Minor Project Report
On
Library Management System

SUBMITTED TO:

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MCA-Batch 2021-24

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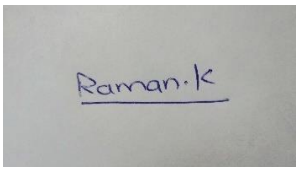

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Student's signature
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Roll Number:34

ACKNOWLEDGEMENT

The satisfaction that accompanies that the successful completion of any task would be incomplete without the mention of people whose ceaseless cooperation made it possible, whose constant guidance and encouragement crown all the efforts with success. I am grateful to our project guide **Mrs. Syamala** Mam for the guidance, inspiration, and constructive suggestions that help in the preparation of this project. I am also thankful to my friends who have helped me in the successful completion of the project.

Abstract

Library Management System is a system that maintains the information about the books. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, the organization of a Library becomes much simple. The Library Management has been designed to computerize and automate the operations performed over the book like adding new books, searching books, displaying books that are presented in the library, and many other operations also. This computerization of the library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

Contents

Introduction

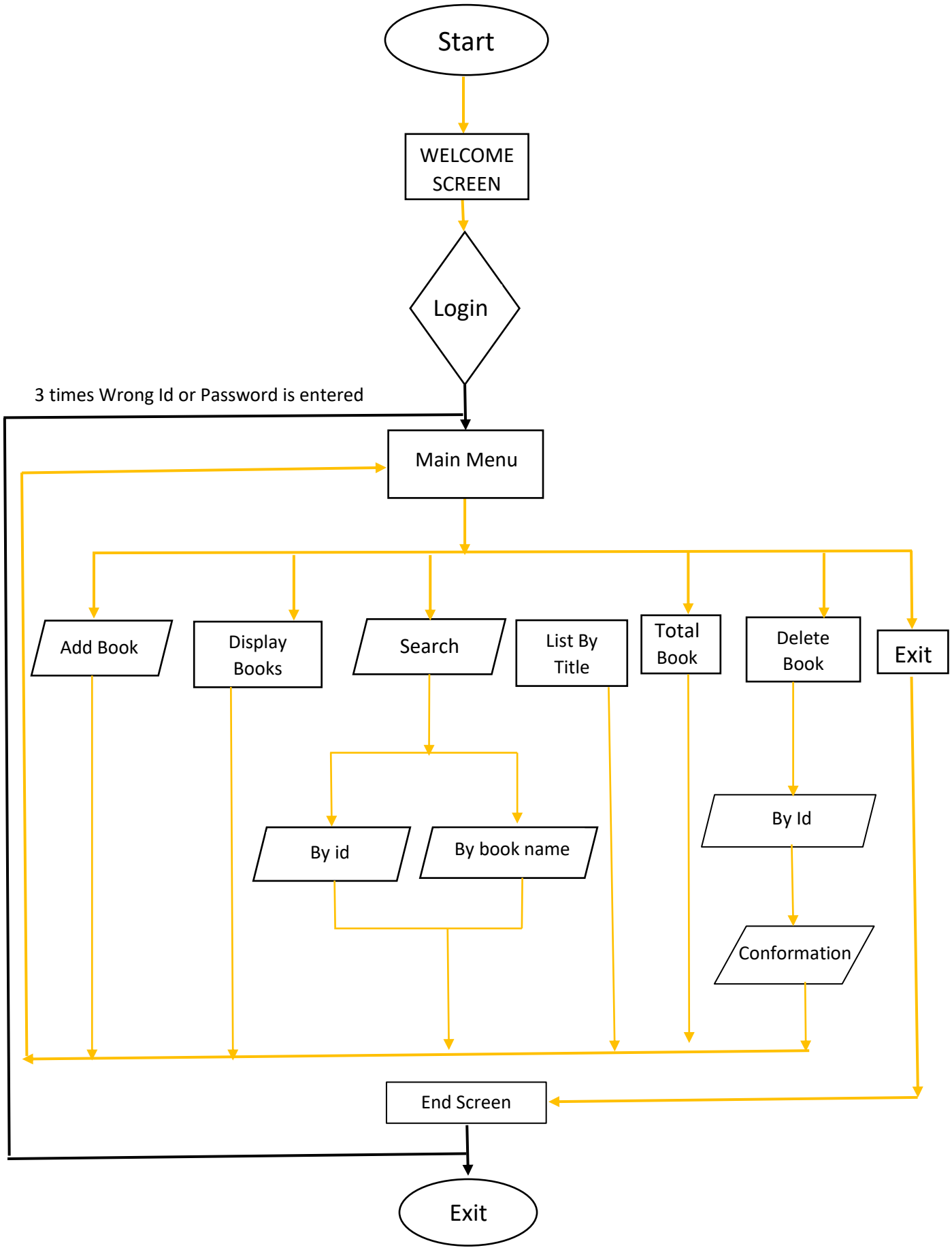
A college library management is a project that manages and stores books information electronically according to Librarian needs. The system helps both students and library managers to keep a constant track of all the books available in the library. It allows both the admin and the student to search for the desired book. This task if carried out manually will be tedious and includes chances of mistakes. Thus, this system reduces manual work to a great extent allows smooth flow of library activities by removing chances of errors in the details.

1.1 Need and Objective of Project

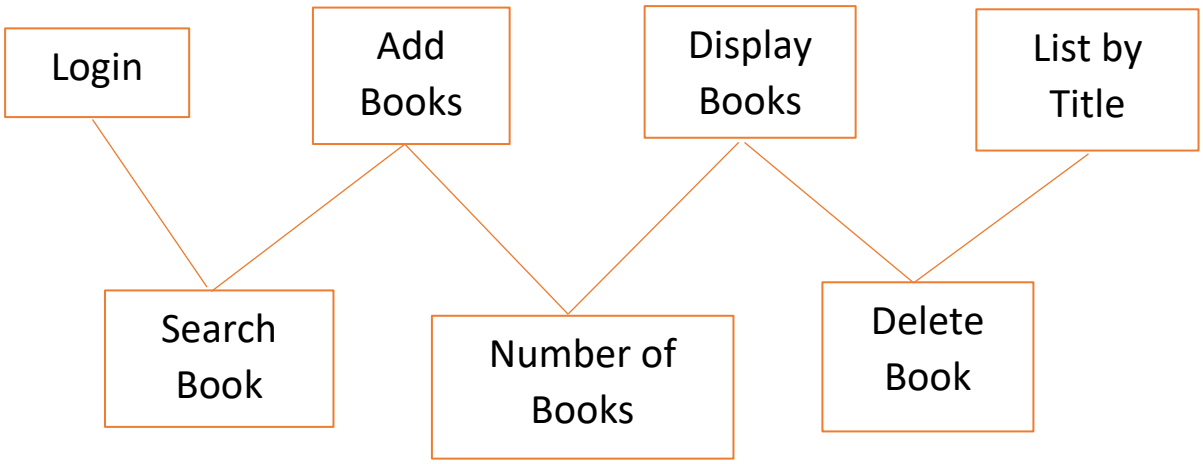
A Library management system is software that uses to maintain the record of the library. It contains work like the number of available books in the library. Library Management Systems is software that helps to maintain a database that is useful to enter new books &search books. Moreover, it also reduces the manual record burden of the librarian. A library management system allows the librarian to maintain library resources in a more operative manner that will help to save time. A library management system is also useful for students as well as a librarian to keep constant track of the availability of all books in a store.

2.Project Design

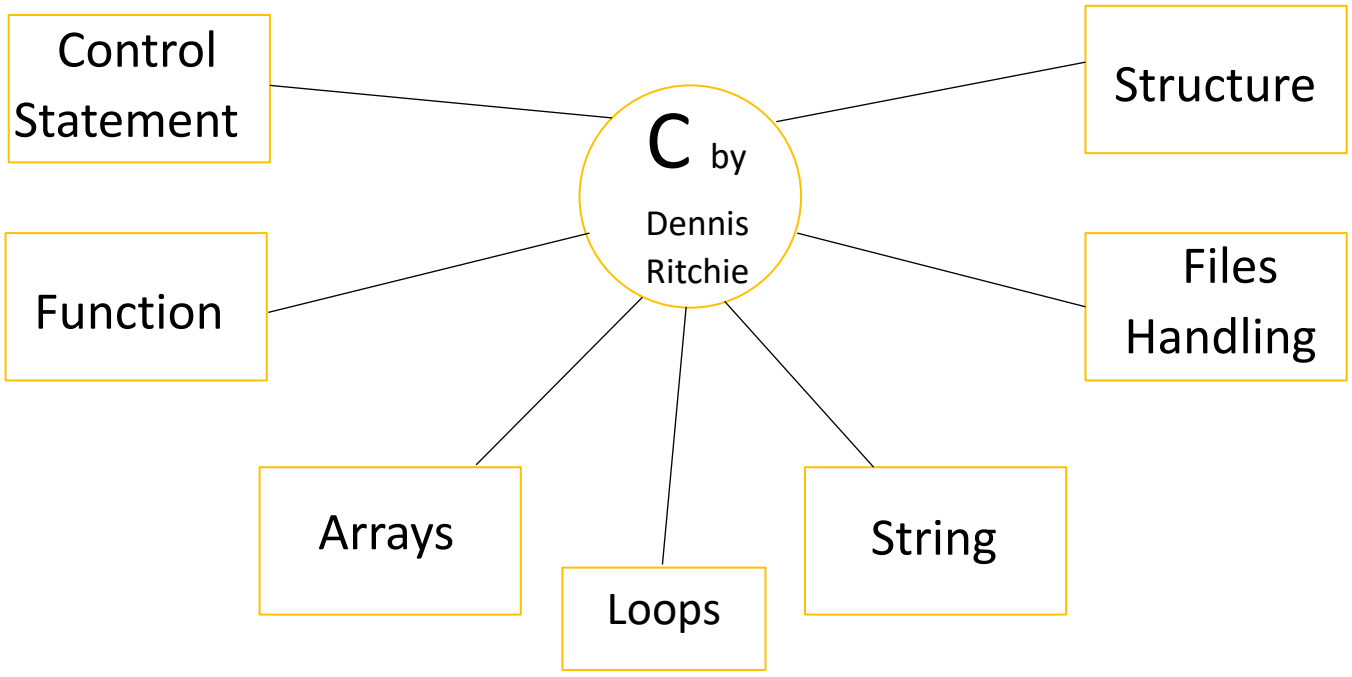
2.1 Flowchart-



2.2 Feature of Project



Feature of C Used in this Project



- Control Statements: Control statements like if else statements, switch statements and loop statements are used in this project.

