



SRM INSTITUTE OF OF SCIENCE AND TECHNOLOGY

C-LANGUAGE

LIBRARY
MANAGEMENT
APPLICATION

A C-LANGUAGE PROJECT

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Computer Science And Engineering
With Specialization In Artificial Intelligence And Machine Learning



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LIBRARY MANAGEMENT SYSTEM

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LIBRARY MANAGEMENT SYSTEM

Aim

To Create a Library Management Application On C Language.

Abstract

C is a procedural programming language. It was initially developed by Dennis Ritchie as a system programming language to write operating system. The main features of C language include low-level access to memory, simple set of keywords, and clean style, these features make C language suitable for system programming like operating system or compiler development.

The Library Management System with Source Code is a project that can Issue books for a library. The system can manage to issue books to every individual person and keep a record of it. The purpose of this system is to help and manage for giving efficient service. The Library Management System is developed in a simple console application; the system can only be accessed with user login information i.e [Username & Password]. The user can do many things in the application, he/she can add new books, list all the books, modify book, and search book and the most important is issue a book. The system provides you some functionality that enables to keep a track on the books and it also stores the date on which it has to be returned. The inputted data are stored as a text file [.txt]. The Library Management System was built in a simple coding structure of C to ensure that beginner can learn something in this system.

Features:

- Colorful UI.
- Issue & Submit A Book.
- Record Of All The Books.
- Tells Where The Book Is Stored {Rack Number},etc.

PROCEDURE

1. Include the HEADER Files.
2. Declare 2 global file pointer variable as {*file1,*file2} , 2 global character variable as {querybook,findbook }.
3. Declare 2 global character variable as{username, password} and initialize their values according to you.
4. Declare 2 global structure as {date,books} with their structure elements and structure variables as [issued,duedate,booklist].
5. Declare 12 functions as { void CONSOLE_XY(int x, int y),void LOADER(),void PASSWORD(),void MAINPROGRAM(),void ADDBOOKS(),int CHECK_BOOK(int t),void AVAILABLE_BOOKS(),void EDITBOOK(),void SEARCH_BOOKS(),void EXINTRO(),void DELETEBOOK(),void BOOK_ISSUE() }
6. The function void CONSOLE_XY(int x, int y) accepts two integer variable and it basically moves the cursor to a specific part of the console to print something.
7. The function void LOADER(), prints a character ASCII[222] 30 times.
8. In function void PASSWORD():- Declare 2 variables as {pass ,user} and accept the value form user , if these value matches to the global variable. It will call the MAINPROGRAM function.
9. The function void MAINPROGRAM(), has 7 choices and according to the user choice respective Functions are called.
10. In function void ADDBOOKS(), Accept the values for user of {BOOK ID,NAME,QUANTITY,PRICE & RACK NUMBER} and store this values in the structure variable booklist and save the data in Books.txt File. Now the USER is Asked if want to save more records and Get The USER response, if YES ADDBOOKS function is called or else MAINPROGRAM function is called.
11. The function CHECK_BOOK(), accepts a integer s its parameter and it check whether that BOOK ID is present in the File Books.txt or not. If found Returns 0 or else returns 1.
12. The function AVAILABLE_BOOKS(), Declare and initialize two integer variables to 0 {total ,money} .This function shows all the BOOKS details that are available in the Books.txt. And it also counts the total number of Books and The total amount of Books. In each loop the value of the variable money and total gets incremented with the values of that particular books.
13. In function EDITBOOK(),Declare variables as c,d,e. Accepts the values of d from the USER and this values is searched is the Books.txt if the Books I available the details are displayed. And the USER is asked to enter new values, there values are stored in structure books and then the value of this structure is restored in the Books.txt. Now the

- *****
USER is Asked if want to modify more records and Get The USER response, if 'YES' EDITBOOK function is called or else MAINPROGRAM function is called.
14. In function SEARCH_BOOKS(), Declare variable {d,s} and get it value from the USER. And depending upon the value of d , Book is either searched by ID or NAME . if the values is matched then the respective details are displayed . Now the USER is Asked if want to search more records and Get The USER response, if 'YES' SEARCH_BOOK function is called or else MAINPROGRAM function is called.
15. In function DELETEBOOK(),Declare variables {i,flag,j,c} and accept the value of i form the user. If that values matched in the Books.txt File , the details are shown. Now the USER is asked to enter the choice if he wants to delete that book from the library or not. If YES the book is removed if NO, MAINPROGRAM is called. Now the USER is Asked if want to delete more records and Get The USER response, if 'YES' DELETEBOOK function is called or else MAINPROGRAM function is called.
16. In BOOK_ISSUE(void), USER choice is recorded and rerspective actions are performed.
- If "1" then Declare variable{z,c,another}.Get entry from the user and store it in variable z. If the value is matched in File Book.txt Details are displayed, Now get the Student name input from USER and store it in the structure booklist and then create a new file Issue.txt and store the value of this structure in lsuuue.txt. Now the USER is Asked if want to ISSUE more Books and Get the USER response, if 'YES' BOOK_ISSUE function is called or else MAINPROGRAM function is called.
 - If "2" then all the data form Issue.txt is displayed.Again the BOOK_ISSUE function is called.
 - If "3" declare a variable p and get the value of it from the USER. If the values matches if the file Issue.txt, respective record is shown. Now the USER is Asked if want to SEARCH more Books and Get the USER response, if 'YES' BOOK_ISSUE function is called or else MAINPROGRAM function is called.
 - If "4" declare variable {b,studentname} and get the value of it from the USER, if both the value matches for a particular record in the file lsse.txt then that record is deleted from the File Issue.txt. Now the USER is Asked if want to SUBMIT more Books and Get the USER response, if 'YES' BOOK_ISSUE function is called or else MAINPROGRAM function is called.
 - If "5" then MAINPROGRAM is called.
17. In the function EXINTRO(), Details regarding The project are displayed and then the PROGRAM is closed .
-

STEP 1 : Introduction is Displayed.

