#include<stdio.h>

#include<string.h> // for strlen

#include<stdlib.h> // for exit0 n exit1

#include<stdbool.h> // for boolean

int main(void)

{ // airline project

int i,j,k,c,p,n,count;

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

printf("\tWelcome to AEROPOLIS Airline's Flight Reservations System\n\n");

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

//-----------------------------------------------------

//1 Destination n soruce :

char source\_city[20];

char dest\_city[20];

printf("Enter the source City from where to you to board flight \n");

scanf("%s",source\_city);

printf("Enter the Destination city \n");

scanf("%s",dest\_city);

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//2 No of tickets :-

printf("Enter the number of passenger(s) : \n");

scanf("%d",&n);

if(n==0)

exit(0);

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//3 Flight details display

int day,month,year,duratn;

printf("Kindly enter the date on which you would like to fly in the format DD/MM/YYYY \n");

scanf("%d/%d/%d",&day,&month,&year);

printf("Here are the flights that are operating on %d/ %d/ %d\n\n",day,month,year);

char airlines[5][20]={"Indigo","Lufthansa","AirAsia","Aditya","Spicejet"};

char deptime[5][10]={"08:00","09:00","11:00","06:00","13:45"};

char arrtime[5][10]={"10:00","10:40","01:00","07:45","15:15"};

char duration[5][5]={"2:00","1:40","2:00","1:45","1:30"};

int ch;

for(i=0;i<5;i++)

{ printf("Enter %d for :\n",i);

printf("\t %s Airlines \n",airlines[i]);

printf("\t Departure : %s \n",deptime[i]);

printf("\t Arrival : %s \n",arrtime[i]);

printf("\t Duration : %s hrs\n\n",duration[i]);

}

printf("\nSelect a flight by entering respective flight code : 0 or 1 or 2 or 3 or 4\n");

scanf("%d",&ch);

if((ch==1)||(ch==2)||(ch==3)||(ch==4)||(ch==0))

{ printf("\nYou have chosen %s airlines\n",airlines[ch]);

}

else

{

printf("You have selected a wrong option,Please restart the whole process\n");

exit(1);

}

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//4 Display of seats:-

printf("The seat layout of the flying machine is : \n");

for(k=0;k<2;k++)

{

printf("\t NORMAL SEATS\n");

for(j=0+5\*k;j<3+5\*k;j++)

{ for(i=6\*j+1,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\t \t");

for(i=6\*j+4,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\n");

}

printf("\n");

printf("\t EXTRA LEG SPACE SEATS\n");

for(j=3+5\*k;j<5+5\*k;j++)

{

for(i=6\*j+1,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\t \t");

for(i=6\*j+4,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\n");

}

printf("\n");

}

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//5 Pricing of seats

printf("PLEASE NOTE : The seats at the extreme corners (left and right) are window seats\n");

printf("\n");

printf("The pricing of the normal seats are as given below -\n");

printf("Window seat : Rs. 3,000 /- only\n");

printf("Middle seat : Rs. 2,500 /- only\n");

printf("Inner seat seat : Rs. 2,500 /- only\n");

printf("\n");

printf("PLEASE NOTE : Extra leg space seats have an additional charge of Rs. 1,500 /- only per seat\n");

printf("\n");

printf("PLEASE NOTE : other add ons can be added later on,before billing\n");

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//6 seat selection

int l,amount,price1,price2,seatprice[n],seat[n];

for (l=0;l<n;l++)

{

printf("Seat is being chosen for passenger %d \n\n",l+1);

printf("Enter : \n 1 for NORMAL SEATS \n 2 for EXTRA LEG SPACE SEATS \n 3 to exit\n\t");

scanf("%d",&c);

// if((c==1)||(c==2)||(c==3))

// {

switch(c)

{

case 1:

printf("\n\tNORMAL SEATS\n");

printf("\nAll normal seats are :\n"); // can show only available seats only,maybe if possible

for(k=0;k<2;k++)

{

for(j=0+5\*k;j<3+5\*k;j++)

{

for(i=6\*j+1,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\t \t");

for(i=6\*j+4,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\n");

}

printf("\n");

}

// seat selection part --> seat choosing in 3 steps

// step-1 : checking validity of enetered a seat number and if invalid taking a valid one

do

{

for(count=0;count!=1;)

{

printf("Pick a seat from the above shown seats:\n");

scanf("%d",&p);

if(((1<=p)&&(p<=18))||((31<=p)&&(p<=48)))

{ seat[l]=p;

count++;

}

else

{

printf("\nWrong number!Please select a correct seat number!\n");

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

continue;

}

}

// step-2 : checking if enetered seat is vacant or not

for (i=0; i<l; i++)

{

if (seat[l]==seat[i])

{

printf("\nSeat already taken.please select another.\n");

