# Program Manual

## Brief description:

This C program is a simple library system, which include some basic functions in library.

## Functionality:

In our program, user and administrator can do different operation in different menu.

### The First part: Users

1> Login & Register
Firstly, users need to "login" this system in the first page, which as figure 1. As long as user login, they are able to enter the next menu.
If user does not have an account, they can choose "Register" to register an account in the first page, which can be seen in figure 1. After registering successfully, user will be led to the login page again.
When users login, if they enter the wrong password, system will not allow them to login. After login successfully, they can go to another menu, which has some basic function in library (figure 2).


Figure 1: the first page

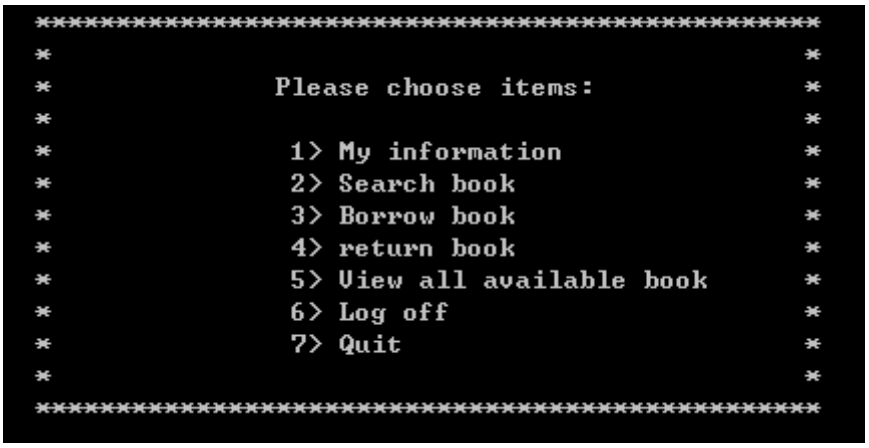


Figure 2: logged-in menu

2> My Information

In this function, users can check their information, such as the username, type (student or teacher) and history. If they have borrowed one book which is not returned, there will showing this book name in the history. The picture of this function is figure 3.

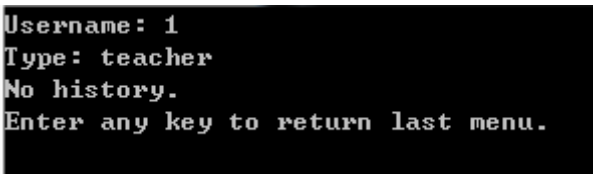


Figure 3: my information

3> Search book

In this function, users can search book through book name, author name, ISBN, subject, Loan type and shelf, which can be seen in figure 4. For example, if users choose "author name", all the books whose name is this author will be shown on the screen. After searching books, system will go back the menu.


Figure 4: search book

4> Borrow book

In this function, user can borrow one book through entering its IBSN. If there

exists this book, users can borrow it, otherwise, users will be told that this book does not exist or this book is borrowed out. If users can borrow one book, if users are teachers, system will remind that they can keep this book for 60 days. If users are students, system will remind that they can keep this book for 30 days. Once users borrowed successfully, this book will be recorded into the user's account information. If this book does not return, users cannot borrow other books. The picture of borrow function is figure 5.

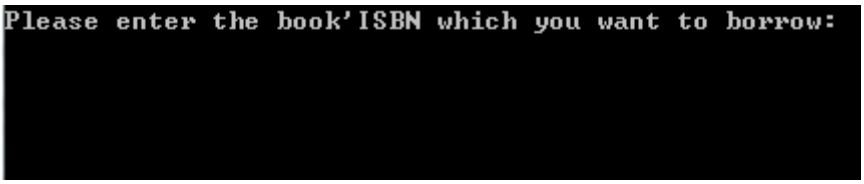


Figure 5: borrow book

5> return book

In this function, users can return the book which they have borrowed by entering its IBSN. If IBSN is not correct, system will remind that this book is not in the library. If users want to return the book which is not borrowed by them, system will remind that they do not borrow this book. If user returns book successfully, the book information in their account will be deleted. More details about this function is figure 6.


Figure 6: return book

5> View all available book

Users can check the book list which includes all available books in the library, which can be seen in figure 7.

