*// HEADER FILE USED IN PROJECT*

*#include<fstream.h>*

*#include<conio.h>*

*#include<stdio.h>*

*#include<process.h>*

*#include<string.h>*

*#include<iomanip.h>*

*// CLASS USED IN PROJECT*

*class book*

*{*

*char bno[6];*

*char bname[50];*

*char aname[20];*

*public:*

*void create\_book()*

*{*

*cout<<"\nNEW BOOK ENTRY...\n";*

*cout<<"\nEnter The book no.";*

*cin>>bno;*

*cout<<"\n\nEnter The Name of The Book ";*

*gets(bname);*

*cout<<"\n\nEnter The Author's Name ";*

*gets(aname);*

*cout<<"\n\n\nBook Created..";*

*}*

*void show\_book()*

*{*

*cout<<"\nBook no. : "<<bno;*

*cout<<"\nBook Name : ";*

*puts(bname);*

*cout<<"Author Name : ";*

*puts(aname);*

*}*

*void modify\_book()*

*{*

*cout<<"\nBook no. : "<<bno;*

*cout<<"\nModify Book Name : ";*

*gets(bname);*

*cout<<"\nModify Author's Name of Book : ";*

*gets(aname);*

*}*

*char\* retbno()*

*{*

*return bno;*

*}*

*void report()*

*{*

*cout<<bno<<setw(30)<<bname<<setw(30)<<aname<<endl;*

*}*

*};         //class ends here*

*class student*

*{*

*char admno[6];*

*char name[20];*

*char stbno[6];*

*int token;*

*public:*

*void create\_student()*

*{*

*clrscr();*

*cout<<"\nNEW STUDENT ENTRY...\n";*

*cout<<"\nEnter The admission no. ";*

*cin>>admno;*

*cout<<"\n\nEnter The Name of The Student ";*

*gets(name);*

*token=0;*

*stbno[0]='/0';*

*cout<<"\n\nStudent Record Created..";*

*}*

*void show\_student()*

*{*

*cout<<"\nAdmission no. : "<<admno;*

*cout<<"\nStudent Name : ";*

*puts(name);*

*cout<<"\nNo of Book issued : "<<token;*

*if(token==1)*

*cout<<"\nBook No "<<stbno;*

*}*

*void modify\_student()*

*{*

*cout<<"\nAdmission no. : "<<admno;*

*cout<<"\nModify Student Name : ";*

*gets(name);*

*}*

*char\* retadmno()*

*{*

*return admno;*

*}*

*char\* retstbno()*

*{*

*return stbno;*

*}*

*int rettoken()*

*{*

*return token;*

*}*

*void addtoken()*

*{token=1;}*

*void resettoken()*

*{token=0;}*

*void getstbno(char t[])*

*{*

*strcpy(stbno,t);*

*}*

*void report()*

*{cout<<"\t"<<admno<<setw(20)<<name<<setw(10)<<token<<endl;}*

*};         //class ends here*

*// global declaration for stream object, object*

*fstream fp,fp1;*

*book bk;*

*student st;*

*// function to write in file*

*void write\_book()*

*{*

*char ch;*

*fp.open("book.dat",ios::out|ios::app);*

*do*

*{*

*clrscr();*

*bk.create\_book();*

*fp.write((char\*)&bk,sizeof(book));*

*cout<<"\n\nDo you want to add more record..(y/n?)";*

*cin>>ch;*

*}while(ch=='y'||ch=='Y');*

*fp.close();*

*}*

*void write\_student()*

*{*

*char ch;*

*fp.open("student.dat",ios::out|ios::app);*

*do*

*{*

*st.create\_student();*

*fp.write((char\*)&st,sizeof(student));*

*cout<<"\n\ndo you want to add more record..(y/n?)";*

*cin>>ch;*