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

break;

}

}

}

while (i!=l);

// step-3 :telling which seat selected for respective passenger

printf("\n");

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

printf("\tYou have selected a NORMAL SEAT for passenger %d\n",l+1);

for(k=0;k<2;k++)

{ for(i=5\*k,count=0;count<3;i++,count++)

{

if((seat[l]==6\*i+1)||(seat[l]==6\*i+6))

{

printf("\tSeat positon : WINDOW SEAT \n");

price1=3000;

price2=0;

seatprice[l]=price1+price2;

printf("\tSeat no. : %d\n",seat[l]);

printf("\tSeat price : %d (base charge) + %d (normal seat charge) = %d(seat charge)\n",price1,price2,seatprice[l]);

}

else if((seat[l]==6\*i+2)||(seat[l]==6\*i+5))

{

printf("\tSeat positon : MIDDLE SEAT \n");

price1=2500;

price2=0;

seatprice[l]=price1+price2;

printf("\tSeat no. : %d\n",seat[l]);

printf("\tSeat price : %d (base charge) + %d (normal seat charge) = %d(seat charge)\n",price1,price2,seatprice[l]);

}

else if((seat[l]==6\*i+3)||(seat[l]==6\*i+4))

{

printf("\tSeat positon : INNER SEAT \n");

price1=2500;

price2=0;

seatprice[l]=price1+price2;

printf("\tSeat no. : %d\n",seat[l]);

printf("\tSeat price : %d (base charge) + %d (normal seat charge) = %d(seat charge)\n",price1,price2,seatprice[l]);

}

//if common stmts keep outside then 6 times printed

}

}

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

break;

case 2:

printf("\n\tEXTRA LEG SPACE SEATS\n");

printf("\nAll the seats with extra leg space are :\n");

for(k=0;k<2;k++)

{

for(j=3+5\*k;j<5+5\*k;j++)

{

for(i=6\*j+1,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\t \t");

for(i=6\*j+4,count=0;count<3;i++)

{

printf(" %d ",i);

count++;

}

printf("\n");

}

printf("\n");

}

do

{

for(count=0;count!=1;)

{

printf("Pick a seat from the above shown seats:\n");

scanf("%d",&p);

if(((19<=p)&&(p<=30))||((49<=p)&&(p<=60)))

{ seat[l]=p;

count++;

}

else

{

printf("\nWrong number!Please select a correct seat number!\n");

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

continue;

}

}

for(i=0;i<l;i++)

{

if(seat[l]==seat[i])

{

printf("\nSeat already taken,please select another.\n");

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

break;

}

}

}

while (i!=l);

printf("\n");

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

printf("\n\tYou have selected an EXTRA LEG SPACE SEAT for passenger %d\n",l+1);

for(k=0;k<2;k++)

{ for(i=5\*k+3,count=0;count<2;i++)

{

if((seat[l]==6\*i+1)||(seat[l]==6\*i+6))

{

printf("\tSeat positon : WINDOW SEAT \n");

price1=3000;

price2=1500;

printf("\tSeat no. : %d\n",seat[l]);

seatprice[l]=price1+price2;

printf("\tSeat price : %d (base charge) + %d (extra leg space seat charge)= %d(seat charge)\n",price1,price2,seatprice[l]);

}

else if((seat[l]==6\*i+2)||(seat[l]==6\*i+5))

{

printf("\tSeat positon : MIDDLE SEAT \n");

price1=2500;

price2=1500;

printf("\tSeat no. : %d\n",seat[l]);

seatprice[l]=price1+price2;

printf("\tSeat price : %d (base charge) + %d (extra leg space seat charge)= %d(seat charge)\n",price1,price2,seatprice[l]);

}

else if((seat[l]==6\*i+3)||(seat[l]==6\*i+4))

{

printf("\tSeat positon : INNER SEAT \n");

price1=2500;

price2=1500;

printf("\tSeat no. : %d\n",seat[l]);

seatprice[l]=price1+price2;

printf("\tSeat price : %d (base charge) + %d (extra leg space seat charge)= %d(seat charge)\n",price1,price2,seatprice[l]);

}

count++;

}

}

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

break;

case 3: printf("\n----------------------\n\n");

exit(1);

default :continue;

break;

} //end switch case

// } outermost if-closing bracket

// else

// {

// printf("\nYou have entered a wrong number,please input only 1,2 or 3\n");

// printf("\nPlease input 3, to exit and restart the process\n");

// continue; //wanting to execute the for loop again but 1st line about pssngr n will get wrong even if we r able to do so

// }

}

printf("^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//7 Passenger details

char name[n][20],gen[n][20],age[n][20];

int phno[n]; //int phno[n][20]; can give like this i.e. array of strings

for(i=0;i<n;i++)

