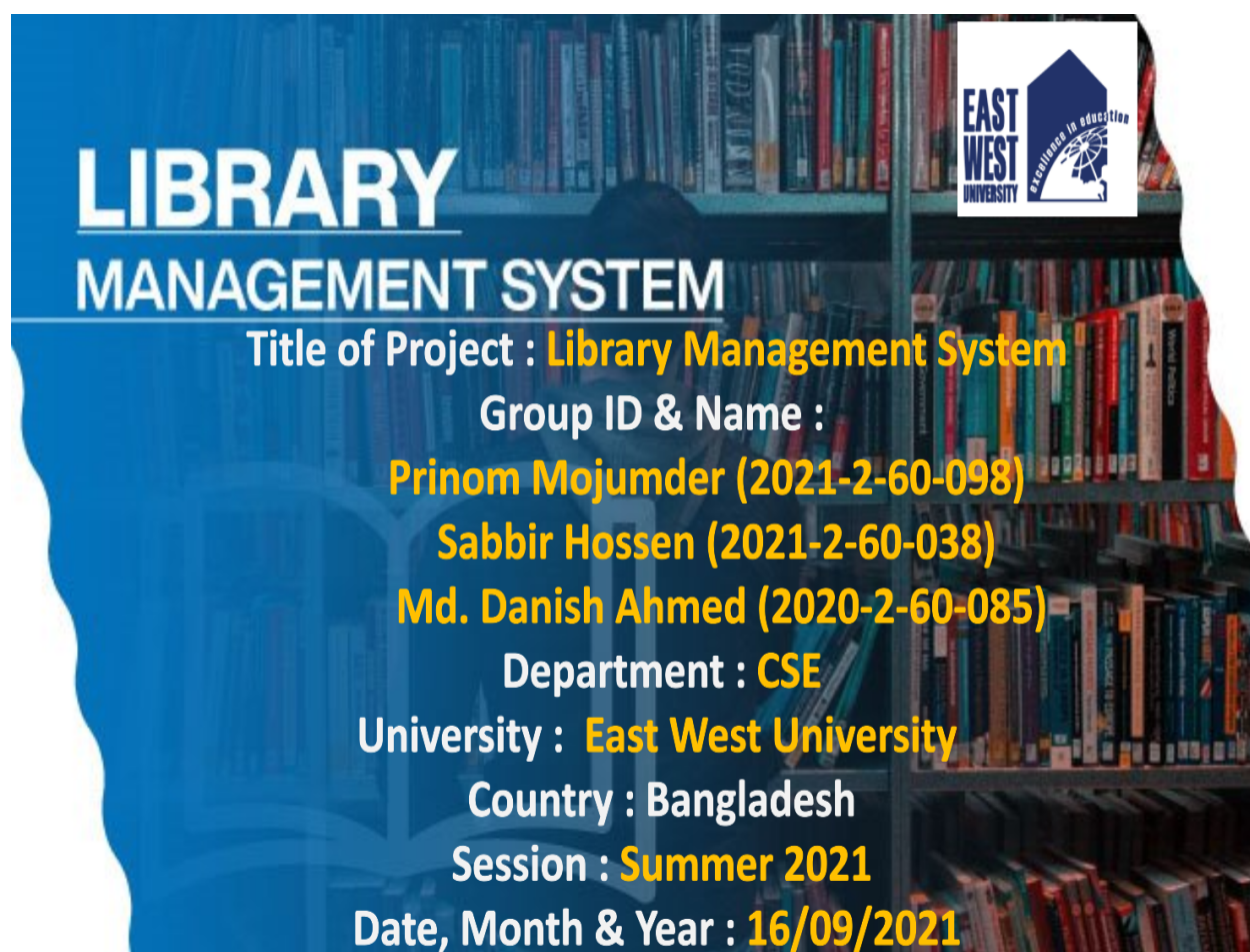


**Cover Page:**



**LIBRARY**  
**MANAGEMENT SYSTEM**

Title of Project : **Library Management System**

Group ID & Name :

**Prinom Mojumder (2021-2-60-098)**  
**Sabbir Hossen (2021-2-60-038)**  
**Md. Danish Ahmed (2020-2-60-085)**

Department : **CSE**

University : **East West University**

Country : **Bangladesh**

Session : **Summer 2021**

Date, Month & Year : **16/09/2021**

### **Project Evaluation Rubrics**

	<b>Max.</b>	<b>Awarded</b>
<b>A. Report</b>		
1. Introduction/Problem statement		
2. Program output (Screen shots)		
3. Source code		
4. Disk/CD neatly attached (Y/N)		
<b>B. Source Code</b>		
1. Style		
Indentation		
Self-documentation		
2. Modularity (small size functions)		
3. Error reporting capabilities		
4. Code efficiency, strategy, and originality		
<b>C. Program Execution</b>		
1. Compile without errors		
2. User friendly		
3. Error free during runtime		
4. Program output		
<b>D. Presentation and Demonstration</b> <b>[Psychomotor Domain]</b>		
1. Presentation and communication skills (Soft skill)		
<b>E. Bonus</b>		
1. Extra significant features		
<b>TOTAL</b>		

### **Project Declaration**

**(Student 1)**

<b>Student ID</b>	2021-2-60-098
<b>Name</b>	Prinom Mojumder.
<b>Session</b>	Summer 2021
<b>Project No.</b>	02
<b>Date submitted</b>	16/9/2021
<b>Deadline of the project</b>	16/9/2021
<b>My contribution in doing this project (in percentage) in the group</b>	40%
<b>Description of my contribution in this project in the group</b>	My contribution to the project is making the code and flowchart.
<b>Number of hours I spent in doing this project</b>	Approximately 65-70 Hours.

