**LIBRARY MANAGEMENT SYSTEM**

**PROGRAM**

#include<stdio.h>

#include<conio.h>

#include<string.h>

#include<ctype.h>

#include<stdlib.h>

#include<windows.h>

#include<time.h>

void welcome(); // to display the welcome screen

void login(); // to display the login screen

void mainmenu(); // to display the main menu

void add\_books(); // to display the add books screen

void delete\_books();// to display the delete function

void search\_books(); // to display the search function

void issue\_books(); // to display the issue books screen

void return\_books(); // to display the return books screen

int wrong=1, count;//global variable for login function of int type

int i=0, valid=0;

char choice=0 ;

char answer;

int target=0,found=0;

struct books// to call in program

{

int books\_id; // declare the integer data type

char b\_name[20];// declare the character data type

char a\_name[20];// declare the charecter data type

int days;// declare the integer data type

int yr; // declare the integer data type

}m;

void gotoxy(short x, short y)// declare the gotoxy function

{

COORD pos ={x,y};

SetConsoleCursorPosition(GetStdHandle(STD\_OUTPUT\_HANDLE),pos);

}

void main() // declare main function

{

welcome(); // call welcome screen

login();// call login screen

}

// welcomr function

void welcome()

{

gotoxy(25,6);

printf(" \*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*");

gotoxy(25,7);

printf(" \*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*");

gotoxy(25,8);

printf(" =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=");

gotoxy(25,9);

printf(" = WELCOME =");

gotoxy(25,10);

printf(" = TO =");

gotoxy(25,11);

printf(" = LIBRARY =");

gotoxy(25,12);

printf(" = MANAGEMENT =");

gotoxy(25,13);

printf(" = SYSTEM =");

gotoxy(25,14);

printf(" =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=");

gotoxy(25,15);

printf(" \*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*");

gotoxy(25,16);

printf(" \*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*-\*\*");

gotoxy(28,22);

printf(" Enter any key to continue.....");

getch();

}

// login function

void login()

{

system("cls");

int L=0;

char a[30], b[30];

system("cls");

printf("------------------------------------------------------------------------------------------------\n");

printf("\t\t\t\t\tLogin Screen");

printf("\n------------------------------------------------------------------------------------------------");

do

{

printf("\n\t\t\t\tEnter Username and Password");

printf("\n\t\t\t\tUsername:");

scanf("%s" ,a);

printf("\n\t\t\t\tPassword:");

scanf("%s" ,b);

if((strcmp(a,"ramco")==0)&& (strcmp(b,"rit@123")==0))

{

printf("\n\t\t\t\tLogged Into System.");

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

printf("\n------------------------------------------------------------------------------------------------");

getch();

mainmenu();

}

else

{

printf("\t\t\t\tLogin Failed Enter Again Username & Password Again\n\n");

L++;

}

}

while(L<=3);

if(L>3){

system("cls");

gotoxy(40,15);

printf("Sorry,Unknown User.");

getch();

system("cls");

}

}

// mainmenu function

void mainmenu(void)

{

int choice;

system("cls");

printf("\n------------------------------------------------------------------------------------------------");

gotoxy(20,2);

printf("MAIN MENU");

printf("\n------------------------------------------------------------------------------------------------");

gotoxy(20,5);

printf("1. Add Books");

gotoxy(20,7);

printf("2. Search Books");

gotoxy(20,9);

printf("3. Delete Books");

gotoxy(20,11);

printf("4. Issue Books");

gotoxy(20,13);

printf("5. Return Books");

gotoxy(20,15);

printf("6. Close Application");

gotoxy(20,17);

printf("Please Enter a choice[1-6]:");

scanf("%i",&choice);

switch(choice)

{

case 1:

add\_books();

break;

case 2:

search\_books();

break;

case 3:

delete\_books();

break;

case 4:

issue\_books();

break;

case 5:

return\_books();

break;

case 6:

exit(0);

break;

default:

printf("Wrong Entry!!");

exit(0);

}

}

// add books function

void add\_books()

{

int days;

system("cls");

FILE \*sfile;

sfile = fopen("BookRecord.txt","a");

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

printf("\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ADD NEW BOOKS\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

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

printf("\n\n\t\t ENTER YOUR DETAILS BELOW:");

printf("\n\t\t------------------------------");

printf("\n\t\tBook ID NO.\t\t:");

fflush(stdin);

scanf("%i",&m.books\_id);

do

{

printf("\n\t\tBook Name\t\t:");

fflush(stdin);

gets(m.b\_name);

m.b\_name[0]=toupper(m.b\_name[0]);

for (i=0;i<strlen(m.b\_name); ++i)

{

if(isalpha(m.b\_name[i]))

{

valid = 1;

}

else

{

valid = 0;

break;

}

}

if (!valid)

{

printf("\nName contain invalid character. Please enter again.");

}

}while(!valid);

do

{

printf("\n\t\tPublication\t\t:");

fflush(stdin);

gets(m.a\_name);

m.a\_name[0]=toupper(m.a\_name[0]);

for (i=0;i<strlen(m.a\_name); ++i)

