#include <iostream>

#include <fstream>

#include <iomanip>

#include <string>

const int size = 300;

using namespace std;

int main();

class Cinema{

public:

void viewTime();

int selectCinema();

void bookTicket(int CinemaType, int CinematNo,int cust);

int seatDisp(int FlightNo);

int findRecord(int FlightNo);

Cinema(){

int a,b,c;

for(c=0;c<4;c++) // represents the flight number

{

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

CinemaSeatNo[a][b][c] = 0;

}

}

}

}

private:

int CinemaSeatNo[6][10][4];

int CinemaType;

int CinemaNo;

int totalTicBook;

int cust;

};

class customer:public Cinema

{

public:

void addCustomer();

void dispCustomer();

private:

char name[size];

char address[size];

char telNo[size];

int payment;

};

//------------------------------View Time---------------------------------------

void viewTime()

{ int menu=1;

int back;

system("cls");

cout << "\n\t^^^^^^^^^^^^^^^^^^^^ Available Cinema ^^^^^^^^^^^^^^^^^\n";

cout << "\n\n\t\t 1.KATTHI 4\n";

cout << "\t\t 2.THALA 55 4.0 \n";

cout << "\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n";

cout << "\n\tEnter 0 to Exit From This Menu : ";

cin >> back;

system("cls");

}

// --------------------------------insert cinema data---------------------------------

int Cinema::selectCinema()

{

int menu1=0,menu2=0,

CinemaNo; // cinemaSeatNo[a][b][x]

system("cls");

do

{

cout<<"\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Please Enter Reservation Detail. \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"

<<"\n\nEnter Time Of Cinema.."

<<"\n\t[1] : For Afernoon Cinema" // cinemaSeatNo[x][x][0 to 1]

<<"\n\t[2] : For MidNight Cinema" // cinemaSeatNo[x][x][2 to 3]

<<"\n\t[0] : To Quit From Reservation Menu\nEnter choice: ";

cin>>CinemaType; // 1= KATTHI, 2=THALA 55

// ------Check Type Of Cinema------

switch(CinemaType)

{

case 1:

do{

cout<<"\n--- Afternoon Show Ticket Reservation ---"

<<"\nEnter Cinema.."

<<"\n\t[1] For KATTHI"

<<"\n\t[2] For THALA 55"

<<"\n\t[0] For Quit Menu\nEnter choice: ";

cin>>CinemaNo;

switch(CinemaNo)

{

case 1:

case 2:

case 3:

CinemaNo=CinemaNo-1;

cust=seatDisp(CinemaNo);

bookTicket(CinemaType,CinemaNo,cust);

menu2=1;

menu1=2;

break;

case 0:

menu2=1;

break;

default:

cerr << "Invalid choice"<<endl<<endl;

system ("pause");

system("cls");

}

}while(menu2 !=1);

break;

case 2:

do{

cout<<"\n--- Night Show Ticket Reservation ---"

<<"\nEnter Flight.."

<<"\n\t[4] For KATTHI"

<<"\n\t[5] For THALA 55"

<<"\n\t[0] For Quit Menu\nEnter choice: ";

cin>>CinemaNo;

switch(CinemaNo)

{

case 4:

case 5:

case 6:

CinemaNo=CinemaNo-1;

cust=seatDisp(CinemaNo);

bookTicket(CinemaType,CinemaNo,cust);

menu2=1;

menu1=2;

break;

case 0:

menu2=1;

break;

default:

cerr << "Invalid choice"<<endl<<endl;

system ("pause");

system("cls");

}

}while(menu2 !=1);

break;

case 0:

menu1=1;

break;

default:

cerr << "Invalid choice"<<endl<<endl;

system ("pause");

system("cls");

}

}while (menu1 ==0);

return (menu1);

}

// -------------------------------- booking ticket function --------------------------------

void Cinema::bookTicket(int CinemaType, int CinemaNo, int customer)