*}while(ch=='y'||ch=='Y');*

*fp.close();*

*}*

*// function to read specific record from file*

*void display\_spb(char n[])*

*{*

*cout<<"\nBOOK DETAILS\n";*

*int flag=0;*

*fp.open("book.dat",ios::in);*

*while(fp.read((char\*)&bk,sizeof(book)))*

*{*

*if(strcmpi(bk.retbno(),n)==0)*

*{*

*bk.show\_book();*

*flag=1;*

*}*

*}*

*fp.close();*

*if(flag==0)*

*cout<<"\n\nBook does not exist";*

*getch();*

*}*

*void display\_sps(char n[])*

*{*

*cout<<"\nSTUDENT DETAILS\n";*

*int flag=0;*

*fp.open("student.dat",ios::in);*

*while(fp.read((char\*)&st,sizeof(student)))*

*{*

*if((strcmpi(st.retadmno(),n)==0))*

*{*

*st.show\_student();*

*flag=1;*

*}*

*}*

*fp.close();*

*if(flag==0)*

*cout<<"\n\nStudent does not exist";*

*getch();*

*}*

*// function to modify record of file*

*void modify\_book()*

*{*

*char n[6];*

*int found=0;*

*clrscr();*

*cout<<"\n\n\tMODIFY BOOK REOCORD.... ";*

*cout<<"\n\n\tEnter The book no. of The book";*

*cin>>n;*

*fp.open("book.dat",ios::in|ios::out);*

*while(fp.read((char\*)&bk,sizeof(book)) && found==0)*

*{*

*if(strcmpi(bk.retbno(),n)==0)*

*{*

*bk.show\_book();*

*cout<<"\nEnter The New Details of book"<<endl;*

*bk.modify\_book();*

*int pos=-1\*sizeof(bk);*

*fp.seekp(pos,ios::cur);*

*fp.write((char\*)&bk,sizeof(book));*

*cout<<"\n\n\t Record Updated";*

*found=1;*

*}*

*}*

*fp.close();*

*if(found==0)*

*cout<<"\n\n Record Not Found ";*

*getch();*

*}*

*void modify\_student()*

*{*

*char n[6];*

*int found=0;*

*clrscr();*

*cout<<"\n\n\tMODIFY STUDENT RECORD... ";*

*cout<<"\n\n\tEnter The admission no. of The student";*

*cin>>n;*

*fp.open("student.dat",ios::in|ios::out);*

*while(fp.read((char\*)&st,sizeof(student)) && found==0)*

*{*

*if(strcmpi(st.retadmno(),n)==0)*

*{*

*st.show\_student();*

*cout<<"\nEnter The New Details of student"<<endl;*

*st.modify\_student();*

*int pos=-1\*sizeof(st);*

*fp.seekp(pos,ios::cur);*

*fp.write((char\*)&st,sizeof(student));*

*cout<<"\n\n\t Record Updated";*

*found=1;*

*}*

*}*

*fp.close();*

*if(found==0)*

*cout<<"\n\n Record Not Found ";*

*getch();*

*}*

*// function to delete record of file*

*void delete\_student()*

*{*

*char n[6];*

*int flag=0;*

*clrscr();*

*cout<<"\n\n\n\tDELETE STUDENT...";*

*cout<<"\n\nEnter The admission no. of the Student You Want To Delete : ";*

*cin>>n;*

*fp.open("student.dat",ios::in|ios::out);*

*fstream fp2;*

*fp2.open("Temp.dat",ios::out);*

*fp.seekg(0,ios::beg);*

*while(fp.read((char\*)&st,sizeof(student)))*

*{*

*if(strcmpi(st.retadmno(),n)!=0)*

*fp2.write((char\*)&st,sizeof(student));*

*else*

*flag=1;*

*}*

*fp2.close();*

*fp.close();*

*remove("student.dat");*

*rename("Temp.dat","student.dat");*

*if(flag==1)*

*cout<<"\n\n\tRecord Deleted ..";*

