

PROJECT DOCUMENTATION

Instructions to Create a Social Media Dashboard

Objective:

Main Menu

1. Add book: Allows you to add a new book to the library.
2. Remove book: Allows you to remove a book from the library by its ISBN.
3. Find book by ISBN: Allows you to find a book by its ISBN.
4. Display all books: Displays all books in the library, including their title, author, ISBN, status, and borrower.
5. Display available books: Displays only the books that are currently available (i.e., not checked out).
6. Exit: Exits the program.

Adding a Book

1. Enter title: Enter the title of the book.
2. Enter author: Enter the author of the book.
3. Enter ISBN: Enter the ISBN of the book.

Removing a Book

1. Enter ISBN: Enter the ISBN of the book you want to remove.

Finding a Book

1. Enter ISBN: Enter the ISBN of the book you want to find.

Challenges AND THEIR SOLUTION:

Challenge 1: Handling Invalid Input

- The program does not have any error handling for invalid input. For example, if the user enters a non-numeric value for the ISBN, the program will crash.
- Solution: Add input validation to check if the input is valid (e.g., numeric for ISBN). If the input is invalid, prompt the user to try again.

Challenge 2: Persisting Data

- The program does not store any data persistently, so all data is lost when the program is exited.
- Solution: Implement a database or file-based storage system to store the data. This can be done using a library such as SQLite or a simple text file.

Challenge 3: Handling Multiple Users

- The program does not have any user authentication or authorization, so multiple users can access and modify the data without restrictions.
- Solution: Implement a user authentication system using a library such as OpenSSL or a simple username/password system. This will allow you to restrict access to certain features and data.

Challenge 5: Displaying Book Information

- The program displays all book information, including borrower information, even if the book is not checked out.
- Solution: Add a method to check if a book is checked out before displaying borrower information. This will prevent displaying borrower information for books that are not checked out.

Challenge 6: Searching for Books

- The program does not have any search functionality, so it's not possible to find books by title or author.
- Solution: Add a search function to the program that allows users to search for books by title, author, or ISBN.

Challenge 7: Handling Multiple Copies of a Book

- The program does not have any mechanism to track multiple copies of a book, so it's not possible to keep track of how many copies are available.
- Solution: Add a "copies" field to the Book class to track how many copies of a book are available. You can also add a method to check if a book has any copies available before checking it out.

LinkedIn Post Link:

<https://www.linkedin.com/feed/update/urn:li:activity:7214011679758553090/>

GitHub Post Link:

<https://github.com/Aleshakhan 22/Handling-Data-Types-and-Variables>