STEP 2 : Enter USERNAME & PASSWORD.

STEP 3 : If both matched MAINWINDOW is loaded. Else Again enter USERNAME & PASSWORD.

STEP 4 : Now we get input form the user,

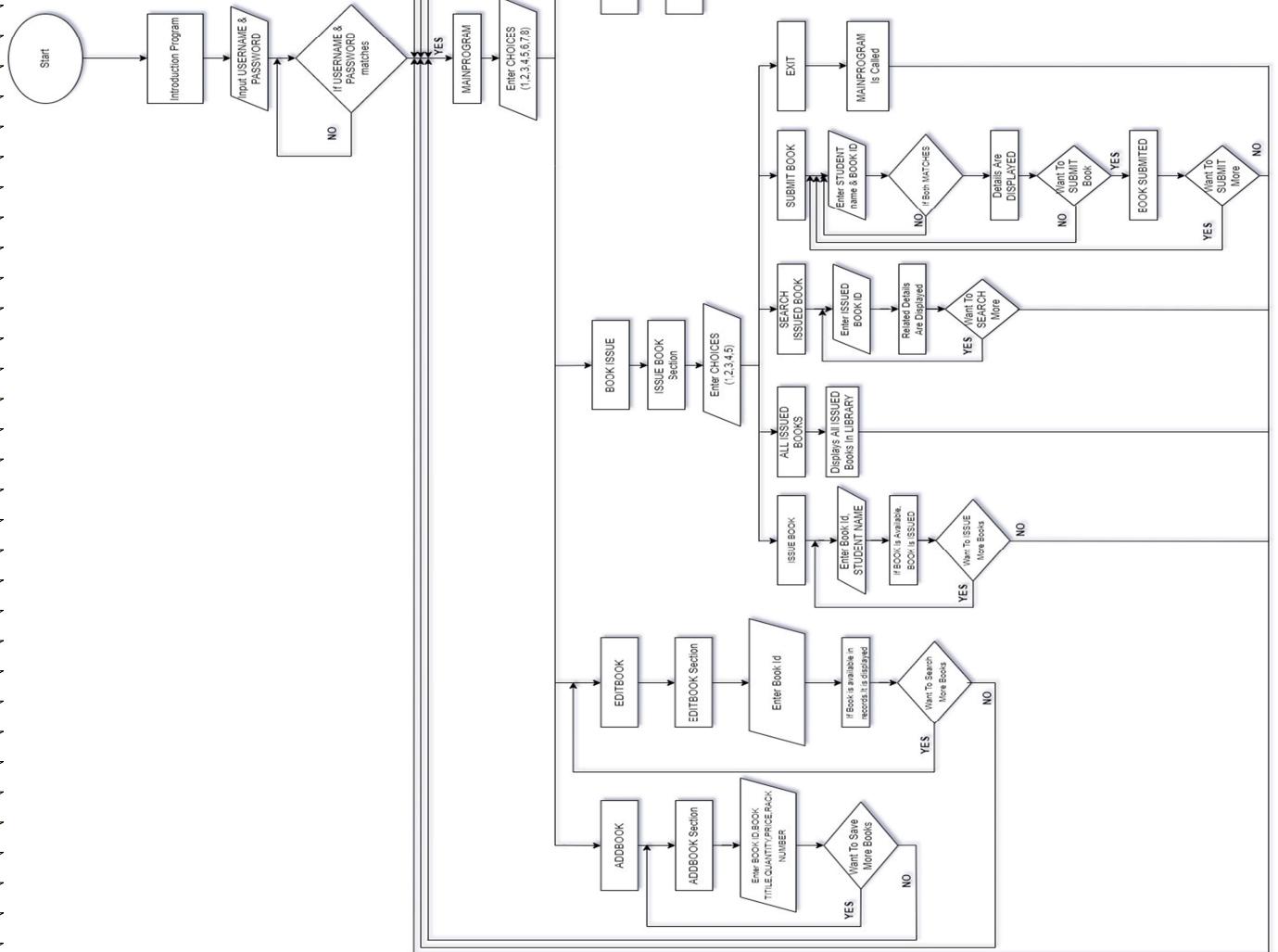
- 1(Add Books) -> Add new book to the library.
- 2(Edit Book's Record) ->Update details of the existing books present in the library.
- 3(Issue Books) -> Issue Book, Submit Books, See all issued books, Back to MAINWINDOW.
- 4(Search Books) -> Search Book by NAME or ID.
- 5(View Book list) ->Shows all the books available in the library.
- 6>Delete Book) -> Remove a particular book from the library record.
- 7(Close Application) -> Closes the Application.

STEP 5 : According to the user input , Respective functions are called on.