*else*

*cout<<"\n\nRecord not found";*

*getch();*

*}*

*void delete\_book()*

*{*

*char n[6];*

*clrscr();*

*cout<<"\n\n\n\tDELETE BOOK ...";*

*cout<<"\n\nEnter The Book no. of the Book You Want To Delete : ";*

*cin>>n;*

*fp.open("book.dat",ios::in|ios::out);*

*fstream fp2;*

*fp2.open("Temp.dat",ios::out);*

*fp.seekg(0,ios::beg);*

*while(fp.read((char\*)&bk,sizeof(book)))*

*{*

*if(strcmpi(bk.retbno(),n)!=0)*

*{*

*fp2.write((char\*)&bk,sizeof(book));*

*}*

*}*

*fp2.close();*

*fp.close();*

*remove("book.dat");*

*rename("Temp.dat","book.dat");*

*cout<<"\n\n\tRecord Deleted ..";*

*getch();*

*}*

*// function to display all students list*

*void display\_alls()*

*{*

*clrscr();*

*fp.open("student.dat",ios::in);*

*if(!fp)*

*{*

*cout<<"ERROR!!! FILE COULD NOT BE OPEN ";*

*getch();*

*return;*

*}*

*cout<<"\n\n\t\tSTUDENT LIST\n\n";*

*cout<<"==================================================================\n";*

*cout<<"\tAdmission No."<<setw(10)<<"Name"<<setw(20)<<"Book Issued\n";*

*cout<<"==================================================================\n";*

*while(fp.read((char\*)&st,sizeof(student)))*

*{*

*st.report();*

*}*

*fp.close();*

*getch();*

*}*

*// function to display Books list*

*void display\_allb()*

*{*

*clrscr();*

*fp.open("book.dat",ios::in);*

*if(!fp)*

*{*

*cout<<"ERROR!!! FILE COULD NOT BE OPEN ";*

*getch();*

*return;*

*}*

*cout<<"\n\n\t\tBook LIST\n\n";*

*cout<<"=========================================================================\n";*

*cout<<"Book Number"<<setw(20)<<"Book Name"<<setw(25)<<"Author\n";*

*cout<<"=========================================================================\n";*

*while(fp.read((char\*)&bk,sizeof(book)))*

*{*

*bk.report();*

*}*

*fp.close();*

*getch();*

*}*

*// function to issue book*

*void book\_issue()*

*{*

*char sn[6],bn[6];*

*int found=0,flag=0;*

*clrscr();*

*cout<<"\n\nBOOK ISSUE ...";*

*cout<<"\n\n\tEnter The student's admission no.";*

*cin>>sn;*

*fp.open("student.dat",ios::in|ios::out);*

*fp1.open("book.dat",ios::in|ios::out);*

*while(fp.read((char\*)&st,sizeof(student)) && found==0)*

*{*

*if(strcmpi(st.retadmno(),sn)==0)*

*{*

*found=1;*

*if(st.rettoken()==0)*

*{*

*cout<<"\n\n\tEnter the book no. ";*

*cin>>bn;*

*while(fp1.read((char\*)&bk,sizeof(book))&& flag==0)*

*{*

*if(strcmpi(bk.retbno(),bn)==0)*

*{*

*bk.show\_book();*

*flag=1;*

*st.addtoken();*

*st.getstbno(bk.retbno());*

*int pos=-1\*sizeof(st);*

*fp.seekp(pos,ios::cur);*

*fp.write((char\*)&st,sizeof(student));*

*cout<<"\n\n\t Book issued successfully\n\nPlease Note: Write the current date in backside of your book and submit within 15 days fine Rs. 1 for each day after 15 days period";*