- Functions: Different types of functions are defined or called throughout this project. There are two types of functions user-defined and standard library function.
  - *Standard Library Function*: These are those functions that are predefined functions in the library.
    Example: printf(), scanf(), gets(), main(), etc.

  - *User-Defined Function*: These are Functions that are defined by the program coder. Example:

I. addbooks(): This function is used to add books to the library.

II. displaybooks(): This function is used to view all the books that are present in the library.

III. searchbook() : This function is used to search books in the library. In this function two more functions are defined which can help us to search in an efficient way searchbyid() and searchbybookname().

IV. listbooks(): This function is used to list books in the library in a title-wise manner. This function helps the user to show all books available with the title.

V. totalbooks(): This function is used to tell us how many books are present in the library.

VI. deletebooks(): This function is used to delete books from the library.

VII. mainmenu(): This function is used to display all other functions.

- Arrays: It is a collection of similar types of data items stored at the contiguous memory location. In this project, a character array is used to store the author's name and book name.

- Structure: In this project library type struct is used. Book is variable of datatype library which is created by using the struct keyword. In this int type id, string type book name and author name are defined.
  Example: struct library
  {
  int bk_id;
  char bk_name[30];
  char author[30];
  int pages;
  float price;
  } li;

- File Handling: Different types of file handling functions are used like to open file fopen() is used. To read and write into file fwrite() and fread() function are used. There is a different type of mode to open a file like a, a+, w, w+, r, r+. To store data two external files are used. From those two one is used to delete records from the library.

- Header Files- Different Header files are used like conio.h, stdio.h ,string.h ,stdlib.h ,window.h.

  #include <conio.h>: This header file stands for console input and output. Used to perform a function like screen getch();, etc.

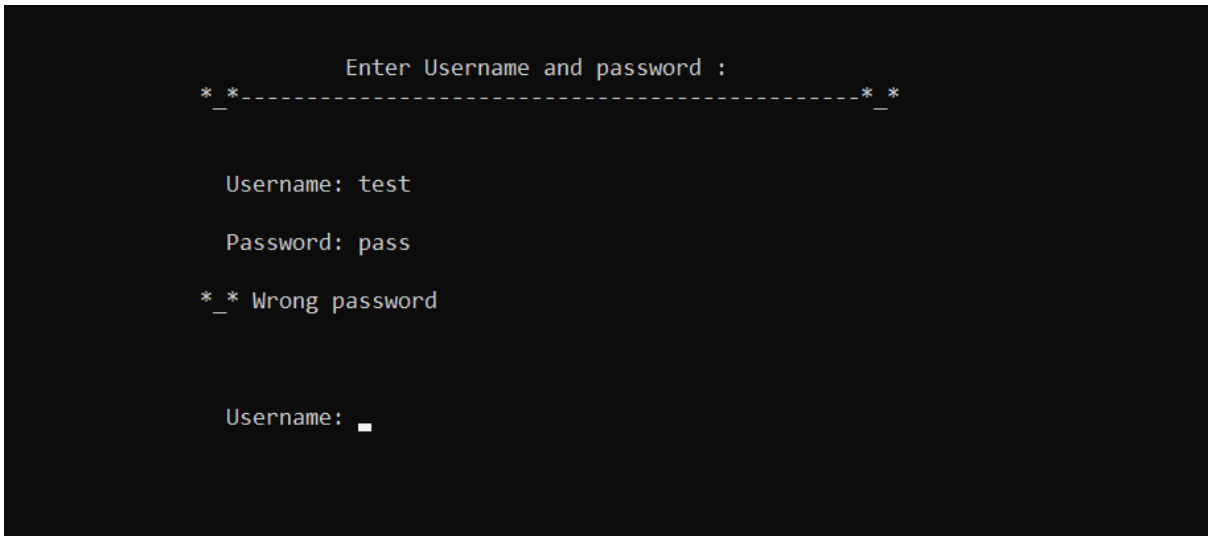
  #include <stdio.h>: This header file stdio.h stands for standard input output. Functins like printf(), scanf(),etc are included in this library file.

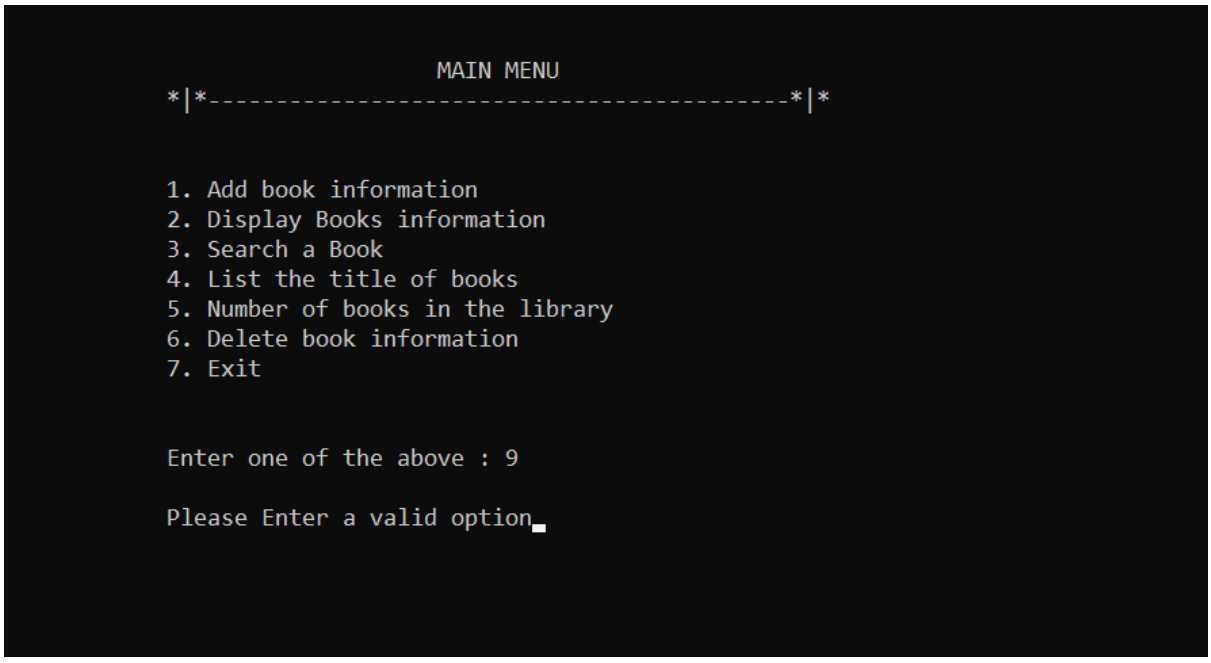
  #include <string.h>: This header file is used to perform string function.

Example- strcat(), strlen(), strcmp() etc.

#include<stdlib.h>: It's stands for standard library. exit() function used in project is defined in this library.

Error Controls in the project:

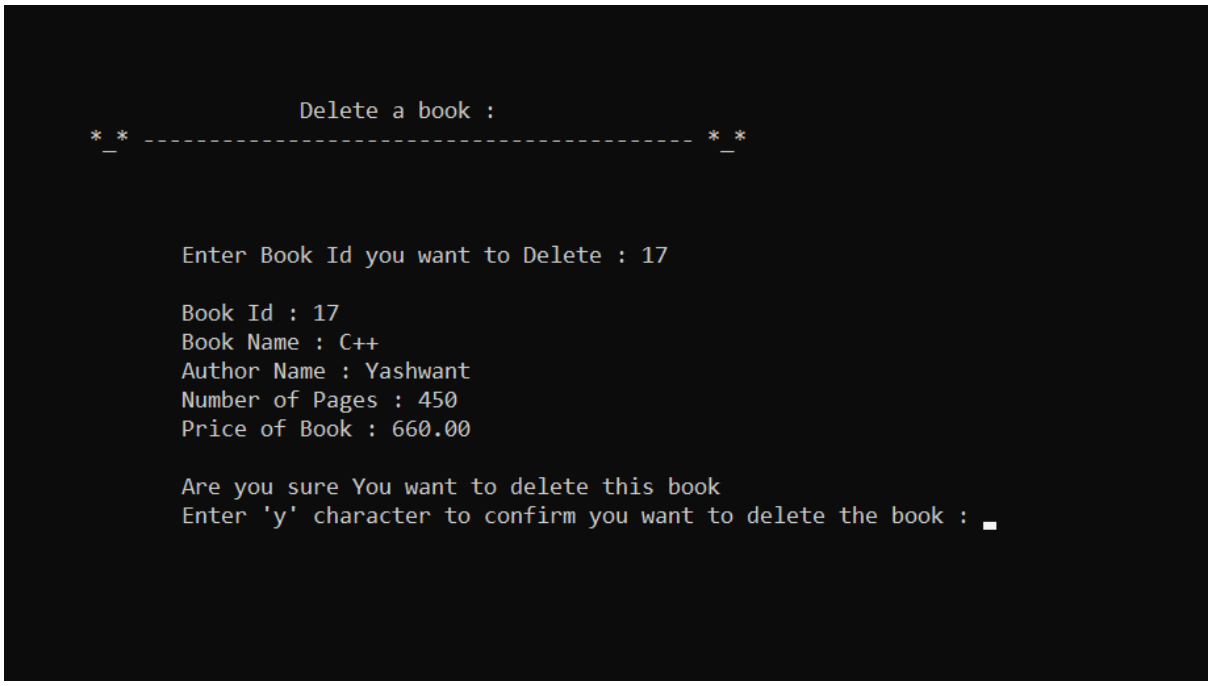




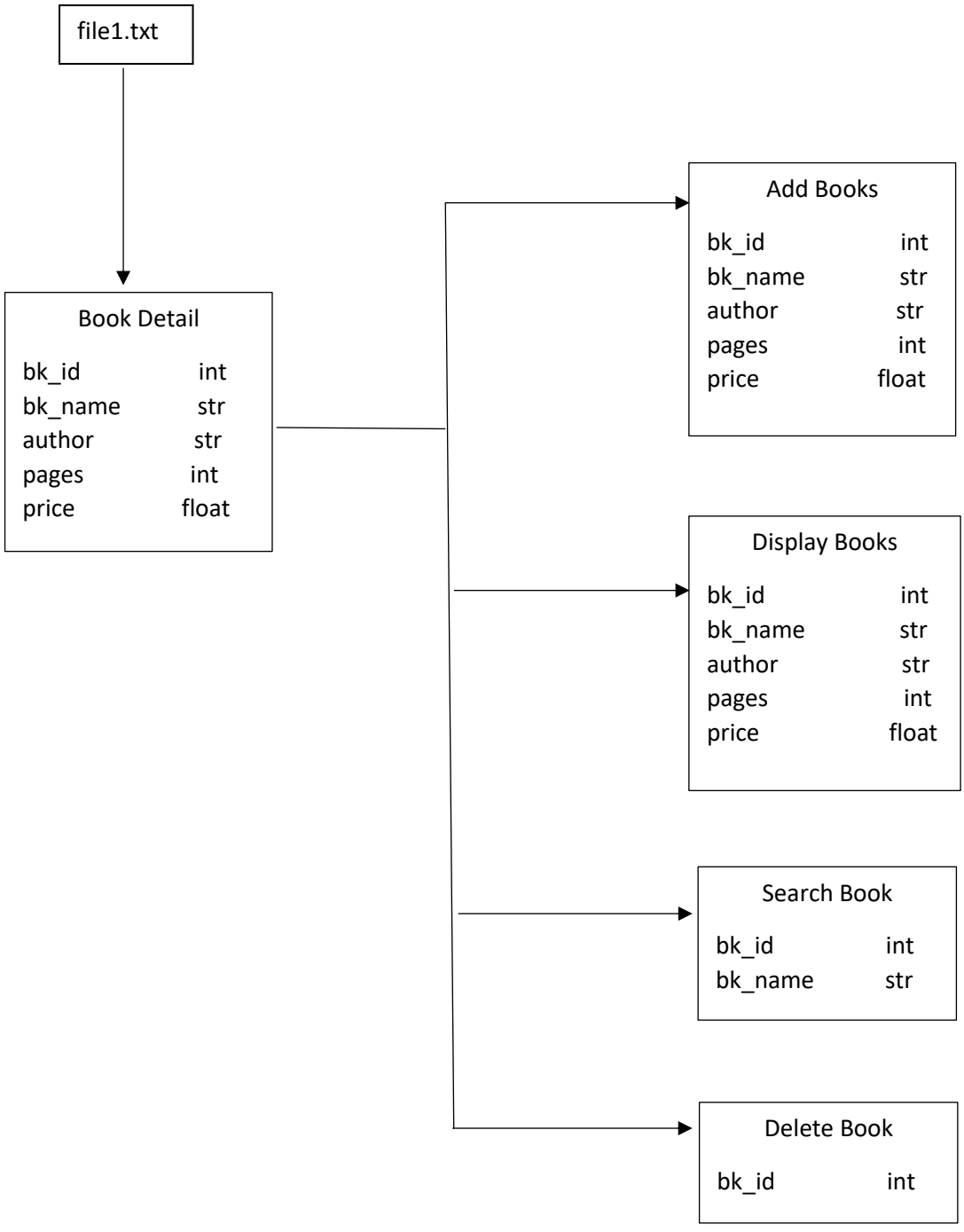
```
                Search a book :
 *_* ---------------------------------------- *_*

         *-* Search By BookID   : Type 1

         *-* Search By BookName   : Type 2

 *_* ---------------------------------------- *_*

        Enter Your Choice : 4


   **-** Please Enter a valid option...
```

```
                Search a book :
*_* ---------------------------------------- *_*

         *-* Search By BookID   : Type 1

         *-* Search By BookName   : Type 2

*_* ---------------------------------------- *_*

       Enter Your Choice : 1

       **-** Enter Book Id you want to search : 50
*-*.................................................*-*

         *-* Book is Not Present in Library for Book ID : 50

 **-** Enter any key to get back to main menu...
```


Delete a book :
_ ---------- *_*
Enter Book Id you want to Delete : 55
_ Book Record Not Found
_ ---------- *_*
- Enter any key to go back to main menu ...


Delete a book :
_ ---------- *_*
Enter Book Id you want to Delete : 17
Book Id : 17
Book Name : C++
Author Name : Yashwant
Number of Pages : 450
Price of Book : 660.00
Are you sure You want to delete this book
Enter 'y' character to confirm you want to delete the book :

2.3 Database Design:



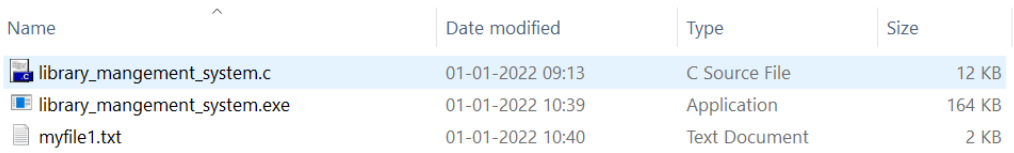
3.Implementation

3.1 Hardware and Software Specification-

a. 4 GB RAM
b. 1TB Hard disk
c. Microsoft Windows 10
d. Intel Core i5
e. Dev C++
f. Virtual Studio Code

3.2 Project Details

The Project file name is “library management system”. Name of the C file and executable file is “library_management_system.c” and “library_management_system.exe”. To store data there is a temporary file name” myfile1.txt”. The user id and Password of the login page are **“test” and “pswd”** respectively.



Name	Date modified	Type	Size
library_mangement_system.c	01-01-2022 09:13	C Source File	12 KB
library_mangement_system.exe	01-01-2022 10:39	Application	164 KB
myfile1.txt	01-01-2022 10:40	Text Document	2 KB

3.3 Project Code

1.Header File and Function:

```
// User Id: test
// Passwrod: pswd

#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
#include <string.h>
void welcome_msg(void);              // Declaration of Welcome Screen
void username_pass(void);            // Declaration of Login screen
void mainmenu(void);                // Declartion for main menu screen

void addbooks(void);            //addbooks function declaration
void displaybooks(void);        //displaybooks function declaration
void searchbook(void);          //searchbooks function declaration
void listbooks(void);           //listbooks function declaration
void totalbooks(void);          //totalbooks function declaration
void deletebooks(void);         //deletebooks function declaration
void endscreen(void);           //endscreen function declaration

struct library
{
    int bk_id;
    char bk_name[30];
    char author[30];
    int pages;
    float price;
} li;       //Global declaration can be used from anywhere in the program
```

```
FILE *f1, *fr, *fd;   //Global declaration of files used.
```

2.Welcome Page (welcome_msg()):

```
// WELCOME SCREEN

void welcome_msg(void)
{
    char c;
    printf("\n\n\n\n\n");
    printf("\n\t\t\t\t  **-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-
    **-**\n");
    printf("\n\t\t\t\t     =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=");
    printf("\n\t\t\t\t     =              WELCOME               =");
    printf("\n\t\t\t\t     =                TO                  =");
    printf("\n\t\t\t\t     =              LIBRARY               =");
    printf("\n\t\t\t\t     =            MANAGEMENT                =");
    printf("\n\t\t\t\t     =              SYSTEM                =");
    printf("\n\t\t\t\t     =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=\n");
    printf("\n\t\t\t\t  ..........................................................\n");
    printf("\n\n\n\t\t\t Enter any key to continue.....");
    getch();
}
```

OUTPUT:

Welcome Page

3.Login Page (username_pass()):

```
/* login using id and pass */

void username_pass(void)
{

    system("cls"); // Used to clear the screen
    char str[] = "test";
    char pwd[] = "pswd";
    char str2[20];
    char pwd2[20];
    int i = 0;
    printf("\n\n\t\t\t   Enter Username and password : ");
```

