Ahsanullah University of Science and Technology *Department of Computer Science and Engineering*

CSE3200: Software Development-V

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Project Proposal

Library Management System

Lab Section: A/A2

Group: 1

Submitted by

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Contents

1 Introduction

We are going to develop a Library Management System. Which will maintain the information about the books present in the library, their authors, the members of library to whom books are issued, library staff and all. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of a Library Management System software becomes much simple. The Library Management has been designed to computerize and automate the operations performed over the information about the members, book issues and returns and all other operations. This computerization of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

1.1 Objective

The objective of developing a Library Management System project is to create a efficient software solution that addresses the challenges faced by traditional libraries in managing their resources and serving their users in ASP.NET MVC C#. By using ASP.NET MVC C#, we want to provide a comprehensive digital platform that enhances accessibility, improves user experience, and streamlines library management processes. The primary objectives of the Digital Library Management System project are as follows:

- Create a user-friendly interface for browsing and accessing digital collections,
- Implement robust search functionality to enable users to find relevant resources efficiently.
- Provide secure user authentication and authorization mechanisms for personalized experiences through log in and sign in option.
- Enable online borrowing and returning of digital materials
- Provide register book option by using it authority can add new books to the library.

1.2 Motivation

The motivation behind embarking on the Library Management System project in ASP.NET MVC C# stems from our firsthand experience and understanding of the limitations and inefficiencies faced by traditional libraries. We have witnessed the challenges of physical space constraints, limited operating hours, and the difficulty for users to access library resources remotely.

Moreover, the rapid advancement of digital technologies has transformed the way information is consumed, making it imperative for libraries to adapt to this digital landscape. Users now expect convenient access to digital resources, personalized experiences, and seamless interactions with library services.

By developing a Digital Library Management System in ASP.NET MVC C#, we aim to provide a solution that bridges the gap between traditional libraries and the digital era. We are motivated to create a platform that empowers libraries to offer their resources in digital formats, cater to the changing needs of users, and optimize library management processes.

Through this project, we strive to improve the overall efficiency and effectiveness of library operations, enabling users to access a wide range of digital resources anytime and anywhere. Our motivation lies in empowering libraries to embrace the digital transformation, expand their reach, and provide an enhanced user experience for their patrons

2 Project Features

The key features of our project are:

1. **Admin Login:**
    This feature used by the admin 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.

2. **Register Student:**
    Admin can register information about new members of the library. Also the information about how many books one member has issued will be added.

3. **Register New Book:**
   This feature allows to add new books to the library. Moreover, system must be able to enter number of copies into table and must be able to not allow two books having same book id.

4. **Search Book:**
   This feature is found in book maintenance part. we can search book based on book id, book name, publication or by author name.

5. **Return Book:**
   If any student wants to return any book, admin can search their information by their id and can see how many books are currently issued in their name and which book the person wants to return.

6. **Issued Book:**
   Student can issue any books available in the library. However one member can issue at most 3 books.

3 Conclusion

Our objective in this project to build a software which will reduce the complexity of managing a library. Using this software one can manage all the information about books, members and admin. In future we hope that we can also modify the software to manage all the information about staffs, and members can issue books online.

4 Project Entity-Relationship Diagram

Entity-Relationship Diagram of Library Management System:

Admin_Name
Admin ID
A_PhoneNumber
Admin

Joining_Date
Member_ID
Admin_Id
Admits

Member_Name
Member ID
M_PhoneNumber
Member
M_DOB
M_Address

Member_ID
Using_Time
UserSerial_Id
Uses

Library_ID
Location
Mem_Numbers
Library
Stuff_numbers
Book_Numbers

Issue ID
Issue_Date
Return_Date
Issues
Member_ID
Book_ID

B_ArrivalDate
Admin_ID
Adds
Book_ID

Books
Book ID
Catagory
Book_Author
Price
Book_Title
NumberOfCopies

Has
Book_ID
H ID
Library_ID