Islamic University Of Science and Technology
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A project synopsis on

Library Management System

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Master of Computer Applications

Under the supervision of

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Library Management System

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1: SUMMARY OF THE PROPOSED WORK

The proposed Library Management System is a software project developed in .NET to streamline and automate various library processes, offering an efficient and user-friendly platform for librarians and patrons. The system aims to enhance the overall management and accessibility of library resources, including books, journals, and multimedia, while providing essential features for administrators and users.

Library System is a sub-discipline of institutional management that focuses on specific issues faced by libraries and library management professionals. Library management encompasses normal managerial tasks, as well as intellectual freedom and fundraising responsibilities. Issues faced in library management frequently overlap with those faced in managing non-profit organizations.[1]

2: OBJECTIVES

The primary objective of the proposed Library Management System in .NET is to develop a comprehensive and efficient software solution that revolutionizes the way libraries operate and interact with their users. The system aims to achieve the following specific objectives:

1. Automation and Efficiency: Streamline and automate various library processes, including cataloging, borrowing, returning, and fine management, to reduce manual efforts and enhance overall operational efficiency.

2. User-Friendly Interface: Create an intuitive and user-friendly interface for both librarians and patrons, ensuring a seamless user experience while navigating the system and performing tasks.

3. Real-Time Information: Provide real-time updates on the availability of books, journals, and multimedia items to help users make informed decisions when selecting resources.

4. Accurate Tracking and Reporting: Enable librarians to generate various reports and analytics related to library usage, popular books, inventory status, and member statistics to support data-driven decision-making.

5. Fine Management: Automate fine calculation and tracking for overdue items, ensuring timely notifications to patrons and efficient management of fines.

6. Renewal System: Facilitate easy and quick book renewal requests.

7. Data Security: Implement robust security measures to safeguard user data and maintain the confidentiality of sensitive information.

3: IMPORTANCE / JUSTIFICATION OF WORK

The Library Management System proposed in .NET holds significant importance for both libraries and their patrons. Its implementation offers numerous advantages, making it a valuable and indispensable tool for modern library management. The key importance of the system can be summarized as follows:

1. Efficient Resource Organization: The system allows librarians to efficiently catalog and manage library resources. With an organized database, librarians can easily track the availability and location of books, journals, and multimedia items, leading to a more systematic library arrangement.

2. Streamlined Operations: Automation of various tasks, such as issuing and returning books, calculating fines, and generating reports, streamlines library operations. This efficiency reduces human errors and frees up librarians' time to focus on providing better services to patrons.

3. Enhanced User Experience: The system's user-friendly interface and features like online search, reservations, and renewals enhance the overall user experience for library patrons. It empowers them to access and interact with the library's resources seamlessly.

4. Data Security and Privacy: The system's robust security measures safeguard sensitive user data and protect the privacy of both patrons and staff, ensuring compliance with data protection regulations.

5. Future Scalability: The system's scalability allows it to accommodate future growth and technological advancements, ensuring it remains relevant and functional for years to come.

6. Cost-Effectiveness: While initial development costs may be incurred, the long-term benefits of improved efficiency, reduced manual labour, and enhanced user satisfaction contribute to overall cost-effectiveness.

The basic functions of library management include overseeing all library operations, managing the library budget, planning and negotiating the acquisition of materials, Interlibrary Loan [ILL] requests, stacks maintenance, over seeing fee collection, event planning, fundraising, and human resources[2]. Most of the libraries that store physical media like books, periodicals, film, and other objects adhere to some derivative of the Dewey Decimal System as their method for tagging, storing, and retrieving materials based on unique identifiers.[3]. Planning the

construction of new libraries or remodeling those that exist is integral since user needs are often changing. To supplement their operating budget, managers often secure funding through donor gifts and fundraising. Many facilities have begun including cafes, Friends of the Library spaces, and even exhibits.[4].

4: SOFTWARE AND HARDWARE REQUIREMENTS

HARDWARE REQUIREMENTS

Processor:
Intel dual core or above Processor
Speed:
1.0GHZ or above
RAM:
1 GB RAM or above
Hard Disk:
20 GB hard disk or above

SOFTWARE REQUIREMENTS:

Operating System:
Windows, Linux
Language:
C#, .NET Framework, Bootstrap, JavaScript
Database:
MS SQL EXPRESS
SQL Server Management Studio (SSMS)
Browser:
Chrome, Edge, Mozilla Firefox, Opera etc

TECHONOLOGY USED:

1. Visual Studio 2017 or above (Front End)
2. MS SQL Server (Back End)

5: CONCLUSION

This website provides a computerized version of library management system which will benefit the students as well as the staff of the library. It makes entire process online. Library Management System allows the user to store the book details and the customer details. This software package allows storing the details of all the data related to library. The system is strong enough to withstand regressive yearly operations under conditions where the database is maintained and cleared over a certain time of span. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports. Having an online platform for students and staff to access and manage library resources can indeed improve efficiency and convenience.

6: REFRENCES

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