**(Student 2)**

<b>Student ID</b>	2020-2-60-085
<b>Name</b>	Md.Danish Ahmed
<b>Session</b>	Summer 2021
<b>Project No.</b>	02
<b>Date submitted</b>	16/9/2021
<b>Deadline of the project</b>	16/9/2021
<b>My contribution in doing this project (in percentage) in the group</b>	30%
<b>Description of my contribution in this project in the group</b>	I helped create the functions. And I also helped make the report.
<b>Number of hours I spent in doing this project</b>	Approximately 46-50 Hours

**(Student 3)**

<b>Student ID</b>	2021-2-60-038
<b>Name</b>	Sabbir Hossen
<b>Session</b>	Summer 2021
<b>Project No.</b>	02
<b>Date submitted</b>	16/9/2021
<b>Deadline of the project</b>	16/9/2021
<b>My contribution in doing this project (in percentage) in the group</b>	30%
<b>Description of my contribution in this project in the group</b>	I helped create the functions. And I also helped make the report.
<b>Number of hours I spent in doing this project</b>	Approximately 35-40 Hours

We hereby certify that this project represents the work done by all our group members with our contribution clearly stated above without copying from any other resources. We declare that no part of our work has been copied from or by other groups, and that no collusion has taken place with any other persons or groups.

We certify that any disks submitted with this project have been virus checked and have no viruses on them.

**Introduction:**

The name of our project is “[Library Management System](#)”. Library Management System Software allows you to keep track of your books and readers in a systematic way. This system was designed specifically to keep track of all student and book information. Because information is kept intellectually rather than physically, it is trustworthy. It can find available books and members more quickly than searching by manually. It allows library administrators to save time. The “Library Management System” project is a management software for keeping track of a library's transactions. It's primarily designed for uploading new books, searching for books, adding new members, updating new information, borrowing books, and returning them. The “Library Management System Project” was created to assist users in maintaining and organizing a library. Beginners and advanced users will find our program to be simple to use. The library

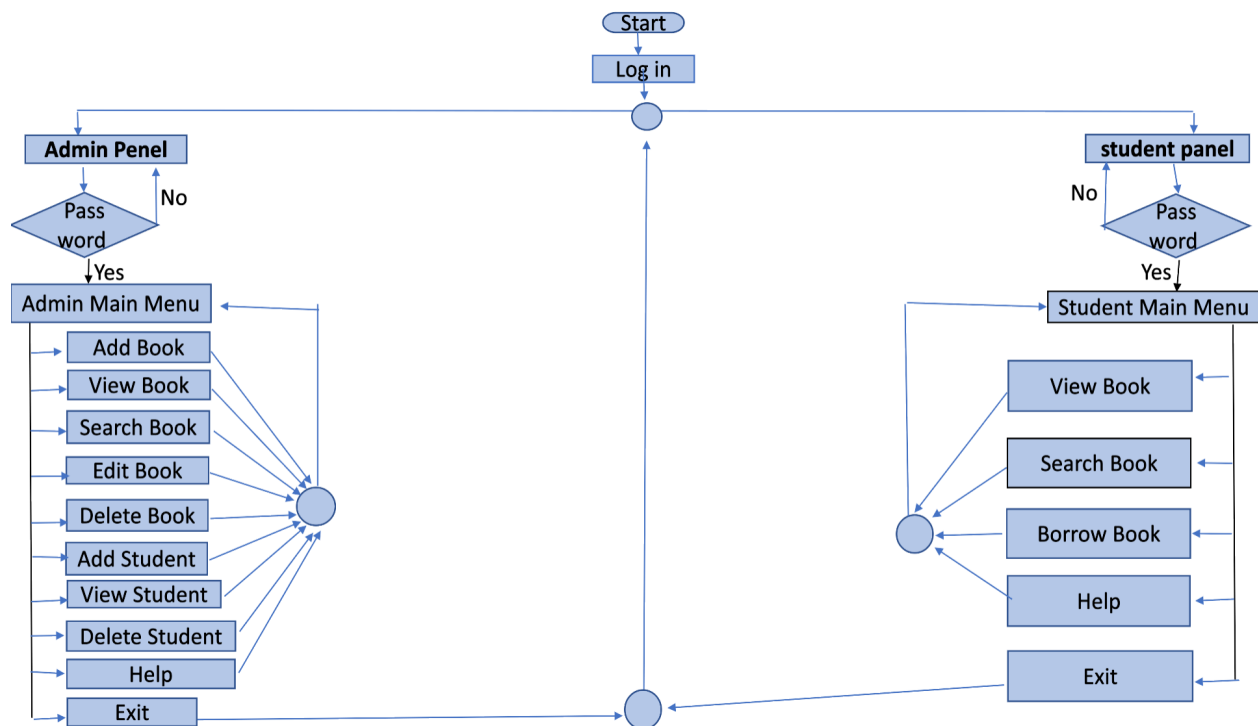
system's report creation feature aids in gaining a thorough understanding of which books the member has borrowed.

**Main Part:** Our project is mainly divided into two parts. One is the admin panel and the other is the student panel.

**Admin Panel:** We have many functions in the admin panel. Such as: Add Book, View Book List, Search Book, Edit Book, Delete Book, Add Student, View Student List, Delete Student, Help & Exit function.

**Student Panel:** We have many functions in the admin panel. Such as: View Book, Search Book, Borrow Book, Help & Exit function.

### **FLOW CHART:**



## Program Output:

### Intro Menu:

```
***** Welcome To Library Project *****

(1) Admin Panel.

(2) Student Panel.

Enter Your Choice:
```

### Admin Main Menu:

```
=> Admin Panel <=
***** Main Menu *****

1.Add Book
2.View Book List
3.Search Book
4.Edit Book
5.Delete Book
6.Add Student
7.View Student List
8.Delete Student
9.Help
10.Exit

=> Enter Your choice: █
```

## Add Book:

```
=> Admin Panel <=

***** Add Book *****

Enter Book ID: 106

Enter Book Name: Gitanjali

Enter Author Name: Rabi

Enter Quantity: 15

Enter Book Category: Poetry

Enter Rack: 1035

Book Added Successfully!
Press Enter key to open main menu again._
```

## View Book:

```
=> Admin Panel <=

***** View Book List *****

ID          Name          Author          Quantity    Category    Rack
100         Calculas        Shamima Mam     15          Math        1000
101         C Programing    Reza Sir       20          CSE         1001
103         Calculas        AP Mam         15          Math        1004
104         Fun With Prinom Prinom         20          Funny       1065
105         Joker           Prinom         15          Funny       1004

Total Books: 85

Press Enter key to open main menu again._
```

## Search Book:

```

=> Admin Panel <=

***** Search Book *****

1. Search by Book ID
2. Search by Book Name
3. Search by Author Name
4. Search by Book Category
5. Main Menu

=> Enter Your choice:
```

