“Hostel Management System”

#include<iostream>

#include<string>

#include<fstream>

using namespace std;

class hostel

{

int room\_no;

char name[30];

char address[50];

char phone[10];

public:

void main\_menu();

void admin();

void student();

void add();

void display();

void rooms();

void edit();

int check(int);

void modify(int);

void delete\_rec(int);

void reg();

void login();

int isLoggedIn();

void student\_menu();

void payment();

int pay();

void login1();

void edit1();

};

string u="admin123";

string p="srm123";

string name;

string pw;

int hostel::pay()

{

int am;

cout<<"ENTER THE AMOUNT AT A TIME:"<<endl<<endl;

int m=65000,h=100000;

cout<<"\tMESS FEE:"<<m<<endl;

cout<<"\tHOSTEL FEE:"<<h<<endl;

cout<<"\tTOTAL AMOUNT:"<<"("<<m+h<<")"<<endl;

cin>>am;

int b=165000-am;

ofstream file("fees.txt");

cout<<"\tBALANCE DUE:"<<b<<endl;

if(b==0)

{

int fee=1;

file<<fee<<endl;

return -1;

}

file.close();

return 0;

}

void hostel::add()

{

int r,flag;

ofstream fout("Record.txt",ios::app);

cout<<"\n Enter Student Detalis:\t";

cout<<"\n\n Room no:";

cin>>r;

flag=check(r);

if(flag)

cout<<"\n Sorry..!!!Room is already booked";

else

{

room\_no=r;

cout<<"\n Name:";

cin>>name;

cout<<"\n Address:";

cin>>address;

cout<<"\n Phone No:";

cin>>phone;

cout<<endl;

int n=pay();

if(n==-1)

{

fout.write((char\*)this,sizeof(\*this));

cout<<"\n Room is booked!!!";

}

else

{

cout<<"\nPlease COMPLETE YOUR PAYMENT"<<endl;

}

}

fout.close();

student\_menu();

}

void hostel::display()

{

ifstream file("Record.txt");

int r;

cout<<"\n Enter room no: ";

cin>>r;

while(true)

{

file.read((char\*)this,sizeof(\*this));

if(file.eof())

break;

if(room\_no == r)

{

cout<<"\n Student Details:"<<endl;

cout<<"\n\n Room no: "<<room\_no;

cout<<"\n Name: "<<name;

cout<<"\n Address: "<<address;

cout<<"\n Phone no: "<<phone;

}

else

{

cout<<".......................";

}

}

file.close();

}

void hostel::rooms()

{

ifstream fin;

fin.open("Record.txt");

cout<<"\n\t\t\tList Of Rooms Allotted:";

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

cout<<"\n\n Room No.\tName\t\tAddress\t\tPhone No.\n";

// fin.eof();

while(true)

{

fin.read((char\*)this,sizeof(\*this));

if(fin.eof())

break;

cout<<"\n\n "<<room\_no<<"\t\t"<<name;

cout<<"\t\t"<<address<<"\t\t"<<phone;

}

fin.close();

hostel::admin();

}

void hostel::edit1()

{

int choice,r;

cout<<"\n EDIT MENU:";

cout<<"\n\n 1.Modify Student Record";

cout<<"\n 2.Delete Student Record";

cout<<"\n Enter your choice: ";

cin>>choice;

cout<<"\n Enter room no: ";

cin>>r;

switch(choice)

{

case 1: modify(r);

break;

case 2: delete\_rec(r);

break;

default: cout<<"\n Wrong Choice!!";

}

admin();

}

void hostel::edit()

{

int choice,r;

cout<<"\n EDIT MENU:";

cout<<"\n\n 1.Modify Student Record";

cout<<"\n 2.Delete Student Record";

cout<<"\n Enter your choice: ";

cin>>choice;

cout<<"\n Enter room no: ";

cin>>r;

switch(choice)

{

case 1: modify(r);

break;

case 2: delete\_rec(r);

break;

default: cout<<"\n Wrong Choice!!";

}

student\_menu();

}

int hostel::check(int r)

{

int flag=0;

ifstream fin("Record.txt",ios::in);

while(!fin.eof())

{

fin.read((char\*)this,sizeof(\*this));

if(room\_no==r)

{

flag=1;

break;

}

}

fin.close();

return(flag);

}

void hostel::modify(int r)

{

long pos , flag;

fstream file("Record.txt",ios::in|ios::out|ios::binary);

flag=0;

while(!file.eof())

{

pos=file.tellg();

file.read((char\*)this,sizeof(\*this));

if(room\_no==r)

{

cout<<"\n Enter New Details:"<<endl;

cout<<"\n Name: ";

cin>>name;

cout<<" Address: ";

cin>>address;

cout<<" Phone no: ";

cin>>phone;

file.seekg(pos);

file.write((char\*)this,sizeof(\*this));

cout<<"\n Record is modified!!"<<endl;

flag=1;

break;

}}

if(flag==0)

cout<<"\n Sorry Room no. not found or vacant!!";

file.close();

}

void hostel::delete\_rec(int r)

{

int flag=0;

char ch;

ifstream fin("Record.txt",ios::in);

ofstream fout("temp.txt",ios::out);

while(!fin.eof())

