

ONLINE LIBRARY MANAGEMENT SYSTEM

Problem statement:

- To develop an online library management system that addresses the shortcomings of traditional library management methods.
- To create a system that enables efficient cataloging, tracking, and retrieval of library resources.
- To provide a user-friendly interface for patrons to search for resources, manage their accounts, and access digital content.
- To facilitate real-time monitoring of resource availability, user borrowing history, and overdue items.
- Developing an efficient online library management system to streamline cataloging, user authentication, and borrowing processes, enhancing accessibility and organization for users while optimizing administrative tasks for library staff.

List of patterns:

1. Singleton

Used in file handling under 2 scenarios one for user and the other for books

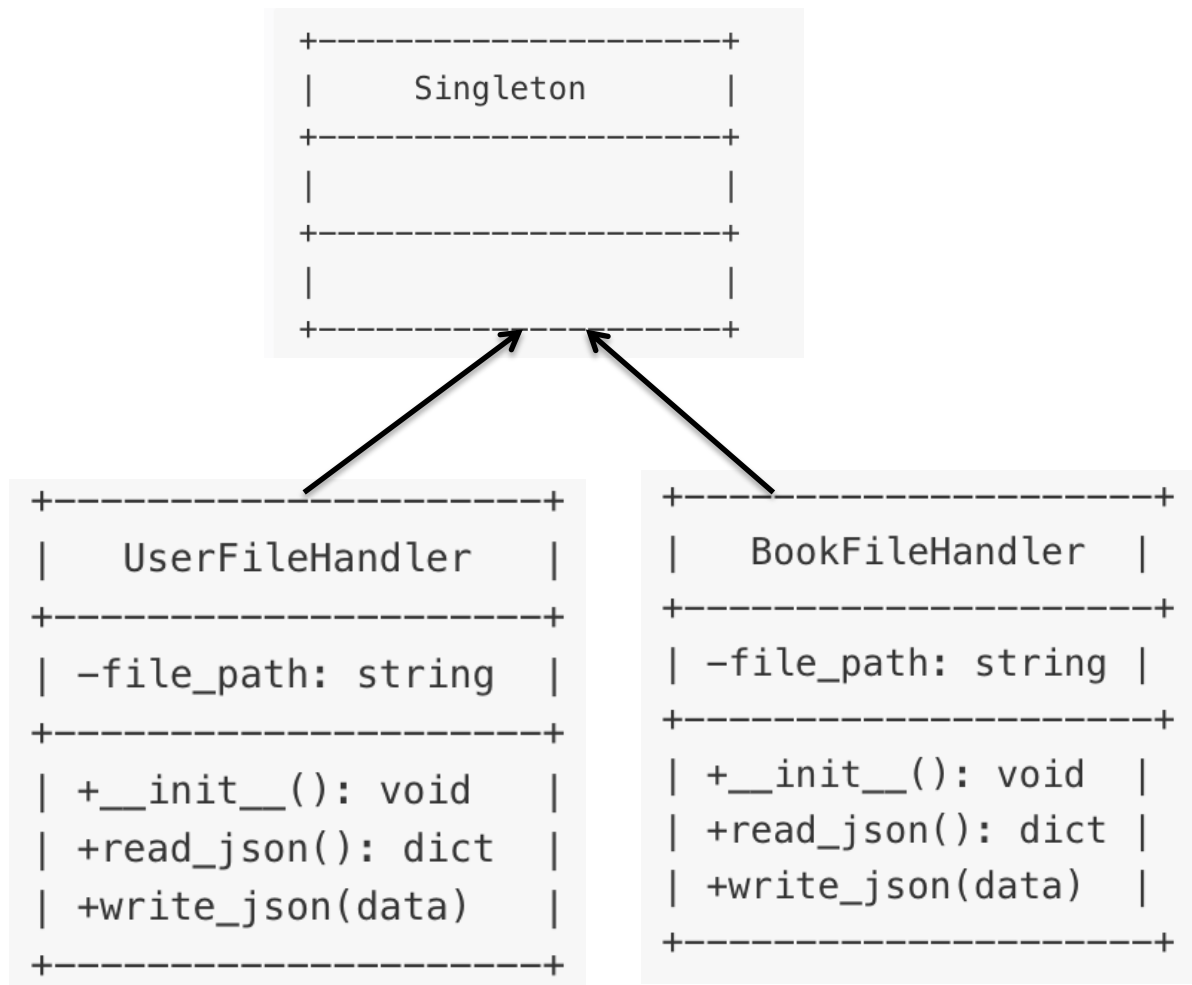
2. Decorator

Used in authentication and adding books where it allows modification in behaviour of functions without changing the actual code

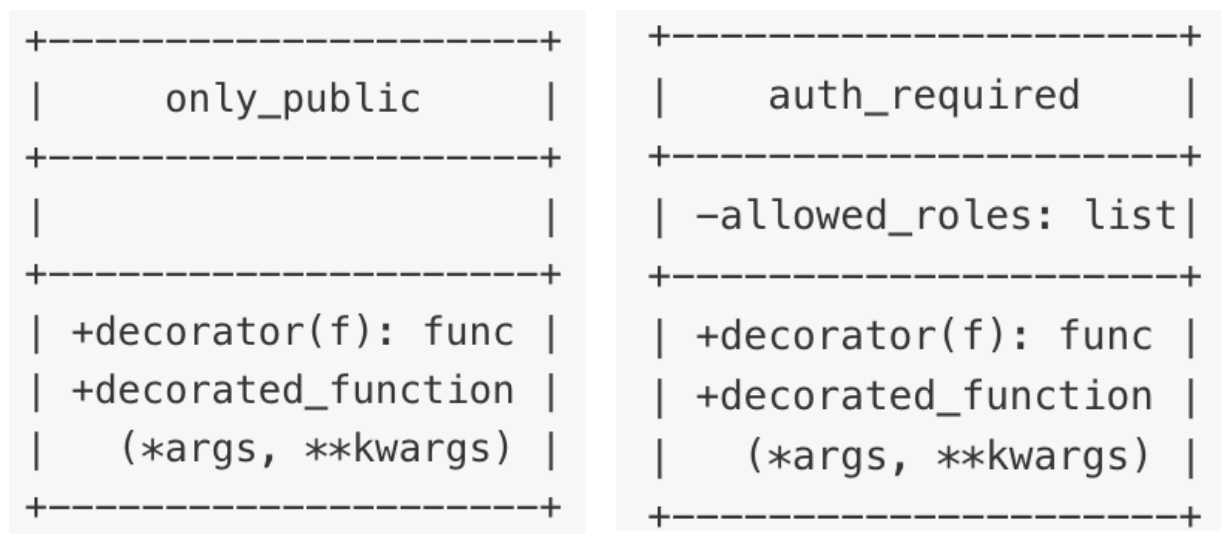
3. Observer

Notifies the user when a book has been borrowed and also maintains a log file in the admin panel