## Edit Book:

```

=> Admin Panel <=

***** Edit Book *****

Enter Book ID to Edit: 106

Book is Available!...

ID            Name            Author            Quantity    Category    Rack
106           Gitanjali           Rabi              15          Poetry      1035

Enter New Book Name: Gita
Enter New Author Name: Robi
Enter New Quantity: 20
Enter New Book Category: Poetry
Enter New Rack: 1036

Book Edited Successfully!...

Press Enter key to open main menu again.
```



## Student Main Menu:

```
=>Student Panel <=
***** Main Menu *****

1.View Book
2.Search Book
3.Borrow Book
4.Help
5.Exit

=> Enter Your choice:
```

## Borrow Book:

```
=> Student Panel <=

***** Borrow Book *****

1. Issue Book
2. Return Book

=> Enter Your choice:
```

### **LIMITATIONS OF OUR PROGRAM:**

1. You must enter the full name or roll when searching.
2. You cannot borrow more than one book.
3. You cannot borrow another book until one has been returned.

### **Appendix:**

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
void admin_pass();
void student_pass();
void amain_menu();
void smain_menu();
void welcome();
void add_book();
void add_student();
void avew_book();
void svew_book();
void view_student();
void asearch_book();
void ssearch_book();
```

```
void edit_book();
void delete_book();
void delete_student();
void ahelp();
void shelp();
void borrow_book();
void isbook();
void rebook();
int s,a,n,bw=0,g;
int arr=0;
struct book {
    int id;
    char name[50];
    char au[50];
    char cat[50];
    int qu;
    int r;
};
struct student {
    int roll;
    char name[50];
    char num[15];
    int isd,ism,isy;
    int red,rem,rey;
```

```

    int fine;

};

FILE *file,*file2,*filest,*filest2;

struct book b;

struct student st;

int main()

{
    welcome();
}

void welcome()

{
    s=a=1;

    system("cls");

    printf("\n\n\t\t\t***** Welcome To Library Project
*****\n");

    printf("\n\n\t\t\t(1) Admin Panel.\n\n\t\t\t(2) Student Panel.\n\n");

    printf("\n\n\t\t\tEnter Your Choice: ");

    scanf("%d",&n);

    while(1) {

        if(n==1) {

            admin_pass();

            break;

        }

        if(n==2) {

```

```

        student_pass();

        break;

    } else {

        printf("\n\t\t\tYou Entered a Wrong Choice. Please Enter Your Choice
Again\n\t\t\t");

        scanf("%d",&n);

    }

}

}

void admin_pass()

{

    if(a==1) {

        system("cls");

        printf("\n\n\t\t\t***** Welcome to Admin Panel
*****");

    }

    char apass[10]= {"admin"};

    char apass1[10];

    printf("\n\n\t\t\tEnter Password: (You cannot enter wrong password more than
3 times)\n\t\t\t");

    scanf("%s",apass1);

    if(strcmp(apass,apass1)==0) {

        printf("\n\n\t\t\tPassword Matched.");

        printf("\n\t\t\tPress any key.....");

```

```

} else {
    if(a==3) {
        printf("\n\t\t\tSorry, you have entered wrong password 3 times\n");
        welcome();
    }
    printf("\n\n\t\t\tWrong Password! %d Time to 3",a);
    printf("\n\t\t\tTry again.....");
    a++;
    admin_pass();
}
aadmin_menu();
}
void student_pass()
{
    if(s==1) {
        system("cls");
        printf("\n\n\t\t\t*****Welcome to Student Panel
*****");
    }
    char apass[10]= {"student"};
    char apass1[10];
    printf("\n\n\t\t\tEnter Password: (You cannot enter wrong password more than
3 times)\n\t\t\t");
    scanf("%s",apass1);

```

```

if(strcmp(apass,apass1)==0) {
    printf("\n\n\t\t\tPassword Matched.");
    printf("\n\t\t\tPress any key.....");
} else {
    if(s==3) {
        printf("\n\t\t\tSorry, you have entered wrong password 3 times\n");
        welcome();
    }
    printf("\n\n\t\t\tWrong Password! %d Time to 3",s);
    printf("\n\t\t\tTry again.....");
    s++;
    student_pass();
}
smain_menu();

}

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

    printf("\n\n\t\t\t=> Admin Panel <=\n\t\t\t***** Main
Menu *****\n");

    printf("\n\n\t\t\t1.Add Book");
    printf("\n\t\t\t2.View Book List");
    printf("\n\t\t\t3.Search Book");

```

```
printf("\n\t\t\t4.Edit Book");
printf("\n\t\t\t5.Delete Book");
printf("\n\t\t\t6.Add Student");
printf("\n\t\t\t7.View Student List");
printf("\n\t\t\t8.Delete Student");
printf("\n\t\t\t9.Help");
printf("\n\t\t\t10.Exit");
printf("\n\n\t\t\t=> Enter Your choice: ");
int ac=0;
scanf("%d",&ac);
if(ac==1) {
    add_book();
}
if(ac==2) {
    avew_book();
}
if(ac==3) {
    asearch_book();
}
if(ac==4) {
    edit_book();
}
if(ac==5) {
    delete_book();
```



```
}  
if(ac==6) {  
    add_student();  
}  
if(ac==7) {  
    view_student();  
}  
if(ac==8) {  
    delete_student();  
}  
if(ac==9) {  
    ahelp();  
}  
if(ac==10) {  
    welcome();  
} else {  
    printf("\n\n\t\t\tYou Entered a Wrong choice. Press Enter key to open main  
menu again.");  
    fflush(stdin);  
    getchar();  
    amain_menu();  
}  
  