{

fin.read((char\*)this,sizeof(\*this));

if(room\_no==r)

{

cout<<"\n Name: "<<name;

cout<<"\n Address: "<<address;

cout<<"\n Pone No: "<<phone;

cout<<"\n\n Do you want to delete this record(y/n): ";

cin>>ch;

if(ch=='n')

{

fout.write((char\*)this,sizeof(\*this));

}

flag=1;

}

else

fout.write((char\*)this,sizeof(\*this));

}

fin.close();

fout.close();

if(flag==0)

cout<<"\n Sorry room no. not found in the record!!";

else

{

remove("Record.txt");

rename("temp.txt","Record.txt");

}

}

void hostel::login1()

{

flag:

cout<<"\nEnter the username:"<<endl;

cin>>name;

cout<<"Enter the password:"<<endl;

cin>>pw;

if(name==u && pw==p)

{

cout<<"LOGIN SUCCESSFUL!";

admin();

}

else

{

cout<<"LOGIN ERROR! Please try again!"<<endl;

goto flag;

}

}

void hostel::admin()

{

int choice=-1;

cout<<"\n\*\*\*\*Admin Menu\*\*"<<endl<<endl;

if(name!=u || pw!=p ){

return;

}

while(choice!=4){

cout<<"\n\t\t\t1.Search for room allocation details";

cout<<"\n\t\t\t2.Rooms Allotted";

cout<<"\n\t\t\t3.Edit Record";

cout<<"\n\t\t\t4.Exit";

cout<<"\n\n\t\t\tEnter Your Choice: ";

//cin>>choice;

cin>>choice;

switch(choice)

{

case 1: display();

break;

case 2: rooms();

break;

case 3: edit1();

break;

case 4: main\_menu();

break;

default:

{

cout<<"\nPlease enter a valid choice\n";

}

}

}

}

void hostel::reg(){

string username, password,fname;

cout << endl<<"-----------------Registration:-------------------- " << endl<<endl;

cout << "Enter a username: ";

cin >> username;

cout << "Enter the password: ";

cin >> password;

ofstream file;

fname="data\\"+username+".txt";

file.open(fname.c\_str());

file << username << endl << password<<endl;

file.close();

cout << "Registration Successful " << username << "!" << endl;

}

int hostel::isLoggedIn(){

string finame;

string username, password,un,pw;

cout <<endl<<endl<<"Enter a username: ";

cin >> username;

cout << "Enter a password: ";

cin >> password;

ifstream file;

finame="data\\"+username+".txt";

file.open(finame.c\_str());

getline(file, un);

getline(file, pw);

if(un == username && pw == password)

{

return 1;

}

else

{

return 0;

}

file.close();

}

void hostel::payment()

{

int f;

ifstream fin("fees.txt");

fin>>f;

if(f==1)

{

int m=65000,h=100000;

cout<<"--------------------PAYMENT STATUS---------------------"<<endl<<endl;

cout<<"MESS FEE:"<<m<<endl;

cout<<"HOSTEL FEE:"<<h<<endl;

cout<<"TOTAL AMOUNT PAID"<<endl;

cout<<m+h;

}

else{

cout<<"FEE NOT PAID"<<endl;

}

fin.close();

student\_menu();

}

void hostel::student\_menu(){

int ch;

cout<<"\n\n\*\*\*Student Menu\*\*\*";

cout<<"\n\n1.Book a room\n2.Edit the details\n3.Payment details\n4.Exit"<<endl;

cin>>ch;

switch(ch){

case 1:hostel::add();

break;

case 2:hostel::edit();

break;

case 3:hostel::payment();

break;

case 4:hostel::main\_menu();

default:cout<<"Enter a valid option";

break;

}

}

void hostel::login(){

int status = hostel::isLoggedIn();

if(status) {

cout << endl;

cout << "Invalid login!" << endl;

hostel::student();

}

else{

int choiceTwo;

cout <<endl<< "Successfully logged in!" << endl;

cout << "Welcome back!"<< endl;

cout << endl;

hostel::student\_menu();

}

}

void hostel::student(){

int ch;

while(1){

cout<<endl;

cout<<"------------------------"<<endl;

cout<<"|1.Register|\n|2.Login"<<" |"<<endl;

cout<<"------------------------"<<endl;

cout<<"Enter your choice:"<<endl;

cin>>ch;

switch(ch){

case 1:hostel::reg();

break;

case 2:hostel::login();

break;

default:cout<<"Please enter a valid choice\n";

}

}

}

void hostel::main\_menu()

{

int ch;

cout<<endl;

cout<<"\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"\t\t\t\t\t\* SRM HOSTEL MANAGEMENT SYSTEM \*"<<endl;

cout<<"\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"------------------------"<<endl;

cout<<"|1.Student|\n|2.Admin"<<" |"<<endl;

cout<<"------------------------"<<endl;

cout<<"Enter your choice:"<<endl;

cin>>ch;

switch(ch)

{

case 1: hostel::student();

break;

case 2:hostel::login1();

break;

default:cout<<"Please enter a valid choice\n";

}

}

int main()

{

system("color F2");

hostel h;

h.main\_menu();

}