*}*

*}*

*if(flag==0)*

*cout<<"Book no does not exist";*

*}*

*else*

*cout<<"You have not returned the last book ";*

*}*

*}*

*if(found==0)*

*cout<<"Student record not exist...";*

*getch();*

*fp.close();*

*fp1.close();*

*}*

*//  function to deposit book*

*void book\_deposit()*

*{*

*char sn[6],bn[6];*

*int found=0,flag=0,day,fine;*

*clrscr();*

*cout<<"\n\nBOOK DEPOSIT ...";*

*cout<<"\n\n\tEnter The student’s admission no.";*

*cin>>sn;*

*fp.open("student.dat",ios::in|ios::out);*

*fp1.open("book.dat",ios::in|ios::out);*

*while(fp.read((char\*)&st,sizeof(student)) && found==0)*

*{*

*if(strcmpi(st.retadmno(),sn)==0)*

*{*

*found=1;*

*if(st.rettoken()==1)*

*{*

*while(fp1.read((char\*)&bk,sizeof(book))&& flag==0)*

*{*

*if(strcmpi(bk.retbno(),st.retstbno())==0)*

*{*

*bk.show\_book();*

*flag=1;*

*cout<<"\n\nBook deposited in no. of days";*

*cin>>day;*

*if(day>15)*

*{*

*fine=(day-15)\*1;*

*cout<<"\n\nFine has to deposited Rs. "<<fine;*

*}*

*st.resettoken();*

*int pos=-1\*sizeof(st);*

*fp.seekp(pos,ios::cur);*

*fp.write((char\*)&st,sizeof(student));*

*cout<<"\n\n\t Book deposited successfully";*

*}*

*}*

*if(flag==0)*

*cout<<"Book no does not exist";*

*}*

*else*

*cout<<"No book is issued..please check!!";*

*}*

*}*

*if(found==0)*

*cout<<"Student record not exist...";*

*getch();*

*fp.close();*

*fp1.close();*

*}*

*// INTRODUCTION FUNCTION*

*void intro()*

*{*

*clrscr();*

gotoxy(35,11);

cout<<"LIBRARY";

gotoxy(35,14);

cout<<"BOOK";

gotoxy(35,17);

cout<<"MANAGEMENT";

gotoxy(35,20);

cout<<"SYSTEM";

cout<<"\n\nMADE BY : Ankur Kaushik";

cout<<"\n\nSCHOOL : Birla school pilani";

cout<<"\n\nCLASS : 12th Annul project";

*getch();*

*}*

*//ADMINISTRATOR MENU FUNCTION*

*void admin\_menu()*

*{*

*clrscr();*

*int ch2;*

*cout<<"\n\n\n\tADMINISTRATOR MENU";*

*cout<<"\n\n\t1.CREATE STUDENT RECORD";*

*cout<<"\n\n\t2.DISPLAY ALL STUDENTS RECORD";*

*cout<<"\n\n\t3.DISPLAY SPECIFIC STUDENT RECORD ";*

*cout<<"\n\n\t4.MODIFY STUDENT RECORD";*

*cout<<"\n\n\t5.DELETE STUDENT RECORD";*

*cout<<"\n\n\t6.CREATE BOOK ";*

*cout<<"\n\n\t7.DISPLAY ALL BOOKS ";*

*cout<<"\n\n\t8.DISPLAY SPECIFIC BOOK ";*

*cout<<"\n\n\t9.MODIFY BOOK ";*

*cout<<"\n\n\t10.DELETE BOOK ";*

*cout<<"\n\n\t11.BACK TO MAIN MENU";*

*cout<<"\n\n\tPlease Enter Your Choice (1-11) ";*

*cin>>ch2;*

*switch(ch2)*

*{*

*case 1: clrscr();*

*write\_student();break;*

*case 2: display\_alls();break;*

*case 3:*

*char num[6];*

*clrscr();*

*cout<<"\n\n\tPlease Enter The Admission No. ";*

*cin>>num;*

*display\_sps(num);*

*break;*

*case 4: modify\_student();break;*

*case 5: delete\_student();break;*

*case 6: clrscr();*

*write\_book();break;*

*case 7: display\_allb();break;*

*case 8: {*

*char num[6];*

*clrscr();*

*cout<<"\n\n\tPlease Enter The book No. ";*

*cin>>num;*

*display\_spb(num);*

*break;*

*}*

*case 9: modify\_book();break;*

*case 10: delete\_book();break;*

*case 11: return;*

*default:cout<<"\a";*

*}*

*admin\_menu();*

*}*

*//    THE MAIN FUNCTION OF PROGRAM*

*void main()*

*{*

*char ch;*

*intro();*

*do*

*{*

*clrscr();*

*cout<<"\n\n\n\tMAIN MENU";*

*cout<<"\n\n\t01. BOOK ISSUE";*

*cout<<"\n\n\t02. BOOK DEPOSIT";*

*cout<<"\n\n\t03. ADMINISTRATOR MENU";*

*cout<<"\n\n\t04. EXIT";*

*cout<<"\n\n\tPlease Select Your Option (1-4) ";*

*ch=getche();*

*switch(ch)*

*{*

*case '1':clrscr();*

*book\_issue();*

*break;*

*case '2':book\_deposit();*

*break;*

*case '3':admin\_menu();*

*break;*

*case '4':exit(0);*

*default :cout<<"\a";*

*}*

*}while(ch!='4');*

*}*

*//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**

*//    END OF PROJECT*

*//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**

**OUTPUT SCREEN**