}
```

```

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

    printf("\n\n\t\t\t=>Student Panel <=\n\t\t\t***** Main
Menu *****\n");

    printf("\n\n\t\t\t1.View Book");
    printf("\n\t\t\t2.Search Book");
    printf("\n\t\t\t3.Borrow Book");
    printf("\n\t\t\t4.Help");
    printf("\n\t\t\t5.Exit");
    printf("\n\n\t\t\t=> Enter Your choice: ");

    int sc=0;

    scanf("%d",&sc);

    if(sc==1) {
        sview_book();
    }

    if(sc==2) {
        ssearch_book();
    }

    if(sc==3) {
        borrow_book();
    }

    if(sc==4) {
        shelp();
    }
}

```

```

    }

    if(sc==5) {
        welcome();
    } else {
        printf("\n\n\t\t\tYou Entered a Wrong choice. Press Enter key to open main
menu again.");
        fflush(stdin);
        getchar();
        smain_menu();
    }
}

void add_book()
{
    system("cls");
    int c=0,d=0;
    printf("\n\n\t\t\t=> Admin Panel <=");
    printf("\n\n\t\t\t***** Add Book
*****\n");
    file=fopen("book.txt","ab+");
    printf("\n\n\t\t\tEnter Book ID: ");
    fflush(stdin);
    scanf("%d",&d);
    rewind(file);
    while(fread(&b,sizeof(b),1,file)==1) {

```

```
    if(d==b.id) {  
        printf("\n\n\t\t\tThis book is already in Library...");  
        c=1;  
    }  
}  
  
if(c==1) {  
    printf("\n\n\t\t\tPress Enter key to open main menu again.");  
    fflush(stdin);  
    getchar();  
    amain_menu();  
} else {  
    b.id=d;  
}  
  
printf("\n\t\t\tEnter Book Name: ");  
fflush(stdin);  
gets(b.name);  
printf("\n\t\t\tEnter Author Name: ");  
fflush(stdin);  
gets(b.au);  
printf("\n\t\t\tEnter Quantity: ");  
fflush(stdin);  
scanf("%d",&b.qu);  
printf("\n\t\t\tEnter Book Category: ");  
fflush(stdin);
```

```

gets(b.cat);

printf("\n\t\t\tEnter Rack: ");

fflush(stdin);

scanf("%d",&b.r);

fseek(file,0,SEEK_END);

fwrite(&b,sizeof(b),1,file);

fclose(file);

printf("\n\n\t\t\tBook Added Successfully!");

printf("\n\t\t\tPress Enter key to open main menu again.");

fflush(stdin);

getchar();

again_menu();

}

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

    int c=0;

    printf("\n\n\t\t\t\t=> Admin Panel <=");

    printf("\n\n\t\t\t\t***** View Book List
*****\n\n");

    printf("\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t Rack\n\n");

    file=fopen("book.txt","rb");

    while(fread(&b,sizeof(b),1,file)==1) {

```

```

printf("\t\t\t%-12d\t\t%-20s\t\t%-24s\t\t%-16d\t\t%-16s\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

    c=c+b.qu;
}

printf("\n\t\t\tTotal Books: %d\n",c);

fclose(file);

printf("\n\t\t\tPress Enter key to open main menu again.");

fflush(stdin);

getchar();

aagain_menu();

}

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

    int c=0;

    printf("\n\n\t\t\t\t\t=> Student Panel <=");

    printf("\n\n\t\t\t\t\t***** View Book List
*****\n");

    printf("\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t Rack\n\n");

    file=fopen("book.txt","rb");

    while(fread(&b,sizeof(b),1,file)==1) {

```

```

printf("\t\t\t%-12d\t\t\t%-20s\t\t\t%-24s\t\t\t%-16d\t\t\t%-16s\t\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

    c=c+b.qu;
}

fclose(file);

printf("\n\t\t\t\tTotal Books: %d\n",c);

printf("\n\t\t\t\tPress Enter key to open main menu again.");

fflush(stdin);

getchar();

smain_menu();
}

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

    printf("\n\n\t\t\t\t\t=> Admin Panel <=");

    printf("\n\n\t\t\t\t\t***** Search Book
*****\n\n");

    printf("\t\t\t\t1. Search by Book ID\n");
    printf("\t\t\t\t2. Search by Book Name\n");
    printf("\t\t\t\t3. Search by Author Name\n");
    printf("\t\t\t\t4. Search by Book Category\n");
    printf("\t\t\t\t5. Main Menu\n");
    printf("\n\n\t\t\t\t=> Enter Your choice: ");

```

```

int ac=0,d,c=0;
scanf("%d",&ac);
if(ac==1) {
    system("cls");
    file=fopen("book.txt","rb");
    printf("\n\n\t\t\t Enter Book Id: ");
    scanf("%d",&d);
    while(fread(&b,sizeof(b),1,file)==1) {
        if(d==b.id) {
            printf("\n\t\t\t Book is found!...\n\n");
            printf("\t\t\t ID\t\t Name\t\t Author\t\t Quantity\t Category\t
Rack\n\n");

printf("\t\t\t %-12d\t %-20s\t %-24s\t %-16d\t %-16s\t %d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

            c=1;
        }
        fclose(file);
    }
    if(c==0) {
        printf("\n\t\t\t Sorry book is not found!...\n");
    }
    fclose(file);
    printf("\n\n\t\t\t Press Enter key to open main menu again.");
}

```



```

    fflush(stdin);
    getchar();
    amain_menu();
}
if(ac==2) {
    system("cls");
    file=fopen("book.txt","rb");
    printf("\n\n\t\t\t Enter Book Name: ");
    char st[50];
    fflush(stdin);
    gets(st);
    while(fread(&b,sizeof(b),1,file)==1) {
        if(strcmp(st,b.name)==0) {
            if(c==0) {
                printf("\n\t\t\t Book is found!...\n\n");
                printf("\t\t\t ID\t\t Name\t\t Author\t\t Quantity\t Category\t
Rack\n\n");
            }

            printf("\t\t\t %-12d\t\t %-20s\t\t %-24s\t\t %-16d\t\t %-16s\t\t %d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

            c=1;
        }
    }
}

```

```
if(c==0) {  
    printf("\n\t\t\tSorry book is not found!...\n");  
}  
  
fclose(file);  
  
printf("\n\t\t\tPress Enter key to open main menu again.");  
fflush(stdin);  
  
getchar();  
  
again_menu();  
}  
  
if(ac==3) {  
    system("cls");  
  
file=fopen("book.txt","rb");  
  
printf("\n\n\t\t\tEnter Author Name: ");  
  
char st[50];  
  
fflush(stdin);  
  
gets(st);  
  
while(fread(&b,sizeof(b),1,file)==1) {  
    if(strcmp(st,b.au)==0) {  
        if(c==0) {  
            printf("\n\t\t\tBook is found!...\n\n");  
            printf("\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t  
Rack\n\n");  
        }  
    }  
}
```

