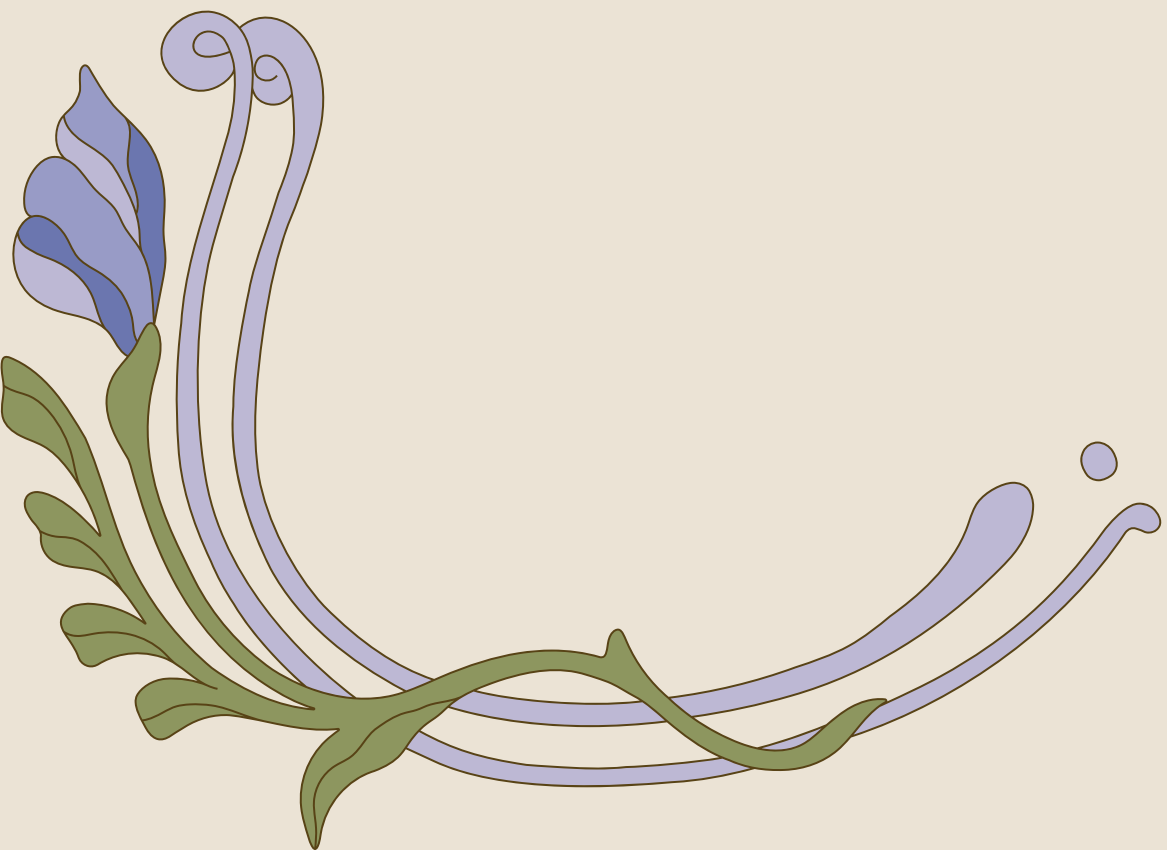
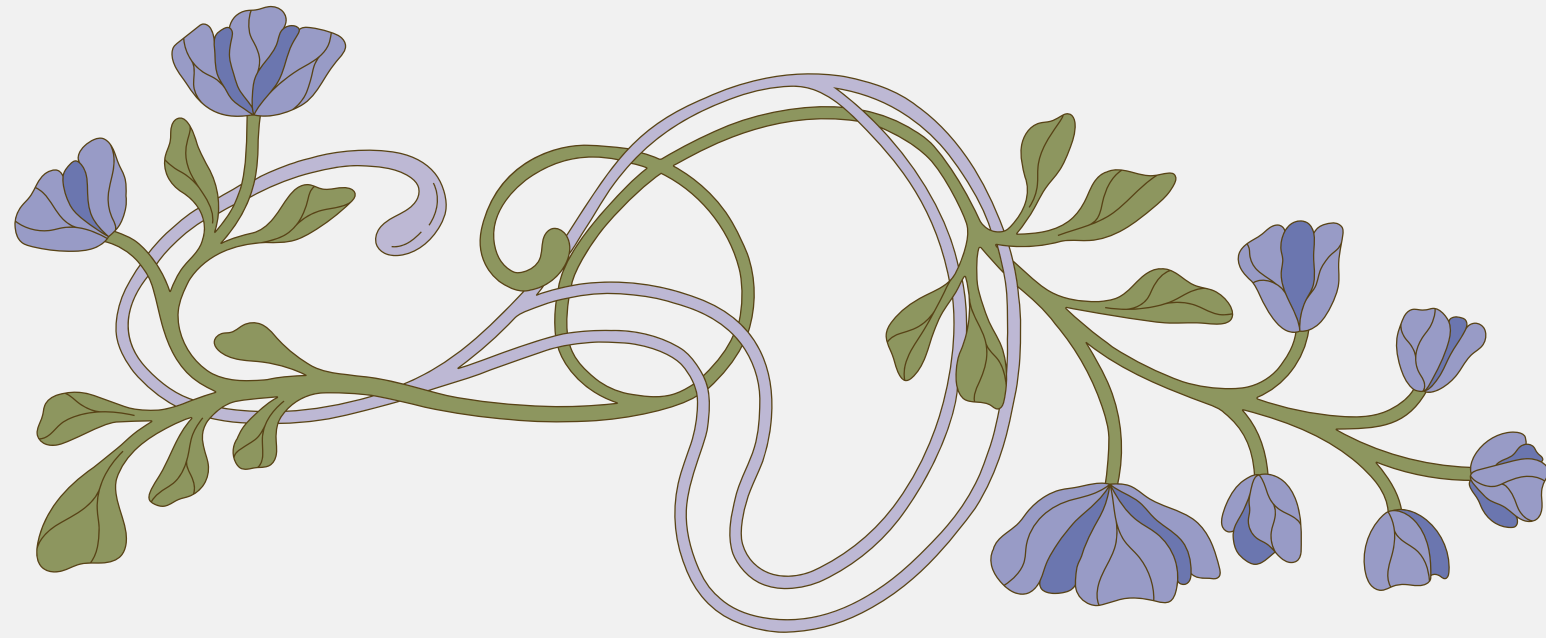