{

int seatNo,

seatCheck=0,

temp,

a,b,

p;

string FType;

p=60-cust;

cout<<"\nHow Many Ticket Do You Want?[ticket available:("<<p<<")]: ";

cin>>totalTicBook;

if (totalTicBook>p||totalTicBook<1)

{

do

{

cout<<"\nSorry!! Seat Available Not Enough Or Invalid Input...";

cout<<"\nHow Many Ticket Do You Want?[ticket available:("<<p<<")]: ";

cin>>totalTicBook;

}while(totalTicBook>p||totalTicBook<1);

}

for (int i=1;i<=totalTicBook;i++)

{

system("cls");

seatDisp(CinemaNo);

cout<<"\nBooking["<<i<<"/"<<totalTicBook<<"]."<<"\nEnter The Seat Number(1 to 60): ";

cin>>seatNo;

if (seatNo<=10) // Ticket between 1 to 10

{

a=0;

b=seatNo-1;

if (CinemaSeatNo[a][b][CinemaNo]==1)

{

seatCheck=1;

i--;

cout<<"\nSorry...Ticket# "<<seatNo<<" booked!!\n";

system("pause");

}

else

{

seatCheck=0;

CinemaSeatNo[a][b][CinemaNo]=1;

}

}

else

if (seatNo>10&&seatNo<=20) // Ticket between 11 to 20

{

a=1;

b=seatNo-11;

if (CinemaSeatNo[a][b][CinemaNo]==1)

{

seatCheck=1;

i--;

cout<<"\nSorry...Ticket# "<<seatNo<<" booked!!\n";

system("pause");

}

else

{

seatCheck=0;

CinemaSeatNo[a][b][CinemaNo]=1;

}

}

else

if (seatNo>20&&seatNo<=30) // Ticket between 21 to 30

{

a=2;

b=seatNo-21;

if (CinemaSeatNo[a][b][CinemaNo]==1)

{

seatCheck=1;

i--;

cout<<"\nSorry...Ticket# "<<seatNo<<" booked!!\n";

system("pause");

}

else

{

seatCheck=0;

CinemaSeatNo[a][b][CinemaNo]=1;

}

}

else

if (seatNo>30&&seatNo<=40) // Ticket between 31 to 40

{

a=3;

b=seatNo-31;

if (CinemaSeatNo[a][b][CinemaNo]==1)

{

seatCheck=1;

i--;

cout<<"\nSorry...Ticket# "<<seatNo<<" booked!!\n";

system("pause");

}

else

{

seatCheck=0;

CinemaSeatNo[a][b][CinemaNo]=1;

}

}

else

if (seatNo>40&&seatNo<=50) // Ticket between 41 to 50

{

a=4;

b=seatNo-41;

if (CinemaSeatNo[a][b][CinemaNo]==1)

{

seatCheck=1;

i--;

cout<<"\nSorry...Ticket# "<<seatNo<<" booked!!\n";

system("pause");

}

else

{

seatCheck=0;

CinemaSeatNo[a][b][CinemaNo]=1;

}

}

else

if (seatNo>50&&seatNo<=60) // Ticket between 51 to 60

{

a=5;

b=seatNo-51;

if (CinemaSeatNo[a][b][CinemaNo]==1)

{

seatCheck=1;

i--;

cout<<"\nSorry...Ticket# "<<seatNo<<" booked!!\n";

system("pause");

}

else

{

seatCheck=0;

CinemaSeatNo[a][b][CinemaNo]=1;

}

}

// ------------- saving cinemaseat --------------

if (CinemaNo==0&&seatCheck==0)

{

ofstream fileout("Cinema1",ios::out|ios::binary);

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

temp=CinemaSeatNo[a][b][CinemaNo];

fileout<<temp<<" ";

}

}

}

else

if (CinemaNo==1&&seatCheck==0)

{

ofstream fileout("Cinema2",ios::out|ios::binary);

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

temp=CinemaSeatNo[a][b][CinemaNo];

fileout<<temp<<" ";