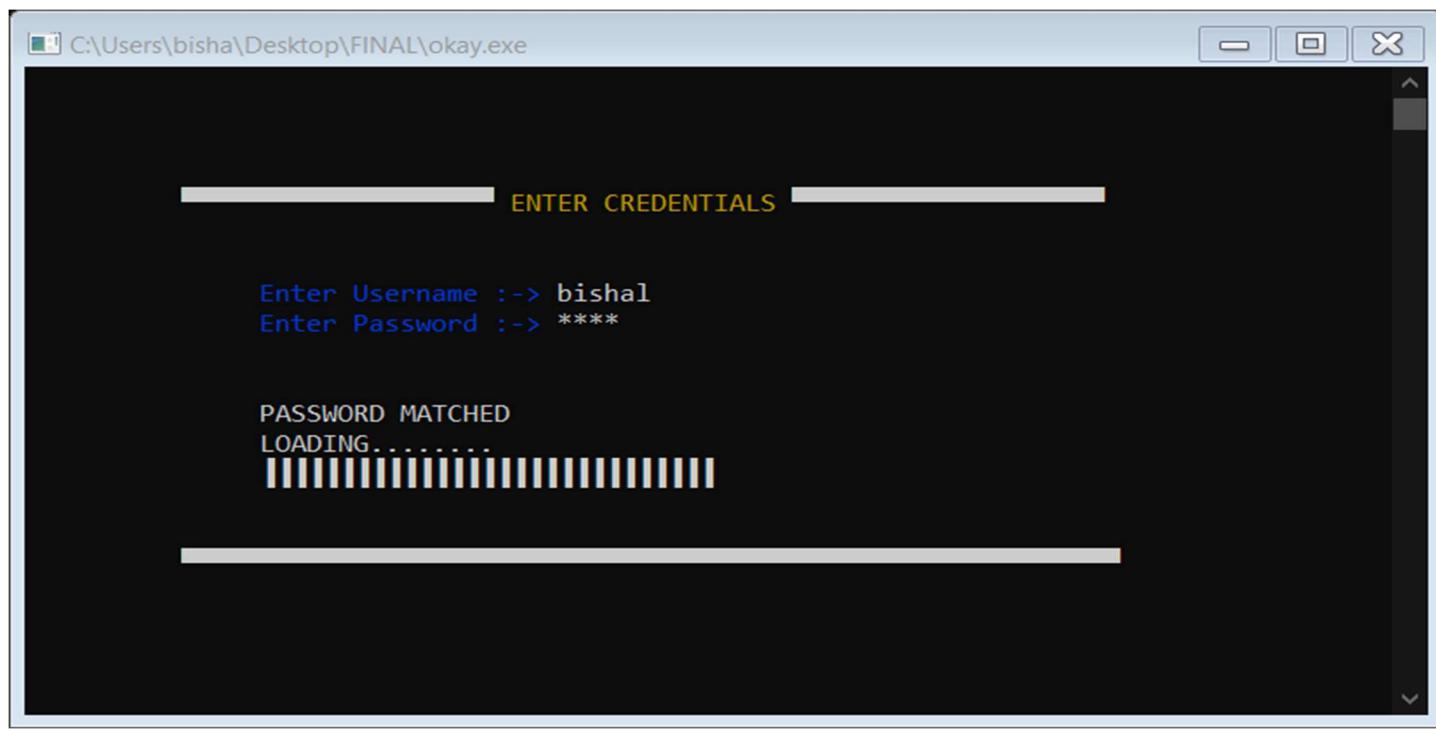
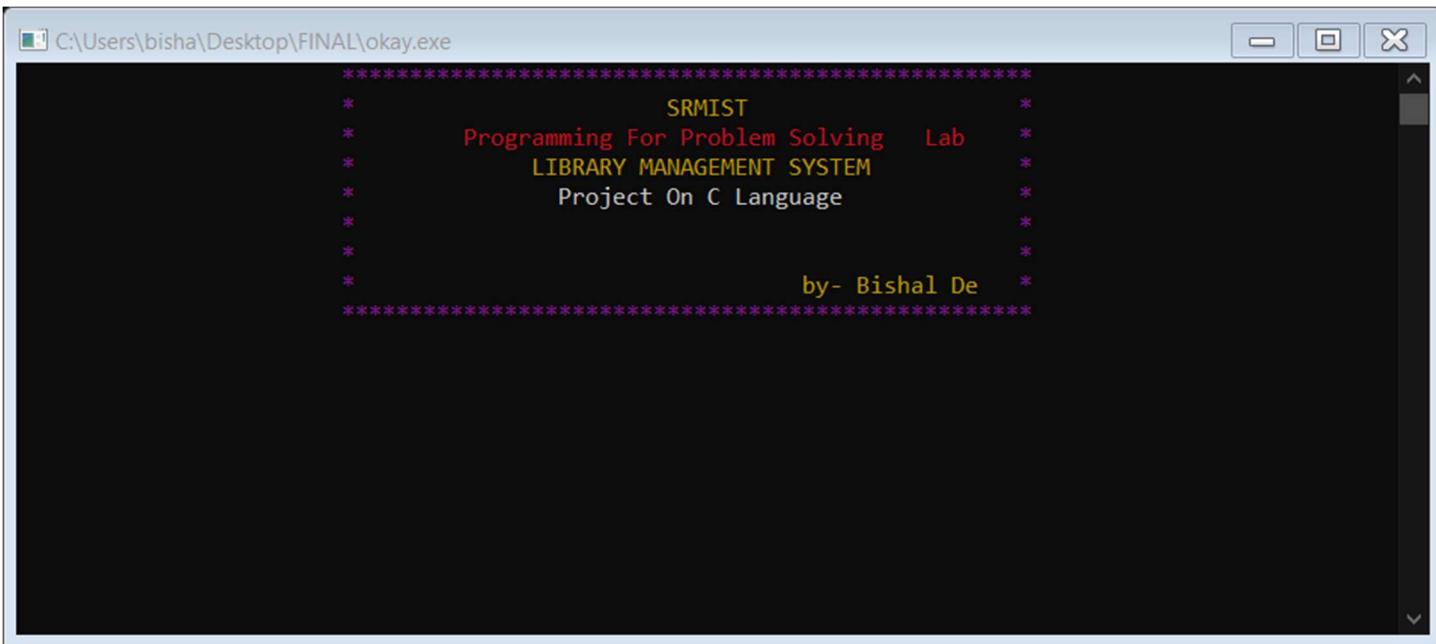
STEP 6 : Press '7' to close the application.