LIBRARY MANAGEMENT SYSTEM

by: Emily Weed





Who and what is it for?

This is a **book management system** for libraries, bookstores, or reading enthusiasts who want to browse and manage a collection of books. The system provides users with functionalities like browsing books, checking availability, and adding them to a hold list or borrowing them.

Target Audience

- Library patrons who want to easily search for books, view details, and manage their borrowing activities.
- Administrators or staff members of libraries who may use the system for book tracking, borrowing management, and integrating external book data.





*Software
Demonstration*



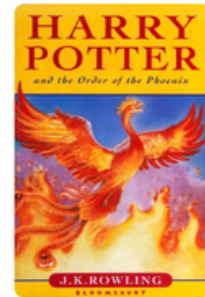


Feature #1: Book Search & Display

The system **automatically** fetches results from the Open Library API and populates the list with book details such as title, author, year, and book cover images. Users do not have to manually input book details or update the library's catalog.

Search bar where the user types a book query:

User types a book query (e.g., "Harry Potter and the Order of the Phoenix"). **Result:**



Title: Harry Potter and the Order of the Phoenix
Author: J. K. Rowling
Publication Year: 2003



Feature #1: Book Search & Display

User Interface & Design

- Clean, intuitive design: the search bar is easy to access at the top, with results displayed in a grid layout.
- Each book entry includes key details, and clicking on a book will show more details if needed.

Backend

- API call to the Open Library API (https://openlibrary.org/search.json?q=book_query), retrieving the data dynamically in real-time.

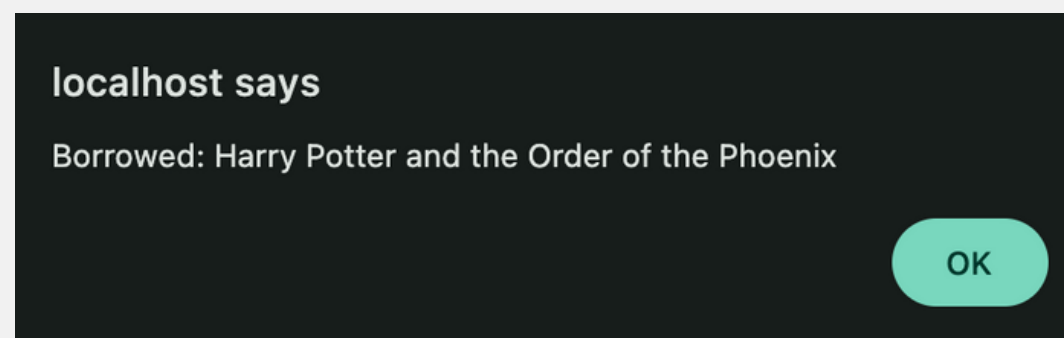
Feature #2: Borrow and Hold System

After a user searches for books, they can borrow or place books on hold with a click of a button.

The **borrow** and **hold** buttons:



Clicking borrow confirms the action and alerts the user that the book is now borrowed (with an automatic update). Same goes for placing a book on hold.



Feature #2: Borrow and Hold System

User Interface & Design

- Clear action buttons with distinct colors (green for borrow, yellow for hold).
- Notifications appear when actions are completed, providing immediate feedback.



Backend

- Simple state changes (borrowed, on hold) are tracked in the backend with the option to integrate with a database for persistence.
- This feature automatically updates the status without any user interaction beyond the initial click.





Feature #1: Automation & Smarts of the System

The system automatically processes data from the Open Library API, displays results, and handles actions like borrowing or placing books on hold.

Once a book is borrowed or placed on hold, the system doesn't require further input to update the status or provide feedback.

System includes automatic data retrieval for book details (title, author, etc.) without manual entry.

Backend

- API integration with Open Library: when users perform a search, the system makes an API call, processes the data, and formats it for easy viewing.
- Action buttons for borrow/hold update the book status in real-time without requiring multiple clicks.

Key Takeaways

- The system minimizes user effort by automatically pulling in book data and managing borrow/hold actions seamlessly.
- Users don't have to manually track or update book availability—everything happens with a simple click, and the system manages the rest.
- The backend integration with Open Library's API ensures that book information is always up-to-date without needing manual maintenance.

