

**Green University of Bangladesh**

**Department of Computer Science and Engineering (CSE)**

**Faculty of Sciences and Engineering**

**Semester: (Fall, Year:2022), B.Sc. in CSE (Day)**

**Course Title:** Data Structure Lab

**Course Code:** CSE 106 **Section:** PC-191

**Project Proposal:** Library Management System with C

**Student Details**

| **Name** | | **ID** |
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| **1.** | Mahmudul Hassan | 191902001 |

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**Course Teacher’s Name : Syed Zenith Rhyhan**

| **Assignment Status**  **Marks: ………………………………… Signature: .....................**  **Comments: .............................................. Date: ..............................** |
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**Introduction:**

The library management system is a software application that manages the complete workflow of the library. The system automates the daily operations of the library, such as book cataloging, borrowing, returning, and managing fines. The proposed project aims to develop a library management system using the C programming language.

**Objectives:**

The objectives of the proposed project are as follows:

To create a user-friendly interface for librarians and users.

To automate the book cataloging process by storing and managing book details in a database.

To enable borrowing and returning of books using a barcode system.

To generate reports on book inventory, user activity, and overdue fines.

To provide a secure and reliable system for library management.

Scope:

The library management system will have two main modules, the librarian module, and the user module. The librarian module will be used to manage the library's day-to-day operations, such as adding and deleting books, managing users, and generating reports. The user module will allow library users to search for books, check book availability, and borrow and return books.

**Features:**

The library management system will include the following features:

Book cataloging: The system will allow librarians to enter book details, such as title, author, publisher, ISBN, and category.

Barcode scanning: The system will use barcode scanners to enable the borrowing and returning of books.

User management: The system will allow librarians to manage user accounts, including registration, login, and password management.

Search and filter: The system will enable users to search for books by title, author, publisher, and category.

Fines and notifications: The system will generate notifications for overdue books and manage the fines for late returns.

Reports: The system will generate reports on book inventory, user activity, and overdue fines.

**Technologies:**

The library management system will be developed using the C programming language. The system will utilize a database to store and manage book and user information. The system will also use barcode scanners to enable the borrowing and returning of books.

**Timeline:**

The proposed project is estimated to take approximately four months to complete. The timeline for the project is as follows:

Month 1: Requirements gathering and system design.

Month 2: Database design and development.

Month 3: User interface development and testing.

Month 4: Integration testing and deployment.

**Conclusion:**

The library management system in C is a vital tool for modern-day libraries. The proposed project aims to develop a user-friendly system that automates the library's daily operations, enabling librarians to manage books and users efficiently. The system will use the latest technologies and provide a secure and reliable system for library management.