{

if(isalpha(m.a\_name[i]))

valid = 1;

else

{

valid = 0;

break;

}

}

if (!valid)

{

printf("\nName contain invalid character. Please enter again.");

}

}while(!valid);

fprintf(sfile,"%i %s %s\n\n",m.books\_id, m.b\_name, m.a\_name);

fclose(sfile);

printf("\n\t SUCCESFULLY RECORDED.\n");

getch();

printf("\n\t\t Do you want to add another book?[Y/N]:");

scanf("%s",&answer);

while(toupper(answer)!='Y'&& toupper(answer)!='N')

{

printf("Invalid!\n\tDo you want to add book?[Y/N]:");

scanf("%s",&answer);

}

if(toupper(answer)=='Y')

{

add\_books();

}

else

{

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

mainmenu();

}

}

// search books function

void search\_books()

{

int found=0;

char id[40];

FILE \*sfile;

system("cls");

sfile=fopen("BookRecord.txt","rb");

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

printf("\n\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* SEARCH BOOKS LIST\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

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

printf("\nEnter Book Name to search:");

fflush(stdin);

scanf("%s",id);

id[0]=toupper(id[0]);

printf(" \n");

printf(" Book ID NO. Book Name Publication ");

printf("\n=====================================================================================\n");

while(fscanf(sfile,"%i %s %s\n\n",&m.books\_id, m.b\_name, m.a\_name)!=EOF)

{

if(strcmp(id,m.b\_name)==0){

found=1;

printf("\t%i",m.books\_id);

printf("\t%s",m.b\_name);

printf("\t%s",m.a\_name);

printf("\n");

}

}

if(!found) printf("\n\n\tNo Record");

fclose(sfile);

printf("\t\t\n\n\nPress any key to go to mainmenu.....");

getch();

mainmenu();

}

// delete function

void delete\_books()

{

int target;

system("cls");

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

printf("\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Delete Books Details\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

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

FILE \*sfile,\*mfile;

sfile=fopen("BookRecord.txt","r");

printf("\nEnter Book ID NO. for delete:");

scanf("%i",&target);

mfile=fopen("TempBook.txt","w+");

if(sfile==NULL)

{

printf("\n\tNo Record in File!");

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

getch();

mainmenu();

}

else

{

while(fscanf(sfile,"%i %s %s\n",&m.books\_id,m.b\_name,m.a\_name)!=EOF)

{

if(target!=m.books\_id)

{

fprintf(mfile,"%i %s %s\n",m.books\_id,m.b\_name,m.a\_name);

}

else

{

found=1;

}

}

if(!found)

{

printf("\nRecord not found");

}

else

{

printf("\n\tRecord deleted successfully.....");

}

fclose(sfile);

fclose(mfile);

remove("BookRecord.txt");

rename("TempBook.txt","BookRecord.txt");

}

getch();

mainmenu();

}

void issue\_books()

{

int target,found=0;

system("cls");

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

printf("\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Issue Books\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

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

FILE \*sfile,\*mfile;

sfile=fopen("BookRecord.txt","r");

printf("\nEnter Book ID NO. to ISSUE :");

scanf("%i",&target);

mfile=fopen("IssueBook.txt","a+");

if(sfile==NULL)

{

printf("\n\tNo Record in File!");

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

getch();

mainmenu();

}

else

{

while(fscanf(sfile,"%i %s %s\n",&m.books\_id,m.b\_name,m.a\_name)!=EOF)

{

if(target==m.books\_id)

{

fprintf(mfile,"%i %s %s\n",m.books\_id,m.b\_name,m.a\_name);

printf("\nThis book :\n");

printf("%i %s %s\n",m.books\_id,m.b\_name,m.a\_name);

found = 1;

}

}

if(!found)

{

printf("\nRecord not found");

}

else

{

printf("\n\tBook Issued successfully.....");

}

fclose(sfile);

fclose(mfile);

}

getch();

mainmenu();

}

void return\_books(){

int target,found=0;

system("cls");

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

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

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

FILE \*sfile,\*mfile;

sfile=fopen("IssueBook.txt","r");

printf("\nEnter Book ID NO. to Return :");

scanf("%i",&target);

mfile=fopen("TempBook.txt","w+");

if(sfile==NULL)

{

printf("\n\tNo Record in File!");

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

getch();

mainmenu();

}

else

{

while(fscanf(sfile,"%i %s %s\n",&m.books\_id,m.b\_name,m.a\_name)!=EOF)

{

if(target!=m.books\_id)

{

fprintf(mfile,"%i %s %s\n",m.books\_id,m.b\_name,m.a\_name);

}

else

{

found=1;

printf("\nThis Book:\n");

printf("%i %s %s\n",m.books\_id,m.b\_name,m.a\_name);

}

}

if(!found)

{

printf("\nRecord not found");

}

else

{

printf("\n\tBook Returned successfully.....");

}

fclose(sfile);

fclose(mfile);

remove("IssueBook.txt");

rename("TempBook.txt","IssueBook.txt");

}

getch();

mainmenu();

}

// end of program