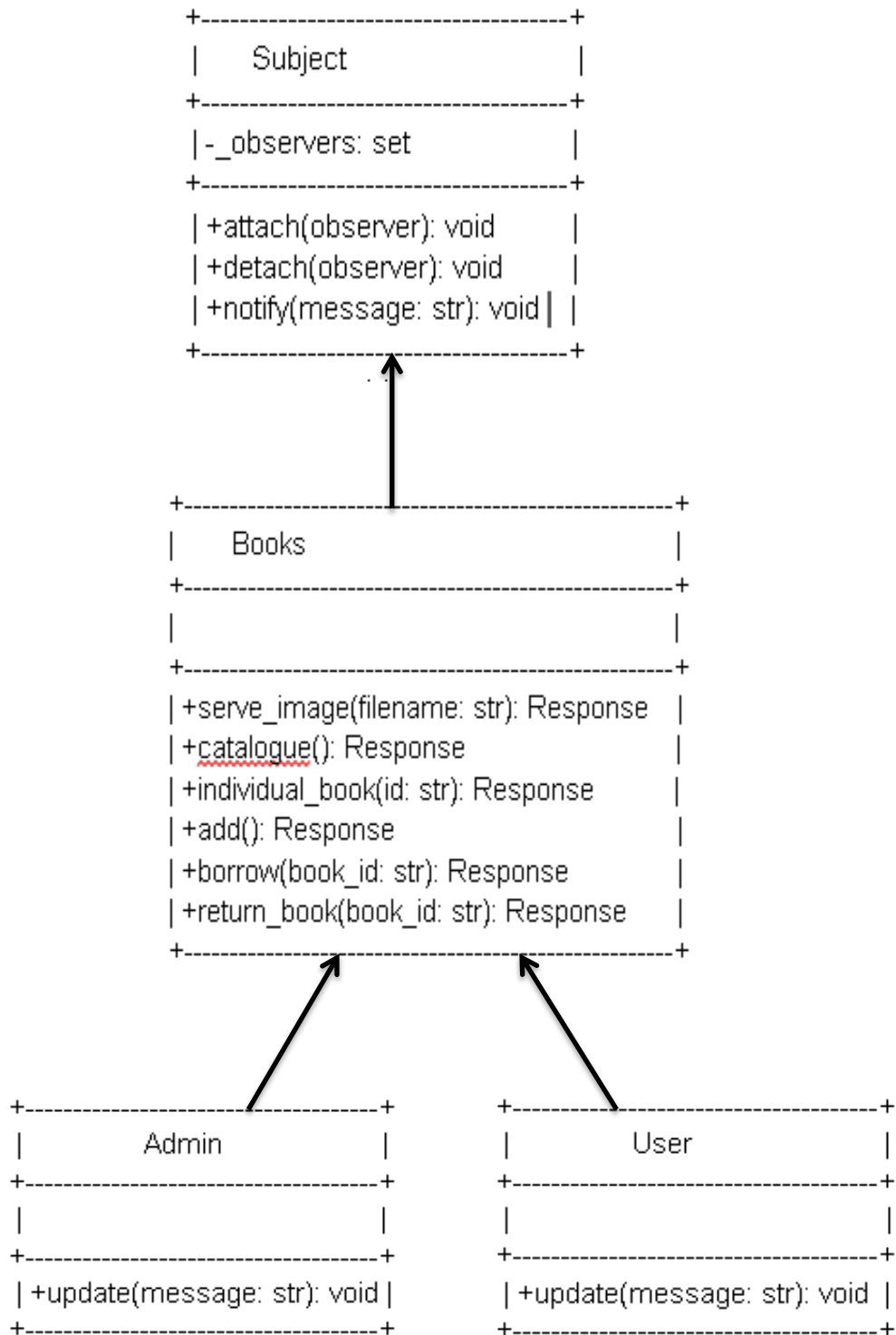
SINGLETON PATTERN:



DECORATOR PATTERN:

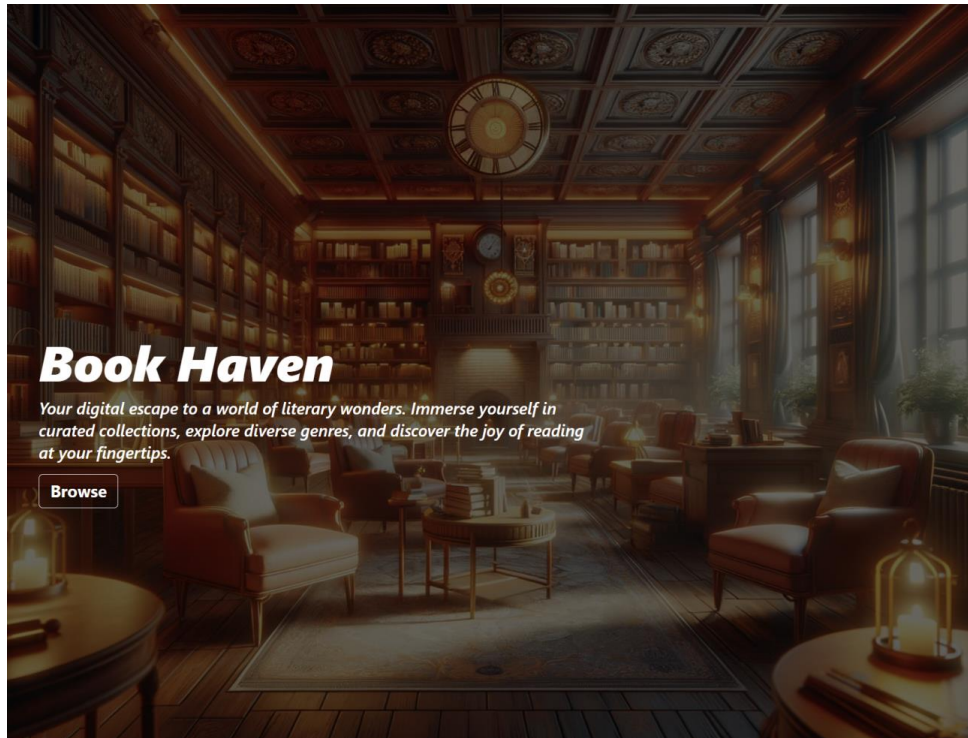


OBSERVER PATTERN:




OUTPUT SCREENSHOTS

1)Landing page:



2)Registration for new user

 **BookHaven**

Member Registration

Register

Username


Password

Password

Continue

Already have an account? Login

3)Login page

 BookHaven

Register

Login

Username

Enter your username


Password

Enter your password

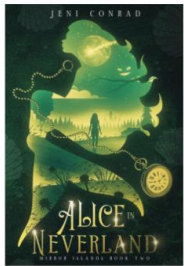
Continue

New Member? Join Now

4)Home page (books are displayed)

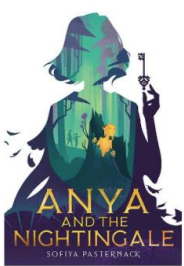
 BookHaven

LogoutACCOUNTADMIN




Alice In Neverland
jeni conrad
fantasy

Borrow



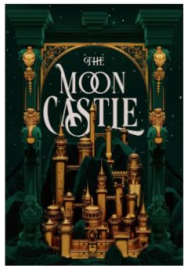
Anya And The Nightingale
sofiya pasternack
fantasy

Borrow




Peter Pan In Wonderland
peter pan in wonderland
fantasy

Borrow



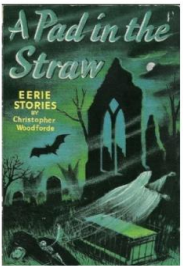
The Moon Castle
fantasy

Borrow



Book Of Sorcery
fantasy


Borrow




A Pad In The Straw
eerie stories
fantasy

Borrow

5)Books borrowed page

<div> BookHaven</div> <div>LogoutACCOUNT</div>				
({roles: ['member'], 'username': 'lohit'})				
<h2>Books Borrowed</h2>				
BOOK NAME	GENRE	AUTHOR	BORROWED DATE	ACTIONS
alice in neverland	fantasy	jeni conrad	23-12-2023	<button>Return</button>
anya and the nightingale	fantasy	sofiya pasternack	23-12-2023	<button>Return</button>
peter pan in wonderland	fantasy	peter pan in wonderland	23-12-2023	<button>Return</button>
book of sorcery	fantasy	maria kilton	23-12-2023	<button>Return</button>

6)Admin panel (log page)

<div> BookHaven</div> <div>LogoutACCOUNTADMIN</div>			
<h2>Admin Panel</h2>			
<h3>All Books Borrowed</h3>			
BOOK NAME	GENRE	AUTHOR	BORROWED DATE
alice in neverland	fantasy	jeni conrad	23-12-2023
anya and the nightingale	fantasy	sofiya pasternack	23-12-2023
peter pan in wonderland	fantasy	peter pan in wonderland	23-12-2023
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