```
printf("\t\t\t%-12d\t\t\t%-20s\t\t\t%-24s\t\t\t%-16d\t\t\t%-16s\t\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,  
b.r);
```

```
c=1;
```

}

}

```
if(c==0) {
```

```
printf("\n\t\tSorry book is not found!...\n");
```

}

```
fclose(file);
```

```
printf("\n\t\t\tPress Enter key to open main menu again.");
```

```
fflush(stdin);
```

```
getchar();
```

```

    amain_menu();
}

```

}

```
if(ac==4) {
```

```
system("cls");
```

```
file=fopen("book.txt","rb");
```

```
printf("\n\n\t\t\t Enter Book Category: ");
```

```
char st[50];
```

```
fflush(stdin);
```

```
gets(st);
```

```
while(fread(&b,sizeof(b),1,file)==1) {
```

```
if(strcmp(st,b.cat)==0) {
```

```

        if(c==0) {
            printf("\n\t\t\tBook is found!...\n\n");
            printf("\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t
Rack\n\n");
        }

printf("\t\t\t%-12d\t%-20s\t%-24s%-16d%-16s%d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

        c=1;
    }
}

if(c==0) {
    printf("\n\t\t\tSorry book is not found!...\n");
}

fclose(file);

printf("\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);

getchar();

    amain_menu();
}

if(ac==5) {
    amain_menu();
}

}

```

```

void ssearch_book()
{
    system("cls");
    printf("\n\n\t\t\t\t\t => Student Panel <=");
    printf("\n\n\t\t\t\t\t***** Search Book
*****\n\n");

    printf("\t\t\t1. Search by Book ID\n");
    printf("\t\t\t2. Search by Book Name\n");
    printf("\t\t\t3. Search by Author Name\n");
    printf("\t\t\t4. Search by Book Category\n");
    printf("\t\t\t5. Main Menu\n");
    printf("\n\n\t\t\t=> Enter Your choice: ");
    int ac=0,d,c=0;
    scanf("%d",&ac);
    if(ac==1) {
        system("cls");
        file=fopen("book.txt","rb");
        printf("\n\n\t\t\tEnter Book Id: ");
        scanf("%d",&d);
        while(fread(&b,sizeof(b),1,file)==1) {
            if(d==b.id) {
                printf("\n\n\t\t\tBook is found!...\n\n");
                printf("\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t
Rack\n\n");
            }
        }
    }
}

```

```
printf("\t\t\t%-12d\t\t\t%-20s\t\t\t%-24s\t\t\t%-16d\t\t\t%-16s\t\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,  
b.r);
```

```
c=1;
```

}

}

```
if(c==0) {
```

```
printf("\n\t\tSorry book is not found!...\n");
```

}

```
fclose(file);
```

```
printf("\n\t\t\tPress Enter key to open main menu again.");
```

```
fflush(stdin);
```

```
getchar();
```

```
smain_menu();
```

}

```
if(ac==2) {
```

```
system("cls");
```

```
file=fopen("book.txt","rb");
```

```
printf("\n\n\t\t\t Enter Book Name: ");
```

```
char st[50];
```

```
fflush(stdin);
```

```
gets(st);
```

```
while(fread(&b,sizeof(b),1,file)==1) {
```

```
if(strcmp(st,b.name)==0) {
```

```

        if(c==0) {
            printf("\n\t\t\tBook is found!...\n\n");
            printf("\t\t\tID\t\tName\t\t\tAuthor\t\t\tQuantity\tCategory\t
Rack\n\n");
        }

printf("\t\t\t%-12d\t\t%-20s\t\t%-24s\t\t%-16d\t\t%-16s\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

        c=1;
    }
}

if(c==0) {
    printf("\n\t\t\tSorry book is not found!...\n");
}

fclose(file);

printf("\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);

getchar();

smain_menu();
}

if(ac==3) {
    system("cls");
    file=fopen("book.txt","rb");
    printf("\n\n\t\t\tEnter Author Name: ");

```

```

char st[50];
fflush(stdin);
gets(st);
while(fread(&b,sizeof(b),1,file)==1) {
    if(strcmp(st,b.au)==0) {
        if(c==0) {
            printf("\n\t\t\tBook is found!...\n\n");
            printf("\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t
Rack\n\n");
        }

        printf("\t\t\t%-12d\t%-20s\t%-24s%-16d%-16s%d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

        c=1;
    }
}
if(c==0) {
    printf("\n\t\t\tSorry book is not found!...\n");
}
fclose(file);
printf("\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);
getchar();
smain_menu();

```



```

}

if(ac==4) {
    system("cls");
    file=fopen("book.txt","rb");
    printf("\n\n\n\t\t Enter Book Category: ");
    char st[50];
    fflush(stdin);
    gets(st);
    while(fread(&b,sizeof(b),1,file)==1) {
        if(strcmp(st,b.cat)==0) {
            if(c==0) {
                printf("\n\t\t\t Book is found!...\n\n");
                printf("\t\t\t ID\t\t Name\t\t Author\t\t Quantity\t Category\t
Rack\n\n");
            }

            printf("\t\t\t %-12d\t %-20s\t %-24s\t %-16d\t %-16s\t %d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

            c=1;
        }
    }

    if(c==0) {
        printf("\n\t\t\t Sorry book is not found!...\n");
    }
}

```

```

    fclose(file);

    printf("\n\t\t\tPress Enter key to open main menu again.");

    fflush(stdin);

    getchar();

    smain_menu();

}

if(ac==5) {
    smain_menu();
}

}

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

    printf("\n\n\t\t\t=> Admin Panel <=");

    printf("\n\n\t\t\t***** Edit Book
*****\n\n");

    file=fopen("book.txt","rb+");

    int d,c=0;

    printf("\n\t\t\tEnter Book ID to Edit: ");

    scanf("%d",&d);

    while(fread(&b,sizeof(b),1,file)==1) {
        if(d==b.id) {
            printf("\n\n\t\t\tBook is Available!...");

```

