C++ PROJECT PRESENTATION

SHELFAWARE

A C++ program that manages library books, borrowing, and returns with admin control and data saving.

Group 9: Cabangon, Mike Justin

Diaz, Jannus Recz C.

Lanurias, Lance Leanard

Libo-on, Gian Carlo

Mauro, Ryan Lewis

OBJECTIVES

- To enable administrators to manage books and user records efficiently.
- To allow users to view, borrow, and return books easily.
- To ensure data persistence through file handling so information is not lost when the program closes.
- To implement basic security using password encryption for the admin account.
- To demonstrate fundamental C++ concepts such as:
- File input/output operations
- Structs and vectors for data organization
- String manipulation and search functions
- Menu-driven programming and user interaction

FEATURES

Admin Features
- Add new books with details such as ID, title, author, category, price, and number of copies.
- Display all available books in a formatted list.
- Search for books by title or author (case-insensitive).
- Delete a book record by ID.
- Change the admin password.
- Save all updates automatically to the data file.

User Features
- View all available books and their details.
- Search for specific books by title or author.
- Borrow books (reduces available copies and records borrower information).
- Return borrowed books and calculate late penalties (₱2 per late day).

System Features
- Automatic saving and loading of data from library_data.txt.
- Encrypted password storage using a simple Caesar cipher (+3).
- Penalty calculation system for late book returns.
- User-friendly, menu-driven console interface.
- Simple error handling for invalid inputs and missing files.

THANK YOU

END OF SLIDES