Online Book Store (C++ Console Application)

The Online Book Store is a console-based application developed using the C++ programming language. This project is designed for beginner-level students, especially first-semester Software Engineering students. It helps to understand and apply fundamental programming concepts in a practical way. The system simulates a simple book purchasing environment where users can view books, search for specific titles, add books to a cart, and generate a bill.

The main goal of this project is not to build a commercial-level application but to strengthen logical thinking, problem-solving skills, and understanding of core C++ concepts. By working on this project, students gain hands-on experience with loops, conditional statements, functions, structures, arrays, and menu-driven programming.

Objectives of the Project

The main objectives of this project are given below the following:

- To understand and apply basic C++ programming concepts.
- To develop a menu-driven console application.
- To practice the use of structures and arrays for data management.
- To improve logical thinking and problem-solving skills.
- To simulate a simple online book purchasing system.
- To gain confidence in writing and explaining C++ code during viva

Scope of the Project

The scope of this project is limited to a simple console-based Online Book Store. The system allows users to view available books, search books by ID or name, add selected books to a cart, remove items from the cart, and calculate the total bill.

The project does not include advanced features such as file handling, database connectivity, user authentication, admin panel, or real online payment systems. All data is stored temporarily using arrays and is lost once the program terminates. This limited scope makes the project suitable for beginner-level learning.

Tools and Technologies Used

- Programming Language: C++
- Application Type: Console-based application
- Development Environment: Any C++ compiler such as Dev-C++, Code::Blocks, or Visual Studio
- Operating System: Windows

The project is implemented using only basic programming constructs without using object-oriented programming or file handling.

System Design and Concepts Used

This project is designed using a structured programming approach. The following C++ concepts are used:

- **Loops:** For displaying lists of books and cart items.
- **Conditional Statements:** For validation and decision-making.
- **Switch Case:** For handling menu options.
- **Functions:** To divide the program into reusable modules.
- **Structures:** To store book and cart information.
- **Arrays:** To manage multiple books and cart items.

These concepts help keep the code organized, readable, and easy to understand

System Features

The Online Book Store provides the following features:

- Display all available books with details such as ID, name, author, price, and stock.
- Search books by ID or name.
- Add books to a shopping cart.
- Remove books from the cart.
- View cart details.
- Calculate and display the total bill.
- Loading bar and screen-clearing features for better user experience.

Program Flow

The program starts with a loading bar to enhance user experience. After loading, the main menu is displayed. The user selects options from the menu using numeric input. Based on the selected option, the corresponding function is executed. After completing each operation, the program waits for user input and then returns to the main menu. The program continues running until the user chooses the exit option.

Limitations of the System

This system has following limitations that are listed below. These limitations are intentional to keep the project simple and suitable for beginners.

- No permanent data storage (no file handling).
- No user login or authentication system.
- No admin panel for managing books.
- Data is lost after program termination.
- Console-based interface only.

Conclusion and Future Enhancements

The Online Book Store project successfully demonstrates how basic C++ programming concepts can be applied to build a simple real-world application. This project helped in improving understanding of logic building, structured programming, and modular code design. It serves as a strong foundation for learning advanced concepts in future semesters and prepares students for more complex software development projects.

The project can be extended in the future by adding file handling to store book and order data.We will implement the user login and authentication. Also Create an admin module for managing books. We will also make sure to add discount and payment simulation features. Convert the console application into a GUI-based system.