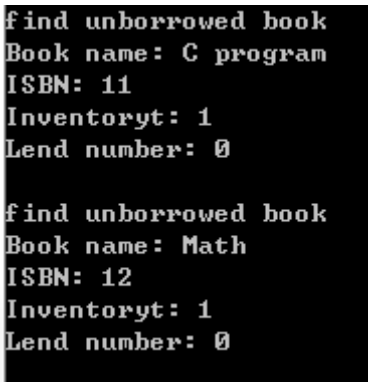


Figure 7: View available books

6> Log off

After users login, they can log off and go back the login page.

**The second part: Administrator**
**(When choosing the administrator option, an administrator menu will be displayed like figure 8)**

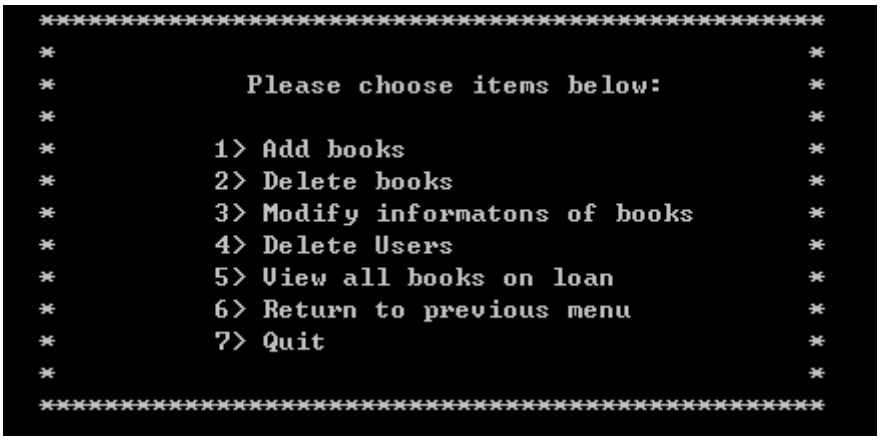


Figure 8: administrator menu

1> Add book

In this function, administrator can add book into this library system. Administrator need enter all the information about this book, such as book name, author name, IBSN, subject, shelf, note and loan type. After adding successfully, this book information is added into a file which named "librarybooks.txt". This process can be shown in figure 9.

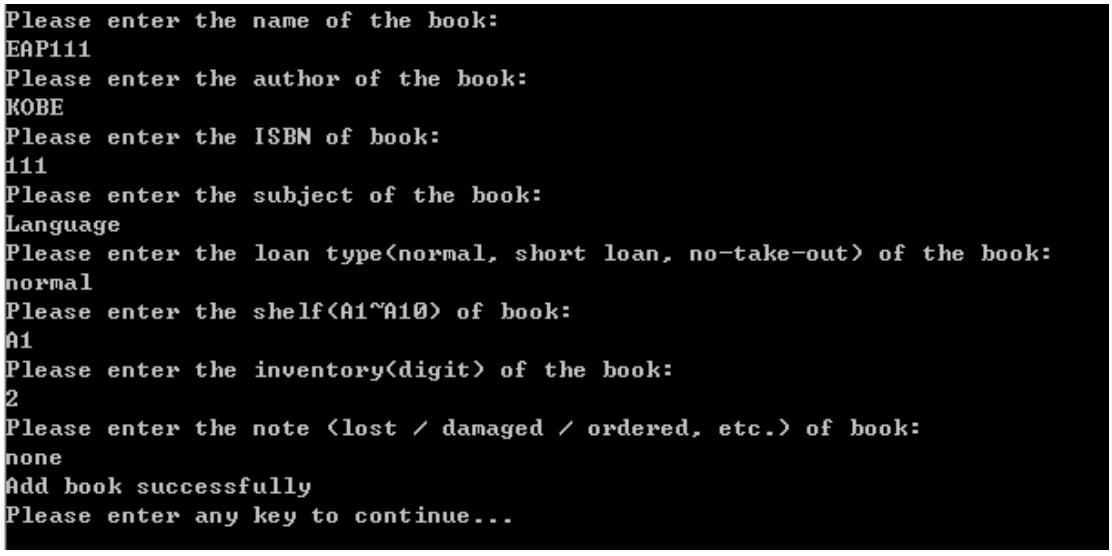


Figure 9: add books

2> Delete book

In this function, administrator can delete book information which has existed in the library. This function is realized by deleting the node of linked list and writing information to the file again. This progress can be seen in figure 10.