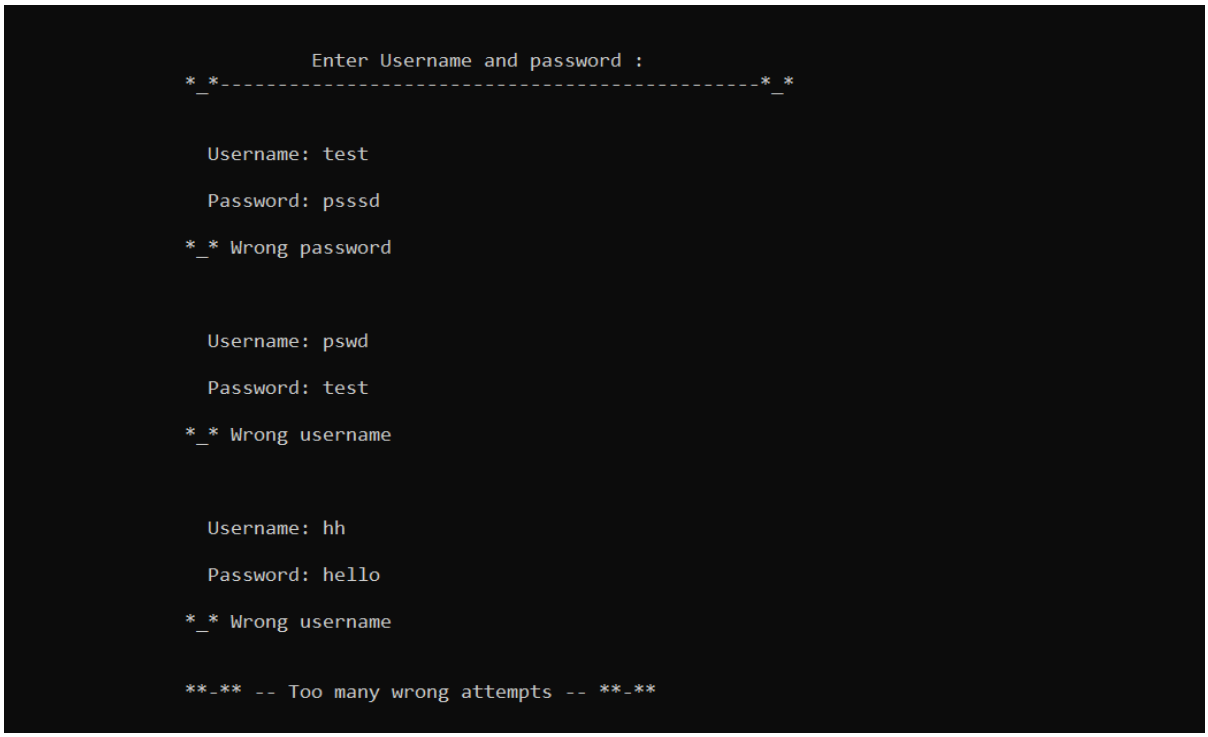
```
printf("\n\t\t*_*----------------------------------------*_*");
while (i < 3)
{
                        printf("\n\n\n\t\t  Username: ");
                        gets(str2);
                        printf("\n\t\t  Password: ");
                        gets(pwd2);

                        if (strcmp(str, str2) == 0)
                        {
                                if (strcmp(pwd, pwd2) == 0)
                                {
                                        printf("\n\n\t\t  Press any key to
continue...");
                                        getch();
                                        mainmenu();
                                }
                                else
                                {
                                        printf("\n\t\t*_* Wrong
password\n");
                                        i++;
                                }
                        }
                        else
                        {
                                printf("\n\t\t*_* Wrong username\n");
                                i++;
                        }
}
if (i == 3)
{
                        printf("\n\n\t\t**-** -- Too many wrong
attempts -- **-** ");
                        getch();
```

```
                exit(0);
        }
    }
```

OUTPUT:

Login Page

If the Password or User Id is incorrect more than 3 times it will exit the program.



4. Main Menu (mainmenu()):

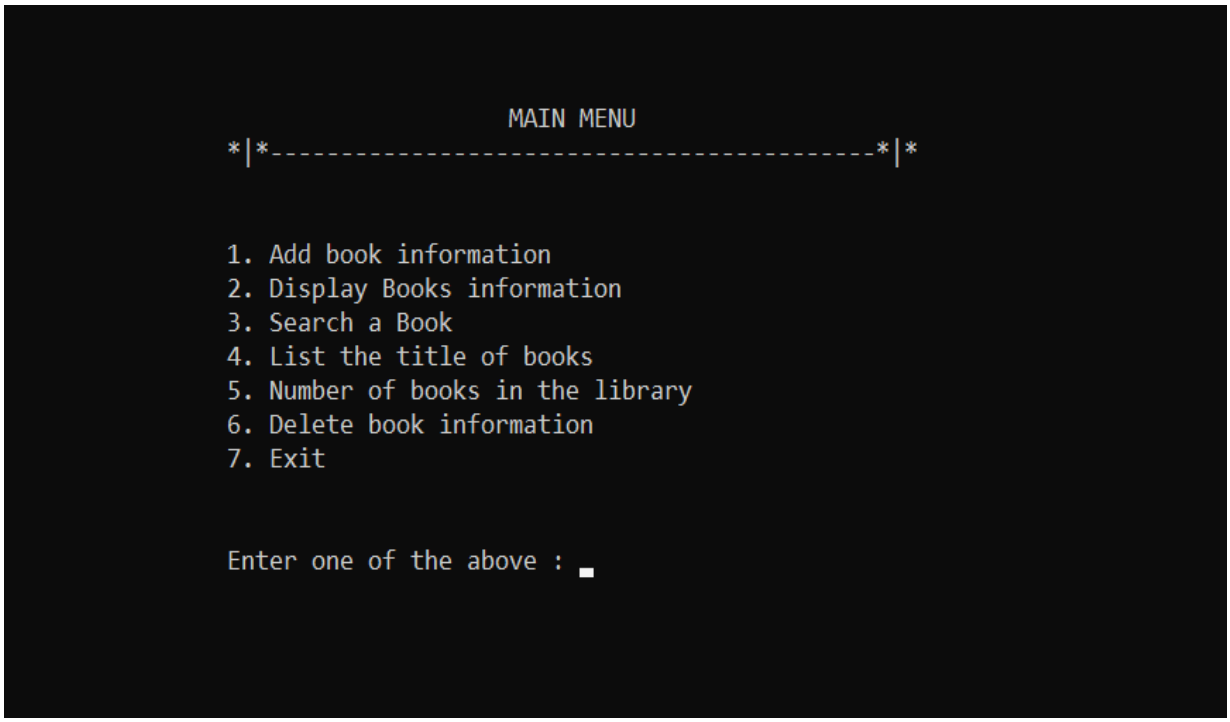
```
/* MAIN MENU */

void mainmenu(void)
{
                        system("cls");

                        char ar_nm[30], bk_nm[30];
                        int i, j;
                        i = j = 0;

                        while (j != 6)
                        {
                                system("cls");
                                printf("\n\n\n\t\t\t\t    MAIN MENU ");
                                printf("\n\t\t*|*------------------------------
-----------*|*");
                                printf("\n\n\n\t\t1. Add book information
\n");
                                printf("\t\t2. Display Books information
\n");
                                printf("\t\t3. Search a Book \n");
                                printf("\t\t4. List the title of books\n");
                                printf("\t\t5. Number of books in the
library\n");
                                printf("\t\t6. Delete book information\n");
                                printf("\t\t7. Exit");

                                printf("\n\n\n\t\tEnter one of the above :
");
                                scanf("%d", &j);

                                if (j > 7)
                                {
```

```
                printf("\n\t\tPlease Enter a valid
option");
                getch();
                mainmenu();
            }

            switch (j)
            {

                /* Add book */
            case 1:
                addbooks();
                break;

                /* Display books */
            case 2:
                displaybooks();
                break;

                /* Search Book */
            case 3:
                searchbook();
                break;

                /* List by title of books */
            case 4:
                listbooks();
                break;

                /* Number of books */
            case 5:
                totalbooks();
                break;

                /* Delete book infomation */
```

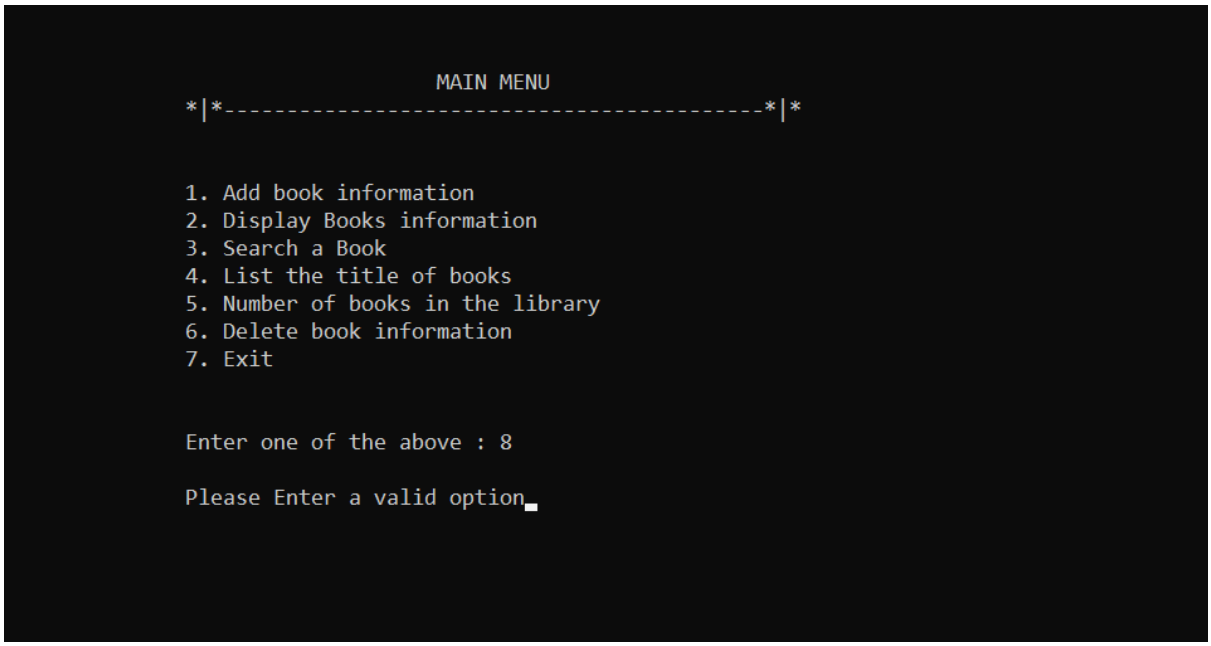
```
                case 6:
                        deletebooks();
                        break;

                        /* End screen */
                case 7:
                        endscreen();
                }
        }
}
```

OUTPUT:

Main Menu



Error Control in main menu



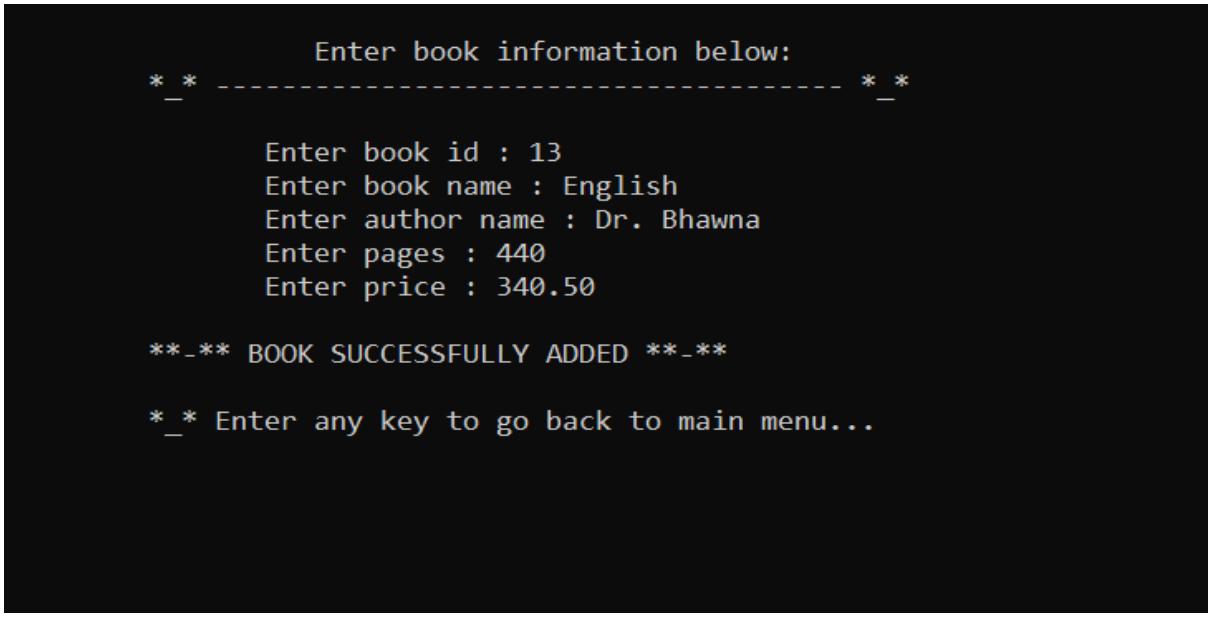
5. Add books (addbooks()):

```
/* Add book FUNCTION*/

void addbooks(void)
{
                    system("cls");

                    f1 = fopen("myfile1.txt", "a");
                    printf("\n\t\t   Enter book information below:
");
                    printf("\n\t *_* ----------------------------------
*_*\n\n");
                    fflush(stdin);
                    printf("\t\tEnter book id : ");
                    scanf("%d", &li.bk_id);
                    fflush(stdin);
```

```
                printf("\t\tEnter book name : ");
                gets(li.bk_name);
                fflush(stdin);
                printf("\t\tEnter author name : ");
                gets(li.author);
                fflush(stdin);
                printf("\t\tEnter pages : ");
                scanf("%d", &li.pages);
                fflush(stdin);
                printf("\t\tEnter price : ");
                scanf("%f", &li.price);
                fwrite(&li, sizeof(li), 1, f1);
                fclose(f1);

                printf("\n\t **-** BOOK SUCCESSFULLY
ADDED **-**");
                printf("\n\n\t *_* Enter any key to go back to
main menu...");

                getch();
}
```

OUTPUT:

Add Book



6.Display Books (displaybooks()):

```
/* Display books FUNCTION */

void displaybooks(void)
{
                        system("cls");
                        fr = fopen("myfile1.txt", "r");
                        printf("\n\t\t Books available in the library\n");
                        printf("\n\t **-** ----------------------------------
--- **-**\n\n");

                        while (fread(&li, sizeof(li), 1, fr) > 0)
                        {
                                printf("\n\t\t Book Id : %.2d", li.bk_id);
                                printf("\n\t\t Book Name : %s",
li.bk_name);
                                printf("\n\t\t Author Name : %s",
li.author);
                                printf("\n\t\t Number of pages : %d",
li.pages);
                                printf("\n\t\t Price of book : %.2f",
li.price);
                                printf("\n");
                        }
                        fclose(fr);
                        printf("\n\n\t *_* Enter any key to go back to
main menu...");
                        getch();
}
```

OUTPUT:

Display Books

```
        Books available in the library

**_** ------------------------------------ **_**


        Book Id : 01
        Book Name : C language
        Author Name : Dennis Ritchie
        Number of pages : 570
        Price of book : 340.50

        Book Id : 02
        Book Name : Computer Organisation
        Author Name : Morris Mano
        Number of pages : 450
        Price of book : 299.99

        Book Id : 03
        Book Name : Discrete Mathematics
        Author Name : Pr. Anuj Sharma
        Number of pages : 370
        Price of book : 200.00

        Book Id : 04
        Book Name : Physics
        Author Name : Prof. JP Singh
        Number of pages : 250
        Price of book : 195.50

        Book Id : 05
        Book Name : Chemistry
        Author Name : Dr. Harshwardhan
        Number of pages : 450
        Price of book : 199.00

        Book Id : 06
        Book Name : Biology
        Author Name : Sanjeev
        Number of pages : 700
        Price of book : 499.50

        Book Id : 07
        Book Name : Hindi
        Author Name : Mrs. Divya
        Number of pages : 400
        Price of book : 250.00
```

```
        Book Id : 08
        Book Name : English
        Author Name : Ms. Sangeeta
        Number of pages : 230
        Price of book : 119.50

        Book Id : 09
        Book Name : General Knowledge
        Author Name : Luceint
        Number of pages : 400
        Price of book : 249.50

        Book Id : 10
        Book Name : Reasoning
        Author Name : Sandeep Shukla
        Number of pages : 340
        Price of book : 150.00

        Book Id : 11
        Book Name : Social Science
        Author Name : Ms. Harmanpreet Kaur
        Number of pages : 430
        Price of book : 250.00

        Book Id : 12
        Book Name : Zoology
        Author Name : Ms. Bhawna
        Number of pages : 300
        Price of book : 499.50

        Book Id : 13
        Book Name : History
        Author Name : Dr. Pardeep Kumar
        Number of pages : 340
        Price of book : 300.00

        Book Id : 14
        Book Name : Geography
        Author Name : Dr. Satvinder
        Number of pages : 240
        Price of book : 300.00

        Book Id : 15
        Book Name : Polity
        Author Name : Satyam sinha
        Number of pages : 444
```

```
        Book Id : 16
        Book Name : Computer architect
        Author Name : Balwinder Kaur
        Number of pages : 500
        Price of book : 650.50


    *_* Enter any key to go back to main menu...
```

7. Search book (searchbook()):

```
/* Search Book FUNCTION*/

void searchbook(void)
{
                        int b_id, choice, found = 0;
                        char Bookname[20];
                        system("cls");
                        printf("\n\n\n\n\t\t\t Search a book : ");
                        printf("\n\t *_* ----------------------------------
---- *_*\n\n");
                        printf("\n\t\t *-* Search By BookID   : Type
1\n");
                        printf("\n\t\t *-* Search By BookName   : Type
2");
                        printf("\n\n\t *_* ----------------------------------
------ *_*\n");

                        fflush(stdin);
                        printf("\n\n\t\tEnter Your Choice : ");
                        scanf("%d", &choice);
                        switch (choice)
                        {
                        case 1:
                                printf("\n\n\t\t**-** Enter Book Id you
want to search : ");
                                scanf("%d", &b_id);
                                fflush(stdin);
                                printf("\t *-
*.....*-*\n");
                                fr = fopen("myfile1.txt", "r");
                                while (fread(&li, sizeof(li), 1, fr) > 0)
                                {
                                        if (li.bk_id == b_id)
```