FLOWCHART



SCREENSHOTS



```
C:\Users\bisha\Desktop\FINAL\okay.exe

#####
# SEARCH BOOK #
#####

1. Search By ID
2. Search By Name

Enter Your Choice ->
```

```
*****  
C:\Users\bisha\Desktop\FINAL\okay.exe  
+++++ Search Books By ID +++++  
Enter BOOK ID -> 2  
Searching.....  
The Book is available  
ID :-> 2  
Name :-> Mathematics  
Author :-> Suresh  
Quantity :-> 5  
Price :-> Rs.450.00  
Rack No :-> 1  
Try another search?(Y/N)
```

```
*****  
C:\Users\bisha\Desktop\FINAL\okay.exe  
+++++ Search Books By Name +++++  
Enter Book Name -> Mathematics  
The Book is available  
ID :-> 2  
Name :-> Mathematics  
Author :-> Suresh  
Quantity :-> 5  
Price :-> Rs.450.00  
Rack No :-> 1  
Try another search?(Y/N)
```

```
*****  
C:\Users\bisha\Desktop\FINAL\okay.exe  
----- AVAILABLE BOOKS -----  


| ID | BOOK NAME    | AUTHOR       | QTY | PRICE  | RackNo |
|----|--------------|--------------|-----|--------|--------|
| 1  | Python       | Sumita       | 3   | 599.00 | 1      |
| 2  | BIOLOGY      | SCSingh      | 4   | 320.00 | 2      |
| 3  | Physics      | JPYadav      | 5   | 100.00 | 2      |
| 5  | History      | Seema        | 1   | 344.00 | 3      |
| 6  | CProgramming | DennisRitche | 5   | 200.00 | 4      |

  
Total Books = 18  
Total Cost Of Books = Rs 4921  
Press Any Key....
```

```
***** DELET SECTION *****  
Enter Book ID :-> 1  


| ID | BOOK NAME | AUTHOR | QTY | PRICE  | RackNo |
|----|-----------|--------|-----|--------|--------|
| 1  | Python    | Sumita | 3   | 599.00 | 1      |



Do you want to delete it?(Y/N):  
The record is sucessfully deleted



Delete another record?(Y/N)


```

```
***** ISSUE SECTION *****  
1. Issue a Book                  2. View Issued Book  
3. Search Issued Book        4. Submit Book  
5. Back to Main Menu  
  
Enter Your Choice ->
```

```
***** ISSUE BOOK SECTION *****  
  
Enter The Book Id:1  
  
The Book Is Available  
The Book Title Is -> Chemistry  
Enter Student Name -> Bishal  
Issued date -> 21-1-2022  
  
The Book With ID 1 is issued to Bishal  
To Be Returned On -> 6-2-2022  
Issue any more(Y/N):
```

***** ISSUED BOOK LIST *****				
STUDENT NAME	ID	BOOK NAME	ISSUED DATE	RETURN DATE
Bishal	1	Chemistry	21-1-2022	6-2-2022
Press Any Key....				

***** SEARCH ISSUE BOOK SECTION *****

Enter Book ID : 1

The Book has taken by : Bishal
 Issued Date : 21-1-2022
 Returning Date : 6-2-2022

Try Another Search?(Y/N)

***** SUBMIT ISSUE BOOK SECTION *****

Enter book id to remove : 1
 Enter Student Name : Bishal

The Book has taken by Bishal
 Issued Date : 21-1-2022
 Returning Date : 6-2-2022

Do You Want to Remove it?(Y/N)

The issued book is removed from list

Delete any more(Y/N):

```
C:\Users\bisha\Desktop\FINAL\okay.exe
*****
ISSUED BOOK LIST *****
STUDENT NAME      ID      BOOK NAME      ISSUED DATE      RETURN DATE
No Record Found
Press Any Key....
```

C:\Users\bisha\Desktop\FINAL\okay.exe

```
*****
*                               SRMIST
*           Programming For Problem Solving    Lab
*           LIBRARY MANAGEMENT SYSTEM
*           Project On C Language
*           *
*           *
*           by- Bishal De
*****
```