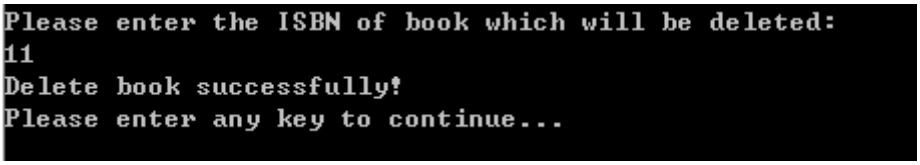


Figure 10: delete books

3> Modify information of books

In this function, administrator can modify any information of books. After modifying the information in the linked list, all the information in the linked list will be wrote into the file again. This progress can be seen in figure 11.

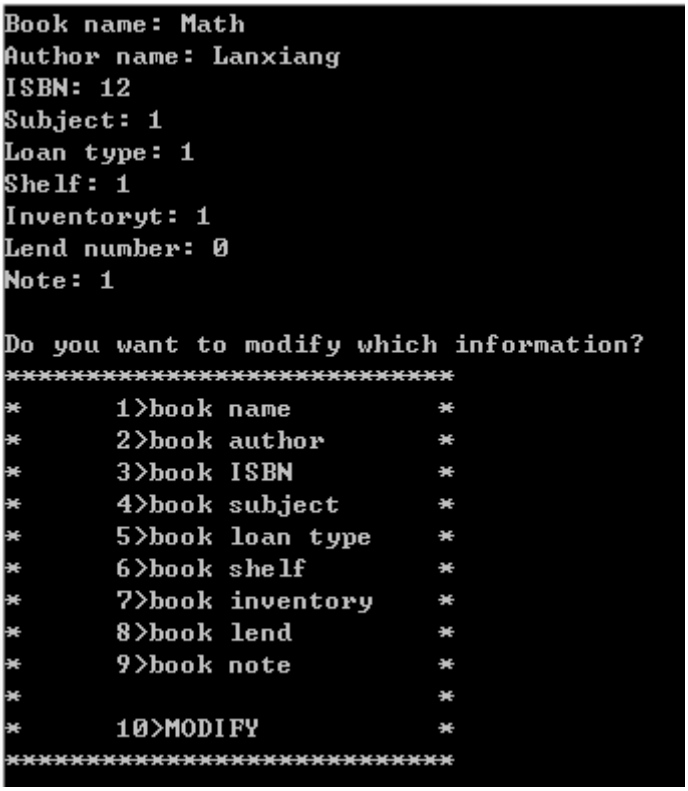


Figure 11: modify books

4> Delete Users

In this function, administrator can delete users' information. This function is realized by delete the node of the linked list and writing the information to the file again. This progress can be seen in figure 12.

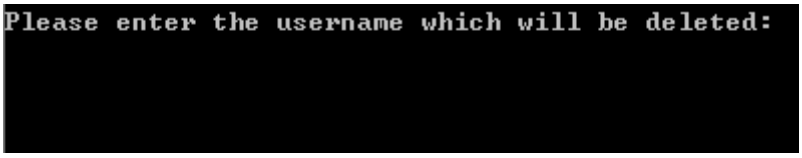


Figure 12: delete users

5> View all books on loan
In this function, administrator can view all the books on loan. This process can be seen figure 13.

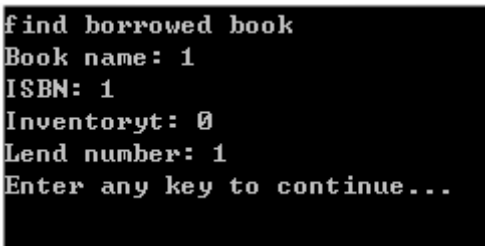


Figure 13: View all books on loan

## Known bugs:

No bug has been found currently.

## Functionality status:

In the borrow function, it can only tell the user how long they can keep this book, but it cannot record the time when user borrows this book.
Similarly, our program does not have the functionality that reminds the user to return the book when exceeding the limited time.