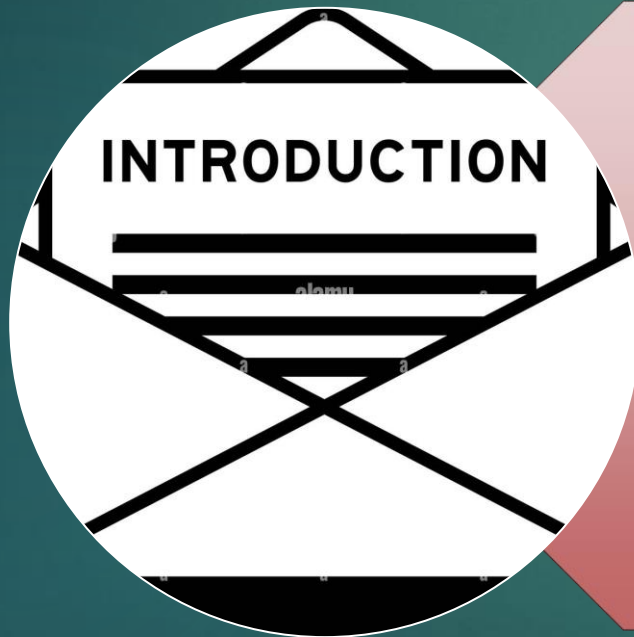


Library Management System

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INTRODUCTION



Library Management System is a digital solution to manage books, members, and records efficiently.

Problem Statement

- Manual system is time-consuming
 - High chances of errors
 - Difficult record management
- Manual library management is time-consuming and prone to errors. Tracking book availability and member history manually is inefficient.

Proposed Solution

C++ Based Digital System

- Automated book issue & return

File Handling for data storage

- Fast & accurate searching

Key Feature

****Book Management:**** Add new books with ID, Title, and Author.

****Member Management:**** Register new members.

****Borrowing System:**** Issue books to members and accept returns.

****Data Persistence:**** Automatically saves and loads data using text files (File I/O).

****Reporting:**** View all available books and registered members.

Flowchart / Workflow

- ▶ ****Start Program**** -> Load Data from Files.
- ▶ 2. ****Display Main Menu:****
 - ▶ * 1. Add Book
 - ▶ * 2. Add Member
 - ▶ * 3. Issue Book
 - ▶ * 4. Return Book
 - ▶ * 5. View All
- ▶ 3. ****User Selects Option**** -> Perform Action.
- ▶ 4. ****Exit**** -> Save Data to Files -> End.

Code Highlight - File Handling

```
▶ ```cpp
▶ void Library::saveData() {
▶     ofstream outFile("library_data.txt");
▶     for (const auto& book : books) {
▶         outFile << book.getId() << " | "
▶             << book.getTitle() << " | "
▶             << book.getAuthor() << endl;
▶     }
▶     outFile.close();
▶ }
```

Conclusion

- ▶ *Successfully implemented a functional Library Management System in C++.
- ▶ * Demonstrated understanding of C++ fundamentals, OOP, and File I/O.
- ▶ * The system is modular and expandable for future features.

Project on GitHub

- Project source code is uploaded on **GitHub**
- GitHub helps in version control and code management
- Easy access to project files anytime
- Improves collaboration and project sharing

GitHub Repository:

- <https://github.com/aman-8x/Library-Management-system>



THANKYOU

Any Question