and objectives of this application is to provide user friendly environment to access social networking sites using single touch on device. It provides facility to share multimedia message more than one social networking sites using single touch. It alerts the all specific contacts by message along with location when the user is in danger.

- **Easy to operate:**
The system should be easy operating by any user.
- **User friendly:**
The GUI is very attractive and simple which will interest to user to use it.
- **Security:**
It provides security to user.

Methodology to be used

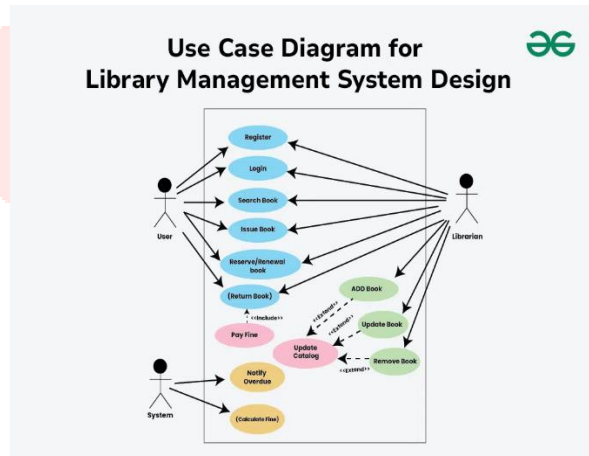


Fig :- Login Process

Conclusion

The hindrance and issues of the traditional library are identified and promote it to easy access for the libraries. In the Library Management system, the librarian can add/update/remove the student and book details into the database.

Unique ID for accessing any book from the library. Through the ID, the librarian can check the user details, fine payment, and book details. The LMS reduces labore work

and makes the system efficient. In future work, we planned to enhance the LMS by integrating the LMS with Local area Network (LAN) which increases the efficiency of the system.

References

- [1] Ramesh Solanki, Parth Chandarana, "Payroll Management System as SaaS" Proceedings of National Conference on New Horizons in IT - NCNHIT 2013.
- [2]www.researchgate.net/publication/49619781
- [3]www.tutorialspoint.com/csharp