

AMPHINICY technologies – C++ technical interview preparation

Library Management System - Project Description

Introduction

The Library Management System project is a basic C++ application that allows users to manage a collection of books. The application should provide common operations such as adding, deleting, searching, and borrowing books.

Objective

The goal of this project is to implement a simple and efficient Library Management System that adheres to good coding practices and demonstrates your ability to structure a C++ application effectively.

Key Requirements

The application should include the following features:

- Add a book to the library with details such as title, author, year, and availability status.
- Search for a book by title, author, or number.
- Borrow a book, meaning marking it as unavailable.
- Return a borrowed book, meaning marking it as available again.
- Display a list of all the books in the library.
- Persist data using file storage (e.g., plain text or JSON) to ensure data is saved between program runs.

You can of course add any functionalities to the project 😊

Requirements

Feel free to use any library. We only expect:

- A complete and functional C++ application with source code.
- Building instructions
- Some documentation

Evaluation Criteria

Your project will be evaluated based on the following criteria:

- Code quality: Readable, modular, and follows best practices.
- Functionality: Completeness of the required features.
- Problem-solving: Effective use of algorithms and data structures.
- Persistence: Correct implementation of file I/O for data storage and retrieval.
- Documentation: Clarity and completeness of the project documentation.