SOURCE CODE

```
/*
 * LIBRARY MANAGEMENT SYSTEM
 * On C Language
 * SRMIST
 * Programming For Problem Solving
 * -RA2111026010231
 * -Bishal De
 * -CSE with AI And ML
 */

// HEADER FILES -----
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
#include <string.h>
#include <ctype.h>
#include <direct.h>

#include <time.h>
#include <windows.h>

// GLOBAL VARIABLES -----
FILE *file1, *file2; // File Pointer variable
char querybook, findbook;
char password[50] = "5741", username[50] = "bishal"; //User Credentials
COORD coordinates = {0, 0};

struct date
{
    int date, month, year;
```

```
***** } issued, duedate;
```

```
***** struct books
```

```
***** {
```

```
*****     int id;
```

```
*****     char stname[20];
```

```
*****     char name[20];
```

```
*****     char Author[20];
```

```
*****     int quantity;
```

```
*****     float Price;
```

```
*****     int rackno;
```

```
*****     struct date issued;
```

```
*****     struct date duedate;
```

```
***** } booklist;
```

```
***** // FUNCTION PROTOTYPE DECLARATION -----
```

```
***** void CONSOLE_XY(int x, int y);
```

```
***** void LOADER();
```

```
***** void PASSWORD();
```

```
***** void MAINPROGRAM();
```

```
***** void ADDBOOKS();
```

```
***** int CHECK_BOOK(int t);
```

```
***** void AVAILABLE_BOOKS();
```

```
***** void EDITBOOK();
```

```
***** void SEARCH_BOOKS();
```

```
***** void EXINTRO();
```

```
***** void DELETEBOOK();
```

```
***** void BOOK_ISSUE();
```

```
***** // MAIN FUNCTION -----
```

```
***** int main()
```

```
***** {
```

```
*****     EXINTRO();
```

```
*****     PASSWORD();
```

```
*****     return 0;
```

```
*****  
* }  
  
*****  
* void CONSOLE_XY(int x, int y)  
* {  
*     coordinates.X = x;  
*     coordinates.Y = y;  
*     SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE),  
* coordinates);  
* }  
  
*****
```

```
*****  
* void LOADER()  
* {  
*     int loader;  
*     CONSOLE_XY(15, 12);  
*     printf("LOADING.....");  
*     printf("\n\n");  
*     CONSOLE_XY(15, 13);  
*     for (loader = 1; loader < 30; loader++)  
*     {  
*         Sleep(100);  
*         printf("%c", 222);  
*     }  
* }  
  
*****
```

```
*****  
* void PASSWORD()  
* {  
*     system("cls");  
*     char ch, pass[50], user[50];  
*     int i = 0, j;  
*     CONSOLE_XY(10, 4);  
*     printf("\033[0;37m");  
*     for (j = 0; j < 20; j++)  
*     {  
*         Sleep(40);  
*         printf("%c", 223);  
*     }  
* }  
  
*****
```

```
*****  
 }  
 printf("\033[0;34m");  
 printf("%s", "\033[0;33m ENTER CREDENTIALS \033[0;37m");  
 for (j = 0; j < 20; j++)  
 {  
     Sleep(40);  
     printf("%c", 223);  
 }  
 CONSOLE_XY(10, 16);  
 printf("\033[0;37m");  
 for (j = 0; j < 60; j++)  
 {  
     printf("%c", 223);  
 }  
 CONSOLE_XY(15, 7);  
 printf("\033[0;34mEnter Username :-> \033[0;37m");  
 scanf("%s", user);  
 CONSOLE_XY(15, 8);  
 printf("\033[0;34mEnter Password :-> \033[0;37m");  
 while (ch != 13)  
 {  
     ch = getch();  
     if (ch != 13 && ch != 8)  
     {  
         putch('*');  
         pass[i] = ch;  
         i++;  
     }  
 }  
 pass[i] = '\0';  
 if (strcmp(user, username) == 0)  
 {  
     if (strcmp(pass, password) == 0)  
     {  
         CONSOLE_XY(15, 11);  
     }  
 }  
 *****
```



```
*****  
***** printf("\t\t\t\033[0;31mThe book id already exists\033[0\n");  
***** getch();  
***** MAINPROGRAM();  
***** }  
***** booklist.id = t;  
***** printf("\t\t\t\033[0;37mEnter BOOK TITLE -> \033[0;32m");  
***** scanf("%s", &booklist.name);  
***** printf("\t\t\t\033[0;37mEnter AUTHOR'S NAME -> \033[0;32m");  
***** scanf("%s", &booklist.Author);  
***** printf("\t\t\t\033[0;37mEnter QUANTITY -> \033[0;32m");  
***** scanf("%d", &booklist.quantity);  
***** printf("\t\t\t\033[0;37mEnter PRICE Per BOOK -> \033[0;32m");  
***** scanf("%f", &booklist.Price);  
***** printf("\t\t\t\033[0;37mEnter The RACK NUMBER -> \033[0;32m");  
***** scanf("%d", &booklist.rackno);  
***** fseek(file1, 0, SEEK_END);  
***** fwrite(&booklist, sizeof(booklist), 1, file1);  
***** fclose(file1);  
***** printf("\t\t\t\033[0;35mThe record is sucessfully saved\n");  
***** printf("\t\t\t\033[0;35mSave any more?\033[0;33m(Y /  
N):\033[0;35m");  
***** if (getch() == 'n')  
*****     MAINPROGRAM();  
***** else  
*****     system("cls");  
***** ADDBOOKS();  
***** }  
  
***** int CHECK_BOOK(int t)  
***** {  
*****     rewind(file1);  
*****     while (fread(&booklist, sizeof(booklist), 1, file1) == 1)  
*****         if (booklist.id == t)  
*****             return 0;  
*****     return 1;  
***** }
```

```
*****  
 }  
  
void AVAILABLE_BOOKS()  
{  
    int total = 0, money = 0, j = 6;  
    system("cls");  
    printf("\033[0;33m\n\n\t----- AVAILABLE  
BOOKS -----");  
    CONSOLE_XY(20, 5);  
    printf("\033[0;34m      ID  BOOK NAME  AUTHOR  QTY  PRICE  
RackNo \033[0;37m");  
    file1 = fopen("Books.txt", "r");  
    while (fread(&booklist, sizeof(booklist), 1, file1) == 1)  
    {  
        CONSOLE_XY(34, j);  
        printf("%d", booklist.id);  
        CONSOLE_XY(41, j);  
        printf("%s", booklist.name);  
        CONSOLE_XY(54, j);  
        printf("%s", booklist.Author);  
        CONSOLE_XY(68, j);  
        printf("%d", booklist.quantity);  
        CONSOLE_XY(75, j);  
        printf("%.2f", booklist.Price);  
        CONSOLE_XY(88, j);  
        printf("%d", booklist.rackno);  
        printf("\n\n");  
        j++;  
        money += booklist.Price * booklist.quantity;  
        total = total + booklist.quantity;  
    }  
    CONSOLE_XY(20, j + 5);  
    printf("\033[0;31m Total Books = \033[0;37m%d\n", total);  
    CONSOLE_XY(20, j + 6);  
    printf("\033[0;31m Total Cost Of Books = Rs \033[0;37m%d", money);  
*****
```



```
*****  
CONSOLE_XY(54, j);  
printf("%s", booklist.Author);  
CONSOLE_XY(68, j);  
printf("%d", booklist.quantity);  
CONSOLE_XY(75, j);  
printf("%.2f", booklist.Price);  
CONSOLE_XY(88, j);  
printf("%d", booklist.rackno);  
