Project Report: Library Management System in C++

In this project, I created a simple program using C++ that helps manage a small library.

It is a practical application of basic programming concepts.

Program Idea:

The program allows the user to perform the following operations:

1. Add a new book.

2. Display all books in the library.

3. Borrow a book if it is available.

4. Return a borrowed book.

5. Exit the program.

Data Structure Used:

Arrays were used to store book data, with each array having a specific role:

- bookids[] to store each book's ID.

- bookTitles[] to store book titles.

- bookAuthors[] to store author names.

- isBorrowed[] to store the book's status (available or borrowed).

A variable named bookcount is used to keep track of the number of books added.

Functions in the Program:

The program is divided into several functions, each performing a specific task:

- addBook() to add a new book.

- displayBooks() to show all stored books.

- borrowBook() to borrow a book.

- returnBook() to return a book.

- menu() to display the options and interact with the user.

How the Program Works:

When the program runs, it displays a menu with options. The user chooses the operation by entering a number, and the program executes it directly.

For example:

- If the user selects to add a book, they enter the book details.

- If the user wants to borrow a book, they enter its ID, and the program checks if it is available or not.