```
printf("\n\n\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\t\n\n\n");

printf("\t\t\t%-12d\t\t%-20s\t\t%-24s\t\t%-16d\t\t%-16s\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);

printf("\n\n\t\t\tEnter New Book Name: ");

fflush(stdin);

gets(b.name);

printf("\n\n\t\t\tEnter New Author Name: ");

gets(b.au);

printf("\n\n\t\t\tEnter New Quantity: ");

scanf("%d",&b.qu);

printf("\n\n\t\t\tEnter New Book Category: ");

fflush(stdin);

gets(b.cat);

printf("\n\n\t\t\tEnter New Rack: ");

scanf("%d",&b.r);

fseek(file,ftell(file)-sizeof(b),0);

fwrite(&b,sizeof(b),1,file);

fclose(file);

printf("\n\n\t\t\tBook Edited Successfully!...");

c=1;

}

}
```

```

if(c==0) {
    printf("\n\n\t\t\tBook is not found!...");
}
printf("\n\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);
getchar();
again_menu();
}

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

    printf("\n\n\t\t\t\t=> Admin Panel <=");
    printf("\n\n\t\t\t\t***** Delete Book
*****\n");

    printf("\n\n\t\t\t\t1. Delete Manually.");
    printf("\n\n\t\t\t\t2. Delete All Books.");
    printf("\n\n\t\t\t\t=> Enter Your choice: ");
    int x;
    scanf("%d",&x);

    if(x==1) {
        system("cls");
        printf("\n\n\t\t\t\t=> Admin Panel <=");
    }
}

```

```
printf("\n\n\t\t***** Delete Book
*****\n");
```

```
int d,c=0;
```

```
printf("\n\t\tEnter Book ID to Delete: ");
```

```
scanf("%d",&d);
```

```
file=fopen("book.txt","rb+");
```

```
rewind(file);
```

```
while(fread(&b,sizeof(b),1,file)==1) {
```

```
    if(d==b.id) {
```

```
        printf("\a\n\n\t\tBook is Available!...");
```

```
        printf("\n\n\t\tID\tName\tAuthor\tQuantity\tCategory\t
Rack\n\n");
```

```
printf("\t\t%-12d\t%-20s\t%-24s%-16d%-16s%\n",b.id,b.name,b.au,b.qu,b.cat,
b.r);
```

```
        c=1;
```

```
    }
```

```
}
```

```
if(c==0) {
```

```
    printf("\n\n\t\tBook is not found!...");
```

```
} else {
```

```
    file2=fopen("delete.txt","ab+");
```

```
rewind(file);
```

```

while(fread(&b,sizeof(b),1,file)==1) {
    if(d!=b.id) {
        fseek(file2,ftell(file2)-sizeof(b),0);
        /// rewind(file2);
        fwrite(&b,sizeof(b),1,file2);
    }
}
fclose(file);
fclose(file2);

remove("book.txt");
rename("delete.txt","book.txt");

file=fopen("book.txt","rb");
fclose(file);
printf("\n\n\t\t\tThe book (ID = %d) has been successfully deleted\n",d);
}

printf("\n\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);
getchar();
again_menu();
}
if(x==2) {

```

```

system("cls");

printf("\n\n\t\t\t\t => Admin Panel <=");

printf("\n\n\t\t\t\t***** Delete Book
*****\n");

printf("\a\n\n\t\t\t\tWarning!!!...");

printf("\n\t\t\t\tDo you really want to delete all the books?");

int y;

printf("\n\n\t\t\t\t1. Yes I Want");

printf("\n\n\t\t\t\t2. No");

printf("\n\n\t\t\t\t=> Enter Your choice: ");

scanf("%d",&y);

if(y==1) {

    file=fopen("book.txt","rb+");

    file2=fopen("delete.txt","ab+");

    fclose(file);

    fclose(file2);

    remove("book.txt");

    rename("delete.txt","book.txt");

    file=fopen("book.txt","rb");

    fclose(file);

    printf("\n\n\t\t\t\tAll books have been successfully deleted\n");

    printf("\n\n\t\t\t\tPress Enter key to open main menu again.");

    fflush(stdin);

    getchar();

```

```

        amain_menu();
    }
    if(y==2) {

        printf("\n\n\t\tPress Enter key to open main menu again.");
        fflush(stdin);
        getchar();
        amain_menu();
    }
}

void ahelp()
{
    system("cls");
    printf("\n\n\t\t\t=> Admin Panel <=");
    printf("\n\n\t\t\t***** Help Desk
*****\n");

    printf("\n\t\t\t-> Password is: admin.");
    printf("\n\t\t\t-> From 'Main menu' You can see all feature.");
    printf("\n\t\t\t-> From 'Main menu' You can Add Books.");
    printf("\n\t\t\t-> From 'Main menu' You can View Books.");
    printf("\n\t\t\t-> From 'Main menu' You can Edit Books.");
    printf("\n\t\t\t-> From 'Main menu' You can Search Books.");

```



```

printf("\n\t\t\t-> From 'Main menu' You can Delete Books.");
printf("\n\t\t\t-> From 'Main menu' You can Add Student.");
printf("\n\t\t\t-> From 'Main menu' You can View Student.");
printf("\n\t\t\t-> From 'Main menu' You can Delete Student.");
printf("\n\n\t\t\t\t-> Thank You <-");
printf("\n\n\t\t\t\tPress Enter key to open main menu again.");
fflush(stdin);

getchar();

again_menu();

}

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

    printf("\n\n\t\t\t\t=> Student Panel <=");

    printf("\n\n\t\t\t\t***** Help Desk
*****\n");

    printf("\n\t\t\t-> Password is: student.");

    printf("\n\t\t\t-> From 'Main menu' You can see all feature.");
    printf("\n\t\t\t-> From 'Main menu' You can View Books.");
    printf("\n\t\t\t-> From 'Main menu' You can Search Books.");
    printf("\n\t\t\t-> From 'Main menu' You can Borrow Books.");
    printf("\n\n\t\t\t\t-> Thank You <-");

    printf("\n\n\t\t\t\tPress Enter key to open main menu again.");

```

```

fflush(stdin);

getchar();

smain_menu();

}

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

    printf("\n\n\t\t\t => Student Panel <=");

    printf("\n\n\t\t\t***** Borrow Book
*****\n");

    printf("\n\n\t\t\t1. Issue Book");

    printf("\n\n\t\t\t2. Return Book");

    printf("\n\n\t\t\t=> Enter Your choice: ");

    int m;

    scanf("%d",&m);

    if(m==1) {
        isbook();
    }

    if(m==2) {
        rebook();
    } else {

```

```
printf("\n\n\t\t\tYou Entered a Wrong choice. Press Enter key to open main menu again.");
```