printf("\n\n");  
printf("\n\t\t\t\t\033[0;36mThe Book Is Available..!\n");  
printf("\t\t\t\t\033[0;32mThe Book ID : \033[0;37m%d\n",  
booklist.id);  
printf("\t\t\t\t\033[0;32mEnter New TITLE : \033[0;37m");  
scanf("%s", booklist.name);  
printf("\t\t\t\t\033[0;32mEnter New AUTHOR'S NAME:  
\033[0;37m");  
scanf("%s", booklist.Author);  
printf("\t\t\t\t\033[0;32mEnter New QUANTITY : \033[0;37m");  
scanf("%d", &booklist.quantity);  
printf("\t\t\t\t\033[0;32mEnter New PRICE : \033[0;37m");  
scanf("%f", &booklist.Price);  
printf("\t\t\t\t\033[0;32mEnter New RACK NUMBER :  
\033[0;37m");  
scanf("%d", &booklist.rackno);  
printf("\n\t\t\t\t\033[0;31mThe record is modified");  
fseek(file1, ftell(file1) - sizeof(booklist), 0);  
fwrite(&booklist, sizeof(booklist), 1, file1);  
fclose(file1);  
c = 1;  
}  
}  
if (c == 0)  
{  
    printf("");  
    printf("\n\t\t\t\t\033[0;31m\aNNo record found\n");  
}
```

```
*****  
}  
printf("\n\n");  
printf("\t\t\t\t033[0;355mModify another Record?(Y/N)");  
fflush(stdin);  
another = getch();  
if (another == 'y' || another == 'Y')  
    system("cls");  
}  
MAINPROGRAM();  
}  
  
void SEARCH_BOOKS()  
{  
    system("cls");  
    int d;  
  
    printf("\033[0;33m\n\t#####\n");  
    SEARCH BOOK #####\n";  
    printf("\033[0;34m\t\t1. Search By ID\n\n");  
    printf("\t\t2. Search By Name\n\n");  
    printf("\t\t033[0;37mEnter Your Choice -> ");  
    file1 = fopen("Books.txt", "r+");  
    rewind(file1);  
    switch (getch())  
    {  
        case '1':  
        {  
            system("cls");  
            printf("\033[0;33m\t+++++++\n");  
            printf("Search Books By ID\n");  
            printf("+++++++\n");  
            printf("\033[0;37m\tEnter BOOK ID -> \033[0;35m");  
            scanf("%d", &d);  
            printf("\n\t\tSearching.....\n");  
            int flag = 1;  
            while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
```

```
*****  
* {  
*     if (booklist.id == d)  
*     {  
*         Sleep(2);  
*         printf("\t\t\t\033[0;31mThe Book is available\n\n");  
*         printf("\t\t\t\033[0;37mID :-> \033[0;35m%d \n", booklist.id);  
*         printf("\t\t\t\033[0;37mName :-> \033[0;35m%s \n",  
* booklist.name);  
*         printf("\t\t\t\033[0;37mAuthor :-> \033[0;35m%s \n",  
* booklist.Author);  
*         printf("\t\t\t\033[0;37mQuantity :-> \033[0;35m%d \n",  
* booklist.quantity);  
*         printf("\t\t\t\033[0;37mPrice :-> \033[0;35mRs.%2f \n",  
* booklist.Price);  
*         printf("\t\t\t\033[0;37mRack No :-> \033[0;35m%d \n",  
* booklist.rackno);  
*         flag = 0;  
*     }  
* }  
* if (flag != 0)  
* {  
*     flag = 1;  
*     printf("\t\t\033[0;31mNo Record Found\n");  
* }  
* printf("\n\t\t\033[0;37mTry another search?\033[0;33m(Y/N)");  
* if (getch() == 'y')  
*     SEARCH_BOOKS();  
* else  
*     MAINPROGRAM();  
* break;  
* }  
* case '2':  
* {  
*     char s[15];  
*     system("cls");  
* }  
*****
```

```
***** Search Books By *****
printf("\t\033[0;33m ++++++ Search Books By ++++++\n\n");
Name ++++++\n\n");
printf("\t\t\033[0;37mEnter Book Name -> \033[0;35m");
scanf("%s", s);
int d = 1;
while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
{
    if (strcmp(booklist.name, (s)) == 0)
    {
        printf("\n\t\t\033[0;31mThe Book is available\n\n");
        printf("\t\t\t\033[0;37mID :-> \033[0;35m%d \n", booklist.id);
        printf("\t\t\t\033[0;37mName :-> \033[0;35m%s \n",
booklist.name);
        printf("\t\t\t\033[0;37mAuthor :-> \033[0;35m%s \n",
booklist.Author);
        printf("\t\t\t\033[0;37mQuantity :-> \033[0;35m%d \n",
booklist.quantity);
        printf("\t\t\t\033[0;37mPrice :-> \033[0;35mRs.%2f \n",
booklist.Price);
        printf("\t\t\t\033[0;37mRack No :-> \033[0;35m%d \n",
booklist.rackno);
        d = 0;
        break;
    }
}
if (d != 0)
{
    d = 1;
    printf("\n\t\t\033[0;31mNo Record Found\n");
}
printf("\n\t\t\033[0;37mTry another search?\033[0;33m(Y/N)");
if (getch() == 'y')
    SEARCH_BOOKS();
else
    MAINPROGRAM();
```

```
*****  
    break;  
}  
default:  
    getch();  
    SEARCH_BOOKS();  
}  
fclose(file1);  
}  
  
void EXINTRO()  
{  
    system("cls");  
    printf("\033[0;35m");  
    printf("\t\t\t*****\n");  
    printf("\t\t\t*\033[0;33m           SRMIST  
\033[0;35m*\n");  
    printf("\t\t\t*\033[0;31m   Programming For Problem Solving E-Lab  
\033[0;35m*\n");  
    printf("\t\t\t*\033[0;33m           LIBRARY MANAGEMENT SYSTEM  
\033[0;35m*\n");  
    printf("\t\t\t*\033[0;37m           Project On C Language  
\033[0;35m*\n");  
    printf("\t\t\t*\033[0;35m*\n");  
    printf("\t\t\t*\033[0;35m*\n");  
    printf("\t\t\t*\033[0;33m           by- Bishal De  
\033[0;35m*\n");  
    printf("\t\t\t*****\n");  
    Sleep(2000);  
}  
  
void DELETEBOOK()  
{  
    int i, j = 5, flag = 0;  
    char c;  
    system("cls");
```

```

printf("\t\t***** DELETE
SECTION*****\n\n");
printf("\t\tEnter Book ID :-> ");
scanf("%d", &i);
file1 = fopen("Books.txt", "r+");
while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
{
    if (booklist.id == i)
    {
        CONSOLE_XY(34, j - 1);
        printf("\033[0;34mID    BOOK NAME    AUTHOR    QTY    PRICE
RackNo \033[0;37m");
        CONSOLE_XY(34, j);
        printf("%d", booklist.id);
        CONSOLE_XY(41, j);
        printf("%s", booklist.name);
        CONSOLE_XY(54, j);
        printf("%s", booklist.Author);
        CONSOLE_XY(68, j);
        printf("%d", booklist.quantity);
        CONSOLE_XY(75, j);
        printf("%0.2f", booklist.Price);
        CONSOLE_XY(88, j);
        printf("%d", booklist.rackno);
        printf("\n\n");
        flag = 1;
        printf("\t\t\t\033[0;33mDo you want to delete
it?\033[0;37m(Y/N):");
        c = getch();
        if (c == 'y' || c == 'Y')
        {
            file2 = fopen("temporary.txt", "w+");
            rewind(file1);
            while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
            {