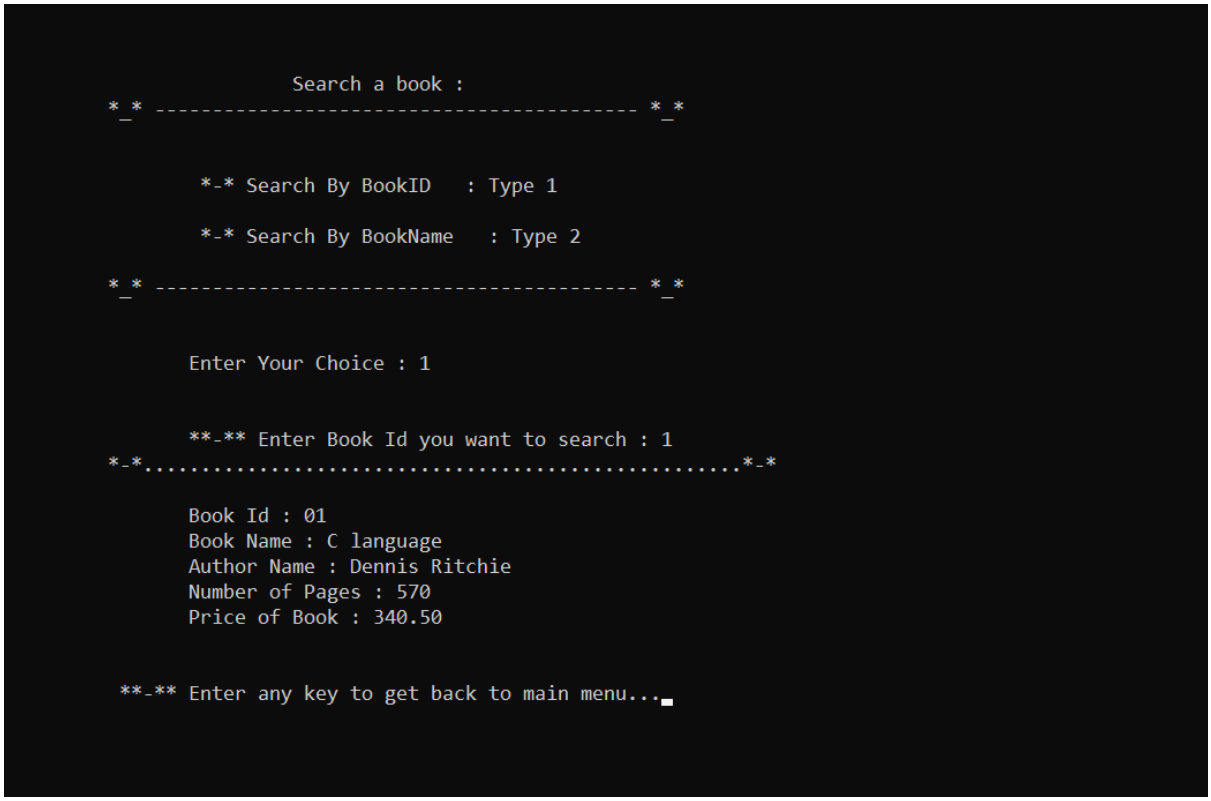
```
                                        {
                                                printf("\n\t\tBook Id : %.2d",
li.bk_id);
                                                printf("\n\t\tBook Name : %s",
li.bk_name);
                                                printf("\n\t\tAuthor Name :
%s", li.author);
                                                printf("\n\t\tNumber of Pages :
%d", li.pages);
                                                printf("\n\t\tPrice of Book :
%.2f", li.price);
                                                printf("\n\n\n\t  **-** Enter
any key to get back to main menu...");
                                                getch();
                                                mainmenu();
                                                found = 1;
                                        }
                                }
                                if (found == 0)
                                {
                                        printf("\n\n\t\t *-* Book is Not
Present in Library for Book ID : %d ", b_id);
                                        printf("\n\n\n\t  **-** Enter any key
to get back to main menu...");
                                        getch();
                                        mainmenu();
                                }
                                fclose(fr);
                                break;
                        case 2:
                                fflush(stdin);
                                printf("\n\n\t\t *-* Enter Book Name you
want to search : ");
                                gets(Bookname);
```

```
                printf("\t *-
*.....*-*\n");
                fr = fopen("myfile1.txt", "r+");
                while (fread(&li, sizeof(li), 1, fr) > 0)
                {
                        if (strcmp(Bookname, li.bk_name)
== 0)
                        {
                                printf("\n\t\tBook Id : %.2d",
li.bk_id);
                                printf("\n\t\tBook Name : %s",
li.bk_name);
                                printf("\n\t\tAuthor Name :
%s", li.author);
                                printf("\n\t\tNumber of Pages :
%d", li.pages);
                                printf("\n\t\tPrice of Book :
%.2f", li.price);
                                printf("\n\n\n\t  **-** Enter
any key to get back to main menu...");
                                getch();
                                mainmenu();
                                found = 1;
                        }
                }
                if (found == 0)
                {
                        printf("\n\n\t\t *-* Book is Not
Present in Library for Book name : %s ", Bookname);
                        printf("\n\n\n\t  **-** Enter any key
to get back to main menu...");
                        getch();
                        mainmenu();
                }
                fclose(fr);
```

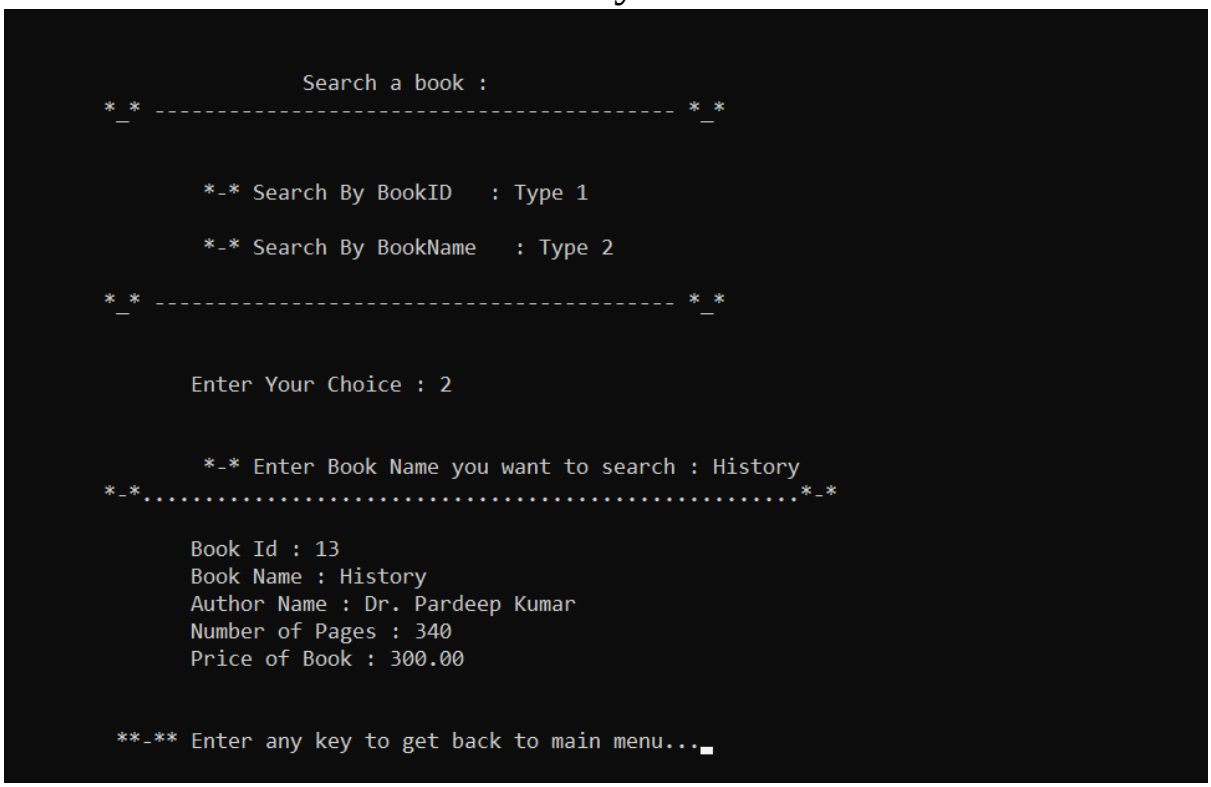
```
                break;
            }
            if (choice != 1 && choice != 2)
            {
                printf("\n\n\n\t   **-** Please Enter a
valid option...");
                getch();
                searchbook();
            }
            getch();
}
```

OUTPUT:

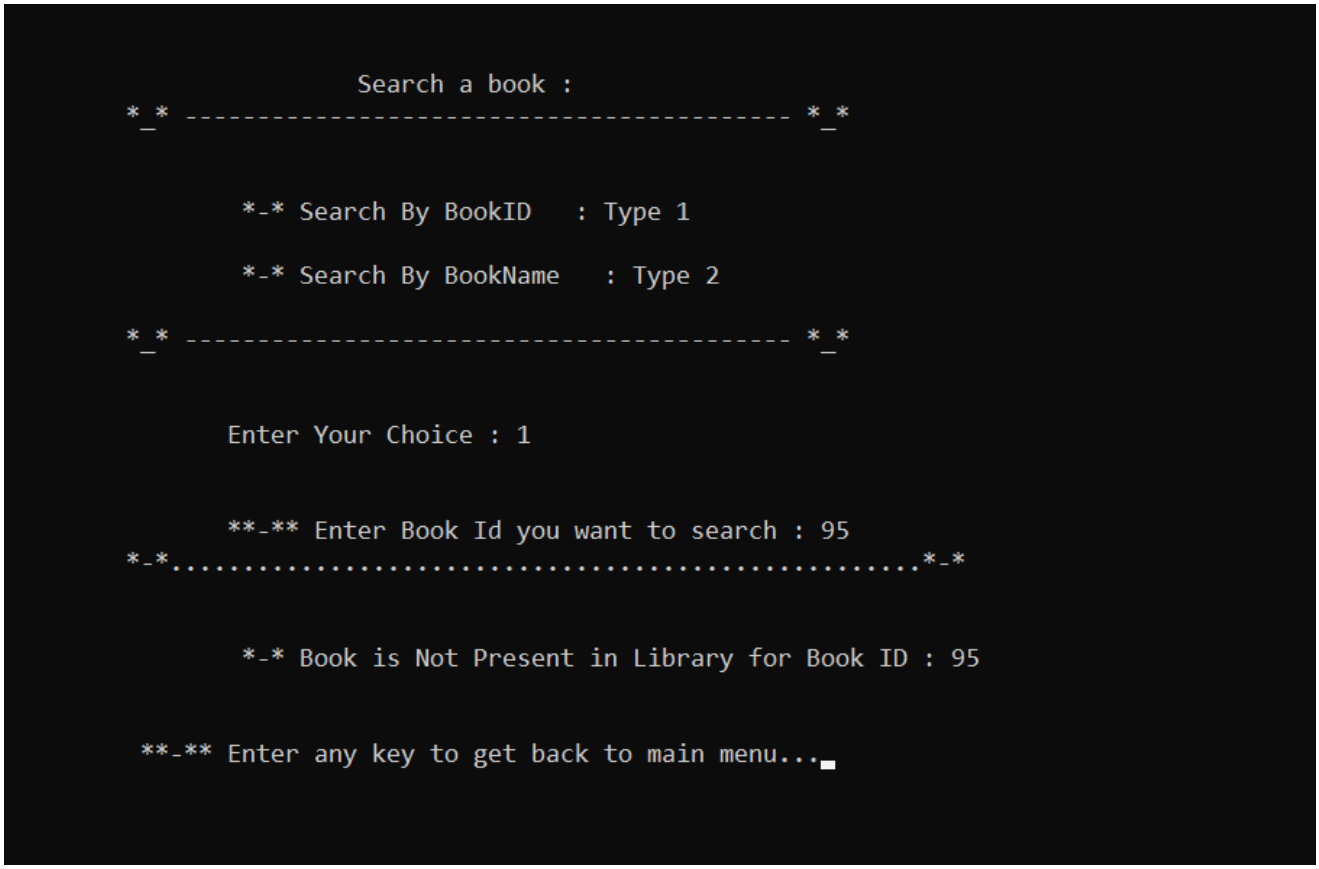
Search Book By Id



Search Book by Book Name



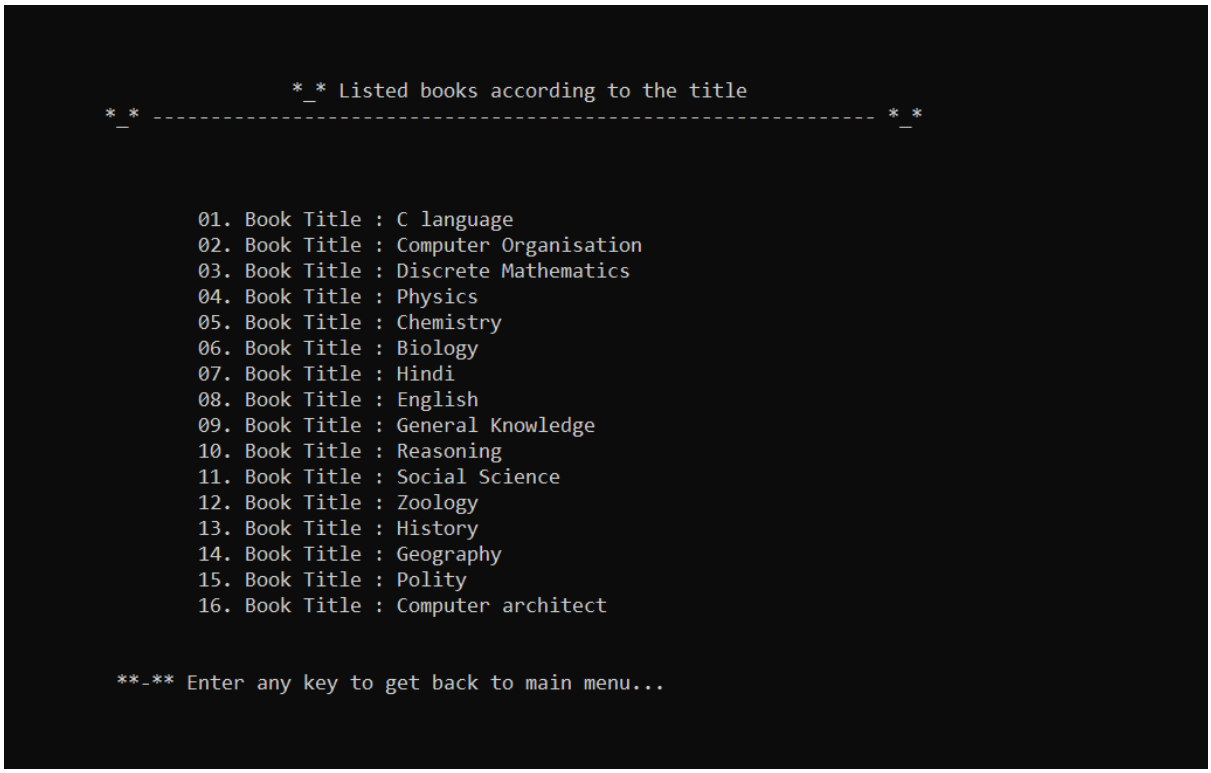
If the book is not present in Library it will print error



8. List Books by Title (listbooks()):

```
/* List by title of books FUNCTION */

void listbooks(void)
{
                        fflush(stdin);
                        system("cls");
                        printf("\n\n\n\n\t\t\t *_* Listed books according
to the title ");
                        printf("\n\t *_* ----------------------------------
---------------------- *_*\n\n\n");
                        fr = fopen("myfile1.txt", "r");
                        int i = 1;

                        while (fread(&li, sizeof(li), 1, fr) > 0)
                        {
                                printf("\n\t\t %.2d. Book Title : %s", i,
li.bk_name);
                                i++;
                        }
                        printf("\n\n\n\t  **-** Enter any key to get back
to main menu...");
                        if (i = 0)
                        {
                                printf("\n\n\t\t *-* No Book is available in
the library ");
                                printf("\n\n\n\t  **-** Enter any key to
get back to main menu...");
                                getch();
                        }
                        fclose(fr);
                        getch();
}
```

OUTPUT:



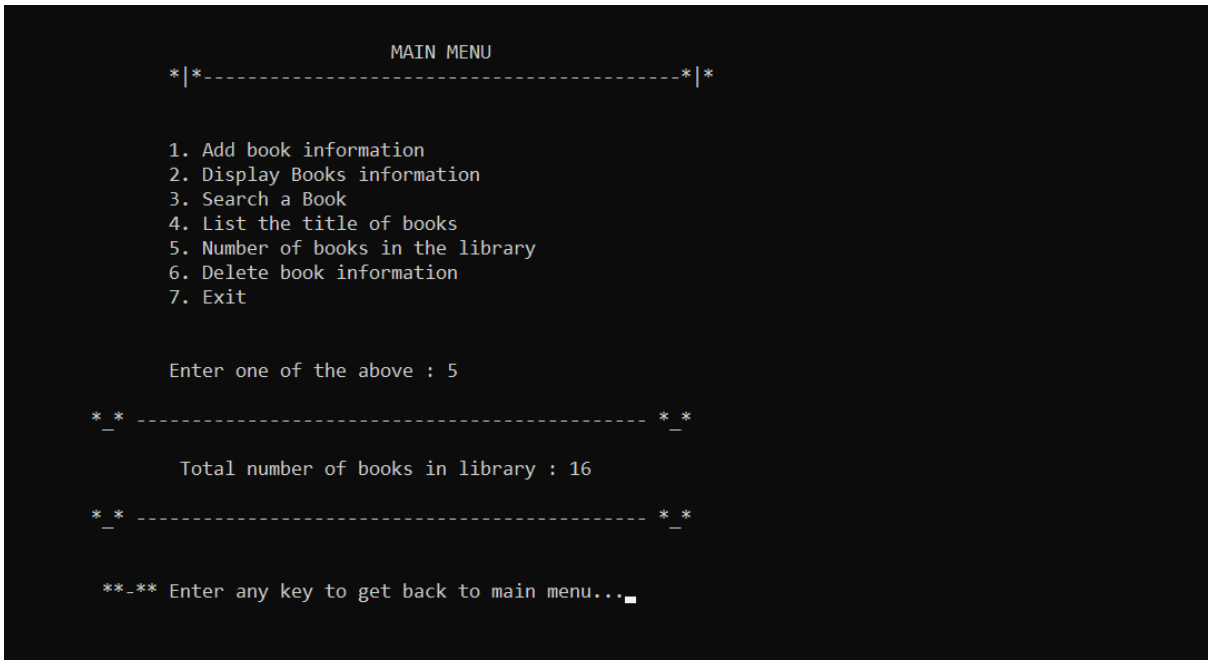
9. Total Books (totalbooks()):

```
/* Number of books FUNCTION */

void totalbooks(void)
{
                        int num = 0;
                        fr = fopen("myfile1.txt", "r");
                        while (fread(&li, sizeof(li), 1, fr) > 0)
                        {
                                num++;
                        }
                        fclose(fr);
                        if (num > 0)
                        {
                                printf("\n\t *_* ------------------------------
---------- *_*\n");
```

```
                printf("\n\t\t Total number of books in
library : %d", num);
                printf("\n\n\t *_* ------------------------
---------------- *_*");
                printf("\n\n\n\t  **-** Enter any key to
get back to main menu...");
                getch();
            }else
            {
                printf("\n\n\t\t *-* No Book is available in
the library ");
                printf("\n\n\n\t  **-** Enter any key to
get back to main menu...");
                getch();
            }
}
```

OUTPUT:

Total Number of books:



10. Delete Books (deletebooks()):

```
/* Delete books function */

void deletebooks(void)
{
                        int b_id, found = 0;
                        system("cls");
                        printf("\n\n\n\n\t\t\t Delete a book : ");
                        printf("\n\t *_* ------------------------------------
---- *_*\n\n");
                        printf("\n\n\t\tEnter Book Id you want to Delete
: ");
                        scanf("%d", &b_id);

                        fr = fopen("myfile1.txt", "r");
                        while (fread(&li, sizeof(li), 1, fr) > 0)
                        {
                                if (li.bk_id == b_id)
                                {
                                        found = 1;
                                        printf("\n\t\tBook Id : %d",
li.bk_id);
                                        printf("\n\t\tBook Name : %s",
li.bk_name);
                                        printf("\n\t\tAuthor Name : %s",
li.author);
                                        printf("\n\t\tNumber of Pages : %d",
li.pages);
                                        printf("\n\t\tPrice of Book : %.2f",
li.price);
                                        char yn;
```

```
                                        printf("\n\n\t\tAre you sure You
want to delete this book  ");
                                        fflush(stdin);
                                        printf("\n\t\tEnter 'y' character to
confirm you want to delete the book : ");
                                        scanf("%c",&yn);

                                        if(yn=='y'){
                                                fflush(stdin);
                                                continue;
                                        }else{
                                                fflush(stdin);
                                                fclose(fr);
                                                printf("\n\n\t *-* Book has not
been deleted");
                                                printf("\n\n\t *-* Enter any
key to return to main menu...");
                                                getch();
                                                mainmenu();
                                        }
                                }
                        }
                        if (found == 0)
                        {
                                printf("\n\n\t\t *_*  Book Record Not
Found");
                                printf("\n\n\t *_* ----------------------------
------------ *_*");
                                printf("\n\n\n\t *-* Enter any key to go
back to main menu ...");
                                getch();
                                system("cls");
                                fflush(stdin);
                                mainmenu();
                        }
```

```
                        rewind(fr);
                        fd = fopen("testfile1.txt", "w");
                        while (fread(&li, sizeof(li), 1, fr) > 0)
                        {
                                if (li.bk_id != b_id)
                                        fwrite(&li, sizeof(li), 1, fd);
                        }
                        fclose(fr);
                        fclose(fd);
                        remove("myfile1.txt");
                        rename("testfile1.txt", "myfile1.txt");

                        if (found == 1)
                        {
                                printf("\n\n\t\t*-* This Book has been
Deleted");
                                printf("\n\n\t\t*-* Enter any key to go
back to main menu...");
                        }
                        getch();
                        system("cls");
                        mainmenu();
}
```

