#include<iostream>

#include<conio.h>

#include<fstream>

#include<string.h>

#include<string>

#include"help.h"

using namespace std;

void Menu() // shows us possible options

{

cout<<"~AIR RESERVATION SYSTEM~"<<endl;

cout<<"1. Flight Details"<<endl;

cout<<"2. Check Availablity"<<endl;

cout<<"3. Book ticket"<<endl;

cout<<"4. Cancellation"<<endl;

cout<<"5. Passengers information"<<endl;

cout<<"6. Exit"<<endl;

}

void FlightDetails() // shows us flight details

{

int idOflight=0,seats=0,business=0,economy=0;

float arrival=0,departure=0;

char nameOflight[100],time1[100],time2[100],source[100],destination[100];

ifstream fin;

fin.open("flightDetails.txt");

while(!fin.eof())

{

cout<<"~Flight Details~"<<endl;

fin>>idOflight;

cout<<"Flight ID\t\t:\t"<<idOflight<<endl;

fin>>nameOflight;

cout<<"Name of Flight\t\t:\t"<<nameOflight<<endl;

fin>>arrival;

fin>>time1;

cout<<"Arrival \t\t:\t"<<arrival<<" "<<time1<<endl;

fin>>departure;

fin>>time2;

cout<<"Departure\t\t:\t"<<departure<<" "<<time2<<endl;

fin>>seats;

cout<<"Total Seats\t\t:\t"<<seats<<endl;

fin>>business;

cout<<"Business Class\t\t:\t"<<business<<endl;

fin>>economy;

cout<<"Economic Class\t\t:\t"<<economy<<endl;

fin>>source;

cout<<"Source Station \t\t:\t"<<source<<endl;

fin>>destination;

cout<<"Destination Station\t:\t"<<destination<<endl;

break;

}

}

void Seats(int array[10][4]) // it will provide us empty seats

{

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

{

for(int j=0;j<4;j++)

{

array[i][j]=0;

}

}

}

void seatsShow(int array[10][4]) // show number for available seats and X for reserved

{

int x1=410,x2=450,y1=10,y2=40;

cout<<"~Seats Management And Availablity~"<<endl;

int counter=1;

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

{

for(int j=0;j<4;j++)

{

if(array[i][j]==0){

cout<<counter<<"\t";

myRect(x1,y1,x2,y2,0,0,250,0,0,250);

}

else

{

cout<<"X\t";

myRect(x1,y1,x2,y2,250,0,0,250,0,0);

}

x1=x1+50;

x2=x2+50;

counter++;

}

x1=410;

x2=450;

y1=y1+40;

y2=y2+40;

cout<<endl;

}

}

int CheckAvailable(int array[10][4],int seatNUmber) // check if seat is available or not

{

int counter=1;

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

{

for(int j=0;j<4;j++)

{

if(counter==seatNUmber)

{

if(array[i][j]==0){

return 1; // seat is available

break;

}

else{

return 0; //seat is not available

break;

}

}

counter++;

}

}

}

void Booked(int array[10][4],int seatNumber) // it will book a seat number

{

int counter=1;

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

{

for(int j=0;j<4;j++)

{

if(counter==seatNumber)

{

array[i][j]=1; // booked

}

counter++;

}

}

}

void Booking(int array[10][4]) // book a seat and store passengers information

{

int idOflight=0,ticketNumber=0,travelCharge=0,passPort=0,age=0,charges=0,discount=0;

char name1[100],source[100],destination[100],flightName[100],option[100];

cout<<"~Booking System~"<<endl;

cout<<"Enter Seat Number : ";

cin>>ticketNumber;

if(CheckAvailable(array,ticketNumber)==1)