```
fflush(stdin);
```

```
getchar();
```

```
smain_menu();
```

```
}
```

```
}
```

```
void add_student()
```

```
{
```

```
system("cls");
```

```
int c=0,d=0;
```

```
printf("\n\n\t\t\t=> Admin Panel <=");
```

```
printf("\n\n\t\t\t***** Add Student *****\n");
```

```
filest=fopen("st.txt","ab+");
```

```
printf("\n\n\t\t\tEnter Roll No: ");
```

```
fflush(stdin);
```

```
scanf("%d",&d);
```

```
rewind(file);
```

```
while(fread(&st,sizeof(st),1,filest)==1) {
```

```
if(d==st.roll) {
```

```
printf("\n\n\t\t\tThis student is already in Library...");
```

```
        c=1;
    }
}
if(c==1) {
    printf("\n\n\t\t\tPress Enter key to open main menu again.");
    fflush(stdin);
    getchar();
    amain_menu();
} else {
    st.roll=d;
}
printf("\n\t\t\tEnter Student Name: ");
fflush(stdin);
gets(st.name);
printf("\n\t\t\tEnter Student Contact Number: ");
fflush(stdin);
gets(st.num);
st.isd=st.ism=st.isy=st.red=st.rem=st.rey=st.fine=0;

fseek(filest,0,SEEK_END);
fwrite(&st,sizeof(st),1,filest);
fclose(filest);
printf("\n\n\t\t\tStudent Added Successfully!");
printf("\n\t\t\tPress Enter key to open main menu again.");
```

```

fflush(stdin);

getchar();

again_menu();

}

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

    printf("\n\n\t\t\t\t\t => Admin Panel <=");

    printf("\n\n\t\t\t\t\t***** Delete Student
*****\n");

    printf("\n\n\t\t\t\t\t1. Delete Manually.");
    printf("\n\n\t\t\t\t\t2. Delete All Students.");
    printf("\n\n\t\t\t\t\t=> Enter Your choice: ");

    int x;

    scanf("%d",&x);

    if(x==1) {

        system("cls");

        printf("\n\n\t\t\t\t\t => Admin Panel <=");

        printf("\n\n\t\t\t\t\t***** Delete Student
*****\n");

        int d,c=0;

        printf("\n\n\t\t\t\t\tEnter Student Roll to Delete: ");

        scanf("%d",&d);

```

```

filest=fopen("st.txt","rb+");
rewind(filest);
while(fread(&st,sizeof(st),1,filest)==1) {
    if(d==st.roll) {
        printf("\n\n\t\tThe Student is Available!...\n\n");
        printf("\t\t\tRoll\t\tName\t\tC.Number\t\tIssue Date\t\tReturn Date
Fine\n\n");

printf("\t\t\t%-12d\t%-20s\t%-24s%-2d-%-2d-%-16d%-2d-%-2d-%-16d%d\n",st.roll,
st.name,st.num,st.isd,st.ism,st.isy,st.red,st.rem,st.rey,st.fine);

        c=1;
    }
}
if(c==0) {
    printf("\n\n\t\tThe Student is not found!...");
} else {
    filest2=fopen("del.txt","ab+");

    rewind(filest);
    while(fread(&st,sizeof(st),1,filest)==1) {
        if(d!=st.roll) {
            fseek(filest2,ftell(filest2)-sizeof(st),0);
            ///rewind(filest2);
            fwrite(&st,sizeof(st),1,filest2);

```

```

    }
}
fclose(filest);
fclose(filest2);

remove("st.txt");
rename("del.txt","st.txt");

filest=fopen("st.txt","rb");
fclose(filest);

printf("\n\n\t\t\tThe Student (Roll = %d) has been successfully
deleted\n",d);
}

printf("\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);
getchar();
again_menu();
}

if(x==2) {
    system("cls");
    printf("\n\n\t\t\t\t=> Admin Panel <=");
    printf("\n\n\t\t\t\t***** Delete student
*****\n");

```

```
printf("\n\n\t\tWarning!!!...");
printf("\n\t\tDo you really want to delete all the students?");
int y;
printf("\n\n\t\t1. Yes I Want");
printf("\n\n\t\t2. No");
printf("\n\n\t\t=> Enter Your choice: ");
scanf("%d",&y);
if(y==1) {
    filest=fopen("st.txt","rb+");
    filest2=fopen("del.txt","ab+");
    fclose(filest);
    fclose(filest2);
    remove("st.txt");
    rename("del.txt","st.txt");
    filest=fopen("st.txt","rb");
    fclose(filest);
    printf("\n\n\t\tAll Students have been successfully deleted\n");
    printf("\n\t\tPress Enter key to open main menu again.");
    fflush(stdin);
    getchar();
    amain_menu();
}
if(y==2) {
```



```

        printf("\n\n\t\t\tPress Enter key to open main menu again.");
        fflush(stdin);
        getchar();
        amain_menu();
    }
}

}

void view_student()
{
    system("cls");
    int c=0;
    printf("\n\n\t\t\t\t\t=> Admin Panel <=");
    printf("\n\n\t\t\t\t\t***** View Student List
*****\n\n");

    printf("\t\t\tRoll\t\tName\t\tC.Number\t\tIssue Date\t\tReturn Date
Fine\n\n");

    filest=fopen("st.txt","rb");
    while(fread(&st,sizeof(st),1,filest)==1) {

printf("\t\t\t%-12d\t%-20s\t%-24s%2d-%2d-%-16d%2d-%2d-%-12d%d\n",st.roll,st
.name,st.num,st.isd,st.ism,st.isy,st.red,st.rem,st.rey,st.fine);

        c++;
    }
}

```

```

printf("\n\t\t\tTotal Student is: %d\n",c);
fclose(filest);
printf("\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);
getchar();
again_menu();
}

```

```

void isbook()
{
    system("cls");
    printf("\n\n\t\t\t=> Student Panel <=");
    printf("\n\n\t\t\t***** Borrow Book
*****\n");
    printf("\n\t\t\t***** Issue Book
*****\n");
    printf("\n\n\t\t\tEnter Your Roll: ");
    int r,t,l=0,p=0;
    scanf("%d",&r);
    filest=fopen("st.txt","rb+");
    while(fread(&st,sizeof(st),1,filest)==1) {
        if(r==st.roll) {
            g=1;
            if(st.isd!=0) {

```