OUTPUT:

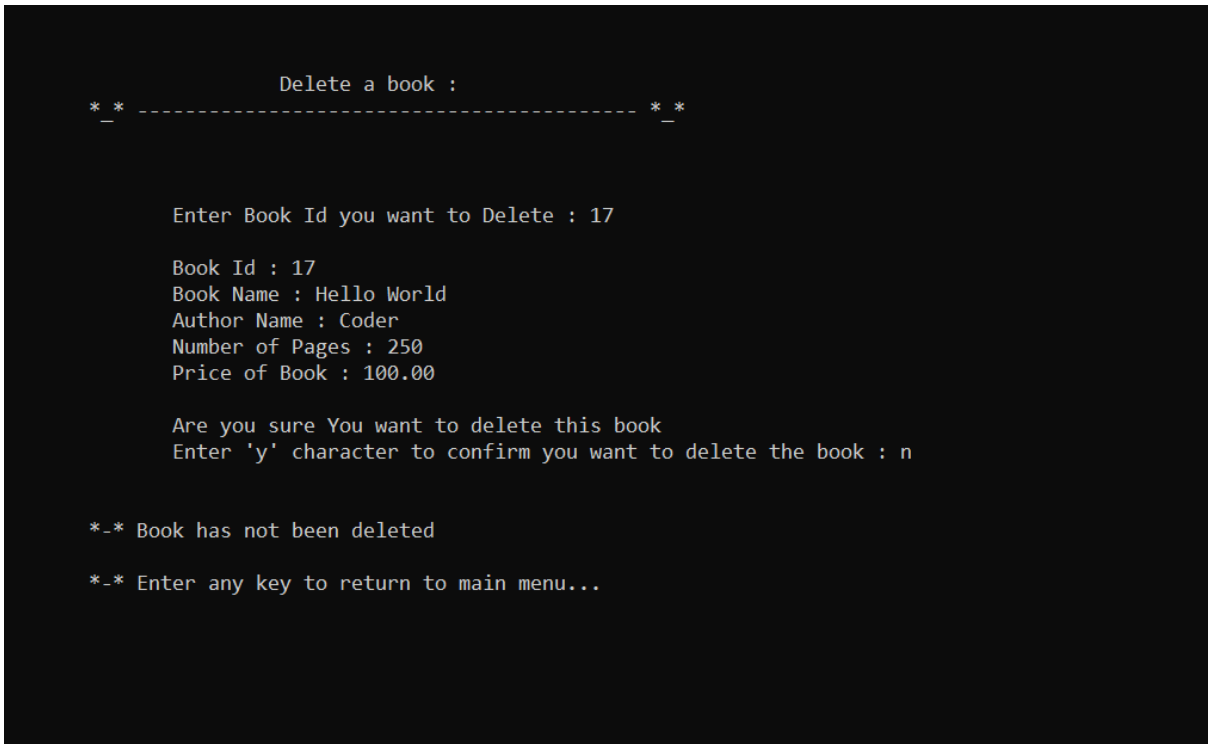
Delete Book

```
                Delete a book :
*_* ---------------------------------------- *_*


       Enter Book Id you want to Delete : 17

       Book Id : 17
       Book Name : Hello World
       Author Name : Coder
       Number of Pages : 250
       Price of Book : 100.00

       Are you sure You want to delete this book
       Enter 'y' character to confirm you want to delete the book :
```

If Book Id is not present in library

```
                Delete a book :
*_* ---------------------------------------- *_*


       Enter Book Id you want to Delete : 55

        *_*  Book Record Not Found

*_* ---------------------------------------- *_*


*-* Enter any key to go back to main menu ...
```

If conformation (i.e ‘y’ character is not pressed) is not given



If conformation (i.e ‘y’ character is pressed) is given

9. Exit (endscreen()):

```
/* End screen FUNCTION */

void endscreen(void)
{
                        system("cls");
                        printf("\n\n\n\n\n");
                        printf("\n\t\t\t   **-**-**-**-**-**-**-**-**-
**-**-**-**-**-**-**-**-**-**-**\n");
                        printf("\n\t\t\t       =-=-=-=-=-=-=-=-=-=-=-=-
=-=-=-=-=-=-=-=-=-=-=");
                        printf("\n\t\t\t       =
=");
                        printf("\n\t\t\t       =          T H A N K   Y O
U          =");
                        printf("\n\t\t\t       =
=");
                        printf("\n\t\t\t       =    H A V E   A   N I C E
D A Y     =");
                        printf("\n\t\t\t       =
=");
                        printf("\n\t\t\t       =-=-=-=-=-=-=-=-=-=-=-=-
=-=-=-=-=-=-=-=-=-=-=\n");
                        printf("\n\t\t\t
**_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*
_**\n");
                        printf("\n\n\n\n\n\n\n\n\n\n\n");
                        exit(0);
}
```

OUTPUT:

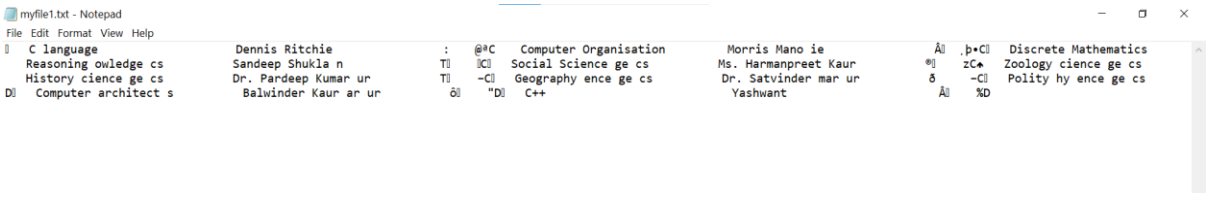
End Screen

4. Testing

All function are working properly as we wanted.

```
          Enter book information below:
*_* ------------------------------------ *_*

        Enter book id : 17
        Enter book name : C++
        Enter author name : Yashwant
        Enter pages : 450
        Enter price : 660

**-** BOOK SUCCESSFULLY ADDED **-**

*_* Enter any key to go back to main menu...
```

Output of myfile1.txt file



Display of books is also working fine

```
          Books available in the library

**_** ------------------------------------ **_**


          Book Id : 01
          Book Name : C language
          Author Name : Dennis Ritchie
          Number of pages : 570
          Price of book : 340.50
```

```
Book Id : 02
Book Name : Computer Organisation
Author Name : Morris Mano
Number of pages : 450
Price of book : 299.99

Book Id : 03
Book Name : Discrete Mathematics
Author Name : Pr. Anuj Sharma
Number of pages : 370
Price of book : 200.00

Book Id : 04
Book Name : Physics
Author Name : Prof. JP Singh
Number of pages : 250
Price of book : 195.50

Book Id : 05
Book Name : Chemistry
Author Name : Dr. Harshwardhan
Number of pages : 450
Price of book : 199.00

Book Id : 06
Book Name : Biology
Author Name : Sanjeev
Number of pages : 700
Price of book : 499.50

Book Id : 07
Book Name : Hindi
Author Name : Mrs. Divya
Number of pages : 400
Price of book : 250.00

Book Id : 08
Book Name : English
Author Name : Ms. Sangeeta
Number of pages : 230
Price of book : 119.50
```

```
Book Id : 09
Book Name : General Knowledge
Author Name : Luceint
Number of pages : 400
Price of book : 249.50

Book Id : 10
Book Name : Reasoning
Author Name : Sandeep Shukla
Number of pages : 340
Price of book : 150.00

Book Id : 11
Book Name : Social Science
Author Name : Ms. Harmanpreet Kaur
Number of pages : 430
Price of book : 250.00

Book Id : 12
Book Name : Zoology
Author Name : Ms. Bhawna
Number of pages : 300
Price of book : 499.50

Book Id : 13
Book Name : History
Author Name : Dr. Pardeep Kumar
Number of pages : 340
Price of book : 300.00
```

```
Author Name : Dr. Pardeep Kumar
Number of pages : 340
Price of book : 300.00

Book Id : 14
Book Name : Geography
Author Name : Dr. Satvinder
Number of pages : 240
Price of book : 300.00

Book Id : 15
Book Name : Polity
Author Name : Satyam sinha
Number of pages : 444
Price of book : 555.55

Book Id : 16
Book Name : Computer architect
Author Name : Balwinder Kaur
Number of pages : 500
Price of book : 650.50

Book Id : 17
Book Name : C++
Author Name : Yashwant
Number of pages : 450
Price of book : 660.00


*_* Enter any key to go back to main menu..._
```

5. Conclusion

1. This The library Management System has been computed successfully and was also tested successfully by taking "test cases". It is user friendly, and has required options, which can be utilized by the user to perform the desired operations.

2. The software is developed using C language as front end and uses file handling as back end in Windows environment.

3. Optimum utilization of resources.

4. Efficient management of records.

5. Simplification of the operations.

6. Less processing time and getting required information. User friendly.

7. Portable and flexible for further enhancement.

Future Scope

1.Multiple books can be added at a time.

2.This is also used for students for issuing and returning books.

3.We can add date and time to check when the book is added in library and when the book is issued or returned to the student.

6. References

Let Us C
Yashavant Kanetkar
BPB Publications
14th Edition

www.geeksforgeeks.org/c-programming-language/
https://www.youtube.com/
www.google.com

Thank You!