{

cout<<"Yes Seat is Available..."<<endl;

cout<<"Enter Flight ID : ";

cin>>idOflight;

cout<<"Enter Name : ";

cin.getline(name1,100);

cin.getline(name1,100);

cout<<"Enter Source Place : ";

cin.getline(source,100);

cout<<"Enter Destination : ";

cin.getline(destination,100);

cout<<"Enter Flight Name : ";

cin.getline(flightName,100);

cout<<"Business Or Economy ? ";

cin.getline(option,100);

cout<<"Enter Your Age : ";

cin>>age;

cout<<"Enter Your Passport Number : ";

cin>>passPort;

if(option[0]=='B')

charges=25000;

else

charges=20000;

if(age>60)

{

discount=(charges\*25)/100;

charges=charges-discount;

}

Booked(array,ticketNumber); // reserved

cout<<"Your Seat Is Successfully Reserved...."<<endl;

ofstream fout;

fout.open("passengers.txt",fstream::app); // store the information of a pessenger i txt file

{

fout<<ticketNumber<<" ";

fout<<name1<<" ";

fout<<source<<" ";

fout<<destination<<" ";

fout<<idOflight<<" ";

fout<<age<<" ";

fout<<passPort<<" ";

fout<<option<<" ";

fout<<charges<<endl;

}

}

else

cout<<"Seat IS Already Reserved...";

}

void information() // provide information of every passenger

{

ifstream fin;

ofstream fout;

fin.open("passengers.txt");

fout.open("info2.txt");

int ticket=0,id=0,age=0,passPort=0,charges=0;

char name[100],source[100],destination[100],class1[100];

cout<<"Ticket\tName\tSource\tDestination\tID\tAge\tPassPort\tClass\t\tCharges\n";

while(fin>>ticket>>name>>source>>destination>>id>>age>>passPort>>class1>>charges)

{

cout<<ticket<<"\t"<<name<<"\t"<<source<<"\t"<<destination<<"\t\t"<<id<<"\t"<<age<<"\t"<<passPort<<"\t\t"<<class1<<" \t"<<charges<<endl;

fout<<ticket<<" "<<name<<" "<<source<<" "<<destination<<" "<<id<<" "<<age<<" "<<passPort<<" "<<class1<<" "<<charges<<endl;

}

}

void Cancellation(int array[10][4])

{

cout<<"~Cancellation~";

int ticket1,counter=1;

cout<<"Enter ticket Number : ";

cin>>ticket1;

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

{

for(int j=0;j<4;j++)

{

if(counter==ticket1)

{

array[i][j]=0; // unreserved

}

counter++;

}

}

ifstream fin;

ofstream fout;

fin.open("info2.txt");

fout.open("Passengers.txt");

int ticket=0,id=0,age=0,passPort=0,charges=0;

char name[100],source[100],destination[100],class1[100];

while(fin>>ticket>>name>>source>>destination>>id>>age>>passPort>>class1>>charges)

{

if(ticket1==ticket)

{

// do nothing

}

else

{

fout<<ticket<<" "<<name<<" "<<source<<" "<<destination<<" "<<id<<" "<<age<<" "<<passPort<<" "<<class1<<" "<<charges<<endl;

}

}

cout<<"Successfully Cancelled..."<<endl;

}

int main()

{

int option=0,seats[10][4];

char option1='\0';

Seats(seats);

while(option!=6){

system("cls");

Menu();

cout<<"Enter An Option : ";

cin>>option;

if(option==1){

system("cls");

FlightDetails();

cout<<"Enter Any Key To Return To Main Menu : ";

cin>>option1;

}

if(option==2)

{

system("cls");

seatsShow(seats);

cout<<"Enter Any Key To Return To Main Menu : ";

cin>>option1;

}

if(option==3)

{

system("cls");

Booking(seats);

cout<<"Enter Any Key To Return To Main Menu : ";

cin>>option1;

}

if(option==4)

{

system("cls");

Cancellation(seats);

cout<<"Enter Any Key To Return To Main Menu : ";

cin>>option1;

}

if(option==5)

{

system("cls");

information();

cout<<"Enter Any Key To Return To Main Menu : ";

cin>>option1;

}

if(option==6)

{

cout<<"GOOD BYE!";

}

}

getch();

}