```

```
*****  
if (booklist.id != i)  
{  
    fseek(file2, 0, SEEK_CUR);  
    fwrite(&booklist, sizeof(booklist), 1, file2);  
}  
}  
fclose(file1);  
fclose(file2);  
remove("Books.txt");  
rename("temporary.txt", "Books.txt");  
file1 = fopen("Books.txt", "rb+");  
printf("\n\t\t\t\033[0;31mThe record is sucessfully deleted\n\n");  
printf("\t\t\t\033[0;37mDelete another  
record?\033[0;33m(Y/N)");  
    c = getch();  
    if (c == 'y' || c == 'Y')  
    {  
        DELETEBOOK();  
    }  
    else  
    {  
        MAINPROGRAM();  
    }  
}  
else  
{  
    MAINPROGRAM();  
}  
}  
}  
if (!flag)  
{  
    printf("Nothing Found");  
    getch();  
    DELETEBOOK();  
}
```

```
*****  
* }  
* }  
  
void BOOK_ISSUE(void)  
{  
    time_t t;  
    t = time(NULL);  
    struct tm tm = *localtime(&t);  
    int z, date = tm.tm_mday, month = tm.tm_mon + 1, year = tm.tm_year +  
1900;  
    system("cls");  
    printf("\t\t\033[0;33m***** ISSUE SECTION  
*****\n\n");  
    printf("\t\t\033[0;37m1. Issue a Book      2. View Issued Book\n");  
    printf("\t\t\033[0;37m3. Search Issued Book   4. Submit Book\n");  
    printf("\t\t\033[0;37m5. Back to Main Menu\n\n");  
    printf("\t\t\033[0;33mEnter Your Choice -> ");  
    switch (getch())  
    {  
        case '1':  
        {  
            system("cls");  
            int c = 0;  
            char another = 'y';  
            while (another == 'y')  
            {  
                system("cls");  
                printf("\t\t\033[0;33m***** ISSUE BOOK  
SECTION *****\n\n");  
                printf("\t\t\033[0;37mEnter The Book Id:\033[0;32m");  
                scanf("%d", &z);  
                file1 = fopen("Books.txt", "r");  
                file2 = fopen("Issue.txt", "a+");  
                if (CHECK_BOOK(z) == 0)  
                {  
                    if (fread(file1, sizeof(int), 1, file2) == 1)  
                        printf("\t\t\033[0;32mBook Issued successfully\n");  
                    else  
                        printf("\t\t\033[0;32mBook Not Found\n");  
                }  
                else  
                    printf("\t\t\033[0;32mBook Already Issued\n");  
                another = getch();  
            }  
        }  
    }  
}
```

```
*****  
***** printf("\n\t\t\t\033[0;31mThe Book Is Available\n");  
***** printf("\t\t\t\033[0;36mThe Book Title Is ->\033[0;37m %s\n",  
booklist.name);  
  
***** printf("\t\t\t\033[0;36mEnter Student Name -> \033[0;37m");  
scanf("%s", booklist.stname);  
printf("\t\t\t\033[0;33mIssued date -> \033[0;36m %d-%d-%d\n\n", date, month, year);  
printf("\t\t\t\033[0;33mThe Book With ID  
\033[0;37m%d\033[0;33m is issued to \033[0;37m%s\033[0;33m\n",  
booklist.id, booklist.stname);  
booklist.issued.date = date;  
booklist.issued.month = month;  
booklist.issued.year = year;  
booklist.dueDate.date = booklist.issued.date + 15;  
booklist.dueDate.month = booklist.issued.month;  
booklist.dueDate.year = booklist.issued.year;  
if (booklist.dueDate.date > 30)  
{  
    booklist.dueDate.month += booklist.dueDate.date / 30;  
    booklist.dueDate.date -= 30;  
}  
if (booklist.dueDate.month > 12)  
{  
    booklist.dueDate.year += booklist.dueDate.month / 12;  
    booklist.dueDate.month -= 12;  
}  
  
printf("\t\t\t\033[0;34mTo Be Returned On -> \033[0;37m %d-%d-%d\n", booklist.dueDate.date, booklist.dueDate.month,  
booklist.dueDate.year);  
fseek(file2, sizeof(booklist), SEEK_END);  
fwrite(&booklist, sizeof(booklist), 1, file2);  
fclose(file2);  
c = 1;
```

```
*****
}
if (c == 0)
{
    printf("\n\t\t\t\033[0;31mNo record found\n");
}
printf("\t\t\t\033[0;37mIssue any more\033[0;33m(Y/N):");
fflush(stdin);
another = getche();
fclose(file1);
if (another != 'y' || another != 'Y')
    BOOK_ISSUE();
}
}
break;
case '2':
{
    system("cls");
    int j = 4;
    printf("\t\033[0;33m ***** ISSUED BOOK
LIST *****\n");
    CONSOLE_XY(2, 2);
    printf("\t\033[0;35m STUDENT NAME      ID      BOOK NAME
ISSUED DATE      RETURN DATE\033[0;37m");
    file1 = fopen("Issue.txt", "r");
    int flag1 = 0;
    while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
    {
        CONSOLE_XY(2 + 7, j);
        printf("%s", booklist.stname);
        CONSOLE_XY(22 + 7, j);
        printf("%d", booklist.id);
