LIBRARY MANAGEMENT SYSTEM

# Objective

The objective of the document is to create a Library management system which will allow users to view all the books in a library, Check for a particular available book, Lend Books , return books, add new books.

# Designing the Main Menu

Store the book details in a Text file in the following format :-

1,A,B,IN

2,C,D,OUT

# Option 1 :- Read entire catalog

* Read the Available books from a Flat File.
* Write down in a list.
* Read from the list

Prinout the Entire Catalogue in the following format :

ID|BOOK NAME|AUTHOR NAME|STATUS

1|A|B|IN

2|C|D|OUT

The above data is just for example only

# Option 2 :- Check for an available book

* User will have option to enter the Book name/Author/Book ID and search for the book.
* In this project we will expect the User to enter the exact Bookname/Author, eventually we will expand it to regex to match patterns.
* Search for the parameters 2(Book Name) and 3(Author) of the flat file values.
* If no match comes, print a exception message, saying”Sorry, book doesn’t exist”.
* Return to Main Menu

# Option 3 :- Issue a book

* User selects option to rent a book.
* Check if the book is actually checked out using the Catalogue ID.
* If book doesn’t exist, print a Sorry message saying, “Sorry, book not found”.
* If its checked out, say, “Sorry, book is already checked out”.
* Else, issue the book to user , print a message saying, “The book , <<Book Name>> is issued to you. Please return the book on or before <<System Date + 7>> Days.
* Change the status to “OUT”.
* Return to Main Menu

# Option 4 :- Return a book

* User selects option to return a book.
* User is asked to key in the Catalogue ID of the Book he is trying to return.
* Check if the book is actually checked out using the Catalogue ID.
* If its checked out, an user is returning, Update the status of the book to “IN”, and print a Thank You message to user.
* If the Status is already IN, and the user is trying to return the book, tell the user that he is trying to return a book which is already Checked In.
* If the Book doesn’t exist only, print a message to the user saying that he is trying to return a wrong book.
* Return to Main Menu

# Option 5 :- Donate/Add a new book

* Ask the user to Enter how many books he wishes to donate.
* As the user to enter the book Names and Author Names.
* Now, Auto increment the catalogue ID of the last book which is in Catalogue to generate a new catalogue id, and go on inserting the Books in the Flat file, based on the newly generated catalogue ID, Book Name and author name sequentially. The Status of the books should be ‘IN’
* Once the process is done, enter a Thank you message to the user for his donation.
* Return to main menu

# Option 6 :-Exit

* Print a bye message and exit the system.

Hint : You can currently do this project using a txt file which will have the Entries as per the attached text file