}

}

}

else

if (CinemaNo==2&&seatCheck==0)

{

ofstream fileout("Cinema",ios::out|ios::binary);

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

temp=CinemaSeatNo[a][b][CinemaNo];

fileout<<temp<<" ";

}

}

}

}

system("cls");

seatDisp(CinemaNo);

// -------------saving customer data--------------

if (CinemaType==1&&CinemaNo==0)

FType="AfterNoon - KATTHI";

if (CinemaType==1&&CinemaNo==1)

FType="AfterNoon – THALA 55";

if (CinemaType==2&&CinemaNo==3)

FType="Night - KATTHI";

if (CinemaType==2&&CinemaNo==4)

FType="Night – THALA 55";

ofstream fout("customer",ios::out|ios::app|ios::binary);

fout<<"Cinema : "<<FType<<endl<<"Total ticket(s) Booked: "<<totalTicBook<<endl;

}

//-------------------------------Find Record----------------------------------------

int Cinema::findRecord(int CinemaNo)

{

int a,b,temp;

cust=0;

if (CinemaNo==0)

{

ifstream fin("Cinema1",ios::in|ios::binary);

while (fin)

{

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

fin>>temp;

if (!fin.fail())// avoid displaying the last char twice

CinemaSeatNo[a][b][CinemaNo] = temp;

if (temp==1)

cust++;

}

}

}

}

if (CinemaNo==1)

{

ifstream fin("Cinema2",ios::in|ios::binary);

while (fin)

{

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

fin>>temp;

if (!fin.fail())// avoid displaying the last char twice

CinemaSeatNo[a][b][CinemaNo] = temp;

if (temp==1)

cust++;

}

}

}

}

if (CinemaNo==2)

{

ifstream fin("Cinema3",ios::in|ios::binary);

while (fin)

{

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

fin>>temp;

if (!fin.fail())// avoid displaying the last char twice

CinemaSeatNo[a][b][CinemaNo] = temp;

if (temp==1)

cust++;

}

}

}

}

if (CinemaNo==3)

{

ifstream fin("flight4",ios::in|ios::binary);

while (fin)

{

for(a=0;a<6;a++) // represents row

{

for(b=0;b<10;b++) // represents column

{

fin>>temp;

if (!fin.fail())// avoid displaying the last char twice

CinemaSeatNo[a][b][CinemaNo] = temp;

if (temp==1)

cust++;

}

}

}

}

// ---- statement to solve the counting of customer ----

if (cust>60)

cust = cust-60;

return (cust);

}

void customer::addCustomer()

{

string P;

cin.ignore(size,'\n');

cout<<"\nEnter Customer Name: ";

cin.getline(name,size);

cout<<"Enter Customer Address: ";

cin.getline(address,size);

cout<<"Enter Customer Contact Number(enter N/A if no contact no.): ";

cin.getline(telNo,size);

cout<<"Enter Type Of Payment"

<<"\n[1] : Cash"

<<"\n[2] : Credit Card\nChoice: ";

cin>>payment;

// ----------- saving customer details -----------

if (payment==1)

P="CASH";

if (payment==2)

P="CREDIT CARD";

ofstream fout("customer",ios::out|ios::app|ios::binary);

fout<<"Customer Name: "<<name<<endl<<"Customer Address: "<<address<<endl

<<"Customer Contact Number: "<<telNo<<endl<<" Type Of Payment: "<<P<<endl<<endl;

cout<<"\nBooking Process Is Done..\n";

system("pause");

system("cls");

}

// ------------------Displaying available seat[0] or booked seat[1] -------------------

int Cinema::seatDisp(int CinemaNo)

{

string title;

if (CinemaNo==0)

title="KATTHI";

else

if (CinemaNo==1)

title="THALA 55";

cust=Cinema::findRecord(CinemaNo);

cout << "\n\n\tDisplaying Seat For " << title;

cout << "\n\t--------------------------------------------------------------------\n";

for(int a=0;a<6;a++)

