

PROJECT SCOPE STATEMENT

Group Name: CodeCrafters

Project Name: Library Management System (LMS)

1. Introduction:

- Library Management System (LMS) will consist of options to facilitate both students and teachers. It will provide different criteria for students and teachers. It will use 'file handling' for holding information. Only a single person (librarian) will be able to access files holding such information. He/she will also be solely responsible for managing the books in library, such as adding new books, removing old books, issuing books etc.
- All data regarding books and students will be store in files. C++ offers several advantages in File Handling. System will use both sequential and random-access files. File handling in C++ is persistent and portable.

2. Objectives:

- Develop a user-friendly system for efficient book borrowing and returning.
- Implement file handling for storing information on books, students, teachers, and library staff.
- Develop a system for adding new books.
- Create functionalities for book checkout, return, and renewal.
- Create functionalities for checking student's previous library record while issuing new books.
- Provide less restrictions for teachers.
- Maintain records of book's borrower and date of return.
- Provide search and filter options for easy book location.

3. Deliverables:

- Command line interface for navigation and usage of system.
- Implementation of file handling for persistent data storage.
- Functionalities for book checkout, return, and renewal.
- Functionalities for adding or removing books from library.
- Different criteria for student and teachers.
- Search and filter options for book retrieval.

4. Technology Stack:

- Programming Language: C++
- Data Storage: File Handling
- Version Control: GitHub
- User Interface: Console-based

5. Milestones:

- Design and User Interface Development
- File Handling Implementation for Data Storage
- User Authentication and Access Control
- Book Checkout and Return Functionality
- Search and Filter Options Implementation
- Testing and Debugging
- Documentation and Final Submission

6. Conclusion:

- Library Management System (LMS) will help to control and manage library by a single person or multiple persons. LMS will use files to manage all data regarding books and students/teachers.
- An efficient LMS is necessary for a college. This implementation of LMS will provide many advantages to every person using it. It will be neat and effective approach to manage library.