```
printf("\n\n\t\t\tYou borrowed a book before. Now you can't borrow books  
again.\n\t\t\t\t\tYou have to return the previous book.\n");
```

```
}
```

```
if(st.isd==0) {
```

```
printf("\n\n\t\t\tYou Available in Library!...\n\n");
```

```
printf("\t\t\tRoll\t\tName\t\tC.Number\t\tIssue Date\t\tReturn Date  
Fine\n\n");
```

```
printf("\t\t\t%-12d\t%-20s\t%-24s%d-%d-%-16d%-16d%-16d%-16d\n",st.roll,st.nam  
e,st.num,st.isd,st.ism,st.isy,st.red,st.rem,st.rey,st.fine);
```

```
l=1;
```

```
int isd,ism,isy;
```

```
printf("\n\n\t\t\tEnter Issue Date:\n");
```

```
printf("\t\t\tddd: ");
```

```
scanf("%d",&isd);
```

```
printf("\t\t\tmmm: ");
```

```
scanf("%d",&ism);
```

```
printf("\t\t\tyyy: ");
```

```
scanf("%d",&isy);
```

```
st.isd=isd;
```

```
st.ism=ism;
```

```
st.isy=isy;
```

```
st.red=0;
```

```
st.rem=0;

st.rey=0;

fseek(filest,ftell(filest)-sizeof(st),0);

fwrite(&st,sizeof(st),1,filest);

fclose(filest);

printf("\n\t\t\tYour issue date is: %d-%d-%d",st.isd,st.ism,st.isy);

printf("\n\n\t\t\tEnter Book Id: ");


file=fopen("book.txt","rb+");

scanf("%d",&t);

while(fread(&b,sizeof(b),1,file)==1) {

    if(t==b.id) {

        p=1;

        printf("\n\n\t\t\tBook is Available!...");

        printf("\n\n\t\t\tID\t\tName\t\tAuthor\t\tQuantity\tCategory\tRack\n\n");

printf("\t\t\t%-12d\t\t%-20s\t\t%-24s\t\t%-16d\t\t%-16s\t\t%d\n",b.id,b.name,b.au,b.qu,b.cat,b.r);

        if(b.qu>9) {

            printf("\n\n\t\t\tYou borrowed this book.\n");

            b.qu=b.qu-1;

            fseek(file,ftell(file)-sizeof(b),0);

            fwrite(&b,sizeof(b),1,file);
```

```

        fclose(file);
    } else {
        printf("\n\n\t\t\tNot Enough Book. \n\t\t\tThere are less than ten
books in the library. You can not borrow this book.\n");
    }
}
}
}
}
}
}
}
if(l==0 && g==0) {
    printf("\n\n\t\t\tYou Are Not Available in Library!...");
}
if(p==0 && g==0) {
    printf("\n\n\t\t\tBook is not found!...");
}
printf("\n\t\t\tPress Enter key to open main menu again.");
fflush(stdin);
getchar();
smain_menu();
}
void rebook()
{
    system("cls");

```

```

printf("\n\n\t\t\t\t => Student Panel <=");

printf("\n\n\t\t\t\t***** Borrow Book
*****\n");

printf("\n\t\t\t\t***** Return Book
*****\n");

printf("\n\n\t\t\t\tEnter Your Roll: ");

int r,t,l=0,p=0,s=0;

scanf("%d",&r);

filest=fopen("st.txt","rb+");

while(fread(&st,sizeof(st),1,filest)==1) {

    if(r==st.roll) {

        printf("\n\n\t\t\t\tYou Available in Library!...\n\n");

        printf("\t\t\t\tRoll\t\tName\t\tC.Number\t\tIssue Date\t\t Return Date
Fine\n\n");

printf("\t\t\t\t%-12d\t\t%-20s\t\t%-24s%d-%d-%-16d%-16d%-16d\n",st.roll,st.name,
st.num,st.isd,st.ism,st.isy,st.red,st.rem,st.rey,st.fine);

        l=1;

        bw=0;

        int red,rem,rey;

        printf("\n\t\t\t\tEnter Return Date:\n");

        printf("\t\t\t\tdd: ");

        scanf("%d",&red);

        printf("\t\t\t\tmm: ");

```

```
scanf("%d",&rem);  
printf("\t\t\tty: ");  
scanf("%d",&rey);  
st.red=red;  
st.rem=rem;  
st.rey=rey;  
int bad=st.rem-st.ism;
```

```
int arr[13]= {0,31,28,31,30,31,30,31,31,30,31,30,31};  
int lp=st.rey%4;  
if(lp==0){  
    arr[2]=29;  
}  
int m=st.ism;  
int din=arr[m];  
int con;  
if(din==29) {  
    con=22;  
}  
if(din==30) {  
    con=23;  
}  
if(din==28) {  
    con=21;
```

```

    }
    if(din==31) {
        con=24;
    }
    if(st.isd>con && st.ism!=st.rem) {
        int a1=din-st.isd;
        int a2=a1+st.red;
        if(a2>7) {
            int a3=a2-7;
            st.fine=30*a3;
        } else {
            st.fine=0;
        }
    }
    if(st.isd<=con && st.ism!=st.rem) {
        int a1=din-st.isd;
        int a2=a1+st.red;
        if(a2>7) {
            int a3=a2-7;
            st.fine=30*a3;
        } else {
            st.fine=0;
        }
    }

```



```

}

if(st.isd<=con && st.ism==st.rem) {

    int a2=st.red-st.isd;

    if(a2>7) {

        int a3=a2-7;

        st.fine=30*a3;

    } else {

        st.fine=0;

    }

}

fseek(filest,ftell(filest)-sizeof(st),0);

fwrite(&st,sizeof(st),1,filest);

fclose(filest);

printf("\n\t\tYour return date is: %d-%d-%d",st.red,st.rem,st.rey);

printf("\n\n\t\tEnter Book Id: ");


file=fopen("book.txt","rb+");

scanf("%d",&t);

while(fread(&b,sizeof(b),1,file)==1) {

    if(t==b.id) {

        p=1;

        printf("\n\n\t\tYou are returning this book...");
    }
}

```