{

cout<<"\t";

for(int b=0;b<10;b++)

{

if(CinemaSeatNo[a][b][CinemaNo]==0)

{

if (a==0)

cout<<setw(2)<<b+1<<"[0] ";

else if (a==1)

cout<<b+11<<"[0] ";

else if (a==2)

cout<<b+21<<"[0] ";

else if (a==3)

cout<<b+31<<"[0] ";

else if (a==4)

cout<<b+41<<"[0] ";

else if (a==5)

cout<<b+51<<"[0] ";

}

else

if(CinemaSeatNo[a][b][CinemaNo]==1)

{

if (a==0)

cout<<setw(2)<<b+1<<"[1] ";

else if (a==1)

cout<<b+11<<"[1] ";

else if (a==2)

cout<<b+21<<"[1] ";

else if (a==3)

cout<<b+31<<"[1] ";

else if (a==4)

cout<<b+41<<"[1] ";

else if (a==5)

cout<<b+51<<"[1] ";

}

}

cout<<"\n\n";

}

cout<<"\t--------------------------------------------------------------------"

<<"\n\tTotal Booked Seat: "<<cust;

return (cust);

}

//------------------ Display/View Customer -----------------------

void customer::dispCustomer()

{

char ch;

system("cls");

ifstream fin("customer",ios::in|ios::binary);

cout<<"\n\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Customer Details.. \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n\n\n";

if(!fin)

{

cerr<<"\nError opening the file..!!\n";

}

while(fin)

{

fin.get(ch);

if (!fin.fail()) // avoid displaying the last char twice

cout<<ch;

}

system("pause");

system("cls");

}

int main()

{

int choice,seatchoice;

int menu=0;

int CinemaMenu=0;

int cinMenu = 0;

Cinema F;

customer C;

system("cls");

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

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

cout << "\t\* Welcome To WONDER cinemas\*\n";

cout << "\t\* \_\_Movie Ticket System\_\_ \*\n";

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

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

do

{

cout << "\n\n\t^^^^^^^^^^^^^^^^^^^^^ MAIN MENU ^^^^^^^^^^^^^^^^^^^^^\n\n";

cout << "\t1. View Available Cinema\n";

cout << "\t2. Check Available Seats\n";

cout << "\t3. Book Ticket(s)\n";

cout << "\t4. View Customer Bookings\n\n";

cout << "\t0. Quit From System\n";

cout << "\n\n\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^";

cout << "\n\n\tEnter your option : ";

cin >> choice;

switch(choice)

{

case 1:

viewTime();

break;

case 2:

system("cls");

do

{

cout<< "\n\t^^^^^^^^^^^^^^^^^^^^^ AVAILABLE SEATS ^^^^^^^^^^^^^^^^^^^^^^^^^\n\n"

<< "\t1. Available Seat For KATTHI\n"

<< "\t2. Available Seat For THALA 55\n"

<< "\t0. To Quit From Available Seats Menu\n"

<< "\t^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n"

<< "\tEnter Your Option : ";

cin>>seatchoice;

switch(seatchoice)

{

case 1:

F.seatDisp(seatchoice-1);

break;

case 2:

F.seatDisp(seatchoice-1);

break;

case 3:

F.seatDisp(seatchoice-1);

break;

case 4:

F.seatDisp(seatchoice-1);

break;

case 0:

cinMenu=1;

system("cls");

break;

default:

cerr << "Invalid choice" << endl << endl;

system ("pause");

}

}while(cinMenu !=1);

break;

case 3:

if (C.selectCinema()==2)

C.addCustomer();

break;

case 4:

C.dispCustomer();

break;

case 0:

menu = 1;

system ("cls");

cout << "\n\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n\n\n";

cout << "\t Thank you for using Movie Ticket System :) ... \n\n";

cout << "\n\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n\n";

break;

default:

cerr << "Invalid choice" << endl << endl;

system ("pause");

system("cls");

}

}while (menu !=1);

system ("pause");

return 0;

}