        CONSOLE_XY(33 + 7, j);
        printf("%s", booklist.name);
        CONSOLE_XY(52 + 7, j);
    }
}
```

```
*****  
***** printf("%d-%d-%d", booklist.issued.date, booklist.issued.month,  
***** booklist.issued.year);  
***** CONSOLE_XY(72 + 7, j);  
***** printf("%d-%d-%d", booklist.duedate.date, booklist.duedate.month,  
***** booklist.duedate.year);  
***** j++;  
***** flag1 = 1;  
***** }  
***** if (flag1 != 1)  
***** {  
*****     printf("\n\n\n\n\t\t\033[0;31mNo Record Found\n\n");  
***** }  
***** fclose(file1);  
***** CONSOLE_XY(1, j+3);  
***** printf("\n\n\033[0;33m\t\tPress Any Key...");  
***** getch();  
***** BOOK_ISSUE();  
***** }  
***** break;  
***** case '3':  
***** {  
*****     system("cls");  
*****     printf("\t\t\033[0;33m***** SEARCH ISSUE  
***** BOOK SECTION *****\n\n");  
*****     printf("\t\t\033[0;34mEnter Book ID : \033[0;37m");  
*****     int p, c = 0;  
*****     char another = 'y';  
*****     while (another == 'y')  
*****     {  
*****         scanf("%d", &p);  
*****         file1 = fopen("Issue.txt", "r");  
*****         int j = 8;  
*****         while (fread(&booklist, sizeof(booklist), 1, file1) == 1)  
*****         {
```

```
*****  
if (booklist.id == p)  
{  
    CONSOLE_XY(10, j);  
    printf("\t\t\033[0;35mThe Book has taken by :\033[0;37m %s",  
booklist.stname);  
    CONSOLE_XY(10, j + 1);  
    printf("\t\t\033[0;35mIssued Date : \033[0;37m %d-%d-%d",  
booklist.issued.date, booklist.issued.month, booklist.issued.year);  
    CONSOLE_XY(10, j + 2);  
    printf("\t\t\033[0;35mReturning Date : \033[0;37m%d-%d-%d",  
booklist.duedate.date, booklist.duedate.month, booklist.duedate.year);  
    printf("\n\t\t-----\n");  
    c = 1;  
    j += 5;  
}  
}  
fflush(stdin);  
fclose(file1);  
if (c == 0)  
{  
    printf("\n\t\t\033[0;31mNo Record Found\n");  
}  
printf("\n\n\t\t\033[0;37mTry Another  
Search?\033[0;33m(Y/N)");  
another = getch();  
(another == 'y' || another == 'Y') ? BOOK_ISSUE() : MAINPROGRAM();  
}  
}  
break;  
  
case '4':  
{  
    system("cls");  
    int b = 0;  
    char studentname[50];
```

```
***** FILE *file3;
***** printf("\t\t\033[0;33m***** SUBMIT ISSUE
***** BOOK SECTION *****\n\n");
***** printf("\t\t\t\033[0;37mEnter book id to remove : \033[0;32m");
***** scanf("%d", &b);
***** printf("\t\t\t\033[0;37mEnter Student Name : \033[0;32m");
***** scanf("%s", &studentname);
***** file1 = fopen("Issue.txt", "r+");
***** while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
{
    if (booklist.id == b && strcmp(booklist.stname, studentname) == 0)
    {
        b = 1;
        printf("\n\t\t\t\033[0;37mThe Book has taken by \033[0;33m
%s\n", booklist.stname);
        printf("\t\t\t\033[0;37mIssued Date : \033[0;33m%d-%d-%d\n",
booklist.issued.date, booklist.issued.month, booklist.issued.year);
        printf("\t\t\t\033[0;37mReturning Date : \033[0;33m%d-%d-
%d\n", booklist.duedate.date, booklist.duedate.month,
booklist.duedate.year);
        printf("\n\t\t\t\033[0;37mDo You Want to Remove
it?\033[0;33m(Y/N)");
        if (getch() == 'y')
        {
            file3 = fopen("record.dat", "wb+");
            rewind(file1);
            while (fread(&booklist, sizeof(booklist), 1, file1) == 1)
            {
                if (booklist.id != b && strcmp(booklist.stname, studentname) != 0)
                {
                    fseek(file1, 0, SEEK_CUR);
                    fwrite(&booklist, sizeof(booklist), 1, file3);
                }
            }
        }
    }
}
```

```
*****  
fclose(file1);  
fclose(file3);  
remove("Issue.txt");  
rename("record.dat", "Issue.txt");  
CONSOLE_XY(10, 14);  
printf("\n\t\t\t\033[0;31mThe issued book is removed from  
list\n");  
}  
}  
}  
}  
if (b == 0 )  
{  
    b = 0;  
    printf("\n\t\t\t\033[0;31mNo record found\n");  
}  
printf("\n\t\t\t\033[0;37mDelete any more\033[0;33m(Y/N):");  
fflush(stdin);  
char another = getche();  
fclose(file1);  
if (another != 'y' || another != 'Y')  
    BOOK_ISSUE();  
else  
{  
    MAINPROGRAM();  
}  
}  
case '5':  
{  
    MAINPROGRAM();  
}  
break;  
default:  
{  
    CONSOLE_XY(10, 18);  
    printf("\t\t\033[0;31m\Wron Entry!!");  
}
```

```
*****  
getch();  
BOOK_ISSUE();  
break;  
}  
}  
CONSOLE_XY(1, 30);  
}  
*****
```

THANK YOU.....!!!