****

**North South University**

Department of Electrical and Computer Engineering

**Lab Project Proposal**

Semester : NSU Spring 2023

Course Code : CSE 215L

Section : 16

Group Name : C

Faculty : Dr. Shamim Al Mamun (SAM3)

Lab Instructor : A. S. M. Sabiqul Hassan

Project Topic : Library Management System

GitHub Repo Link : https://github.com/Nafiz204/Library-Management-System

Submission Date : 11/05/2023

|  |  |
| --- | --- |
| Student Information | GitHub Account Links |
| ID- 2222044042  Name- Nafiz Imtiaz  Email- nafiz.imtiaz3@northsouth.edu | https://github.com/Nafiz204 |
| ID- 2221314642  Name- Munem Bulbul  Email- munem.bulbul@northsouth.edu | https://github.com/Munem-1 |
| ID- 2222866042  Name- Shakib Alom Fahim  Email- shakib.fahim@northsouth.edu | https://github.com/fahim007ab |

Project Topic: Library Management System

Introduction:

The Library Management System is a software application that aims to automate the management of various library functions such as book cataloguing, book lending, book return, fines and charges, and more. It is designed to cater to the needs of small to medium-sized libraries, such as school or community libraries. The system will be developed using Java and

Java Swing for the user interface. It will be a desktop-based application with an intuitive user interface that allows people to easily navigate and perform tasks. The system will also provide a range of features to enable library staff to manage the library efficiently. This includes the ability to add, edit, and delete book and user records, track borrowing history, and manage fines and charges. Users will be able to search for books, borrow and return books, and receive notifications about book reservations and overdue books. Overall, the Library Management System aims to improve the management of library functions, reduce administrative tasks, and improve the overall user experience for library users.

Objective:

1. Improve the efficiency of library management by automating and streamlining various library functions, such as book cataloguing, lending, and return, reducing administrative tasks for library staff.
2. Enhance the accessibility of book information by providing a secure and easily accessible database of book records, including details such as title, author, publisher, ISBN, genre, and availability.
3. Enable library staff to manage book and user records efficiently by providing them with features such as adding, editing, and deleting records, tracking borrowing history, managing fines and charges, and generating reports.
4. Improve the user experience of library users by providing features such as book search and filtering, book reservations, book recommendations, email notifications, and an easy-to-use interface.
5. Develop the Library Management System using the Agile development methodology, with regular iterations and sprints, to ensure that the final product meets the needs of the library staff and users.
6. Provide a user-friendly interface for library staff to perform their daily tasks such as cataloguing, lending, and return of books.
7. Allow the library staff to quickly generate reports on book borrowing, overdue fines, and other data relevant to library operations.
8. Improve the availability of books by allowing users to easily reserve books that are currently checked out.
9. Simplify book check-out and return processes for users.
10. Enable library staff to easily add and manage new books in the library catalogue.

Features:

1. Book cataloguing: The system will allow the library to catalogue books with details such as title, author, publisher, ISBN, and more.
2. Book Handling: The system will allow the library to efficiently add, delete, and edit the book information.
3. User Handling: Users will be able to create their own profile and library authority will be able to see those user histories and handle them easily.
4. Book reservations: Allow users to reserve books that are currently checked out and receive notifications when the book becomes available.
5. Book lending: The system will allow the library to lend books to registered users.
6. Book return: The system will allow users to return books and generate receipts.
7. Fines and charges: The system will calculate and track fines and charges for overdue books and generate reports.
8. Book search: Allow users to search the book catalogue by title, author, publisher, genre, and other criteria.
9. User management: The system will allow the library to manage registered users, and their borrowing history, and generate useful reports.
10. Reporting and analytics: The system will generate reports and analytics on library functions.
11. Receipt Generation: The system will help the user to check out books and generate a receipt for the user.

Development Approach:

The system will be developed using Java programming language and Java Swing for the user interface.

Conclusion:

In conclusion, the Library Management System is designed to improve the efficiency and accuracy of library operations, simplify the user experience for library users, and provide secure and easily accessible book information. With its user-friendly interface, features for managing book and user records, and ability to generate reports and notifications, the Library Management System will significantly reduce the administrative tasks for library staff and allow them to focus on providing quality service to library users. We believe that the Library Management System will greatly benefit small to medium-sized libraries, such as school or community libraries, by improving the overall library experience for both staff and users.