{

printf("Enter the following details of the passenger %d : \n",i+1);

printf("Name :\t");

scanf("%s",name[i]);

printf("Mobile Number :\t");

scanf("%d",&phno[i]);

printf("Age :\t");

scanf("%s",age[i]);

printf("Gender (M/F) :\t");

scanf("%s",gen[i]);

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

}

printf("^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//8 food selection details

bool Food\_required[n];

int food\_choice[n],foodprice[n];

for(i=0;i<n;i++)

{

printf("Please select add-ons of food for passsener %d - %s :\n",i+1,name[i]);

printf("PRESS 0 FOR selecting food \n else PRESS any other key to terminate\n");

int b;

scanf("%d",&b);

Food\_required[i]=b;

if(Food\_required[i]==0)

{

printf("\n ENTER FOOD CHOICE : \n PRESS 1 - FOR VEG \n PRESS 2 - FOR NON-veg \n");

scanf("%d",&food\_choice[i]);

if(food\_choice[i]==1)

foodprice[i]=250;

else if(food\_choice[i]==2)

foodprice[i]=350;

}

else

{

foodprice[i]=0;

}

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

continue;

}

printf("^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//9 Payment Method

int finalcost[n],price[n],amt = 0;

for(i=0,amt=0;i<n;i++)

{

price[i]=seatprice[i]+foodprice[i];

printf("The COSTS exclusive and inclusive of GST for passeneger %d - %s are : \n",i+1,name[i]);

printf("\nCOST exculsive of GST is :\t Rs. %d(seat cost) + %d(food cost) = %d /-\n\n",seatprice[i],foodprice[i],price[i]);

finalcost[i]=1.15\*price[i];

printf("COST inculsive of 15%% GST is :\t Rs. %d\n\n",finalcost[i]);

amt=amt+finalcost[i];

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

}

printf("\nThe TOTAL AMOUNT TO BE PAID for all passengers being = Rs. %d /-\n",amt);

printf("\n");

int choice,x,cvv;

char ID[20], bank\_name[20];

printf("Choose one of the following options for payment : \nEnter 1 for UPI Payment\nEnter 2 for Net Banking\nEnter 3 for Debit And Credit Card\nEnter Any Other Key To Terminate\n");

scanf("%d", &choice);

switch(choice)

{

case 1: printf("\nEnter Your UPI ID\n");

scanf("%s",ID);

printf("\n\tEnter 1 To Pay\nEnter Any Other Key To Terminate\n");

scanf("%d", &x);

if(x==1)

printf("\nAmount paid : Rs. %d /-\n", amt);

else

exit(1);

break;

case 2: printf("\nEnter Your Bank Name\n");

scanf("%s", bank\_name);

printf("Enter Your Netbanking ID\n");

scanf("%s",ID);

printf("\n\tEnter 1 To Pay\nEnter Any Other Key To Terminate\n");

scanf("%d", &x);

if(x==1)

printf("\nAmount Paid: Rs. %d /-\n", amt);

else

exit(1);

break;

case 3: printf("\nEnter Your Card Number (without spaces) \n");

scanf("%s",ID);

printf("Enter cvv\n");

scanf("%d", &cvv);

printf("\n\tEnter 1 To Pay\nEnter Any Other Key To Terminate\n");

scanf("%d", &x);

if(x==1)

printf("\nAmount Paid: Rs. %d /-\n", amt);

else

exit(1);

break;

default: printf("Payment is terminated , please restart the whole process again\n");

exit(1);

}

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

//-----------------------------------------------------

//10 Issue of boarding pass

for(i=0;i<n;i++)

{

for(j=0;j<58;j++)

printf("\_");

printf("\n");

printf("| The BOARDING PASS of the passenger %d is :\t \t |\n",i+1);

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

if(strlen(name[i])<=5)

printf("| Name : \t %s \t\t\t\t |\n",name[i]);

else if(strlen(name[i])<=13)

printf("| Name : \t %s \t\t\t |\n",name[i]);

else

printf("| Name : \t %s \t\t |\n",name[i]);

printf("| Mobile number : \t %d |\n",phno[i]);

printf("| Age : \t %s \t |\n",age[i]);

printf("| Gender : \t %s \t |\n",gen[i]);

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

if(Food\_required[i]==0)

{

printf("| FOOD SELECTED \t |\n");

if(food\_choice[i]==1)

{

printf("| Food choice :\t VEG \t |\n");

}

else if(food\_choice[i]==2)

{

printf("| Food choice :\t NON - VEG \t |\n");

}

else

{

continue;

}

}

else

{

printf("| FOOD NOT SELECTED \t\t |\n");

}

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

if(strlen(airlines[ch])<=5)

printf("| Airlines : \t %s Airlines\t\t\t |\n",airlines[ch]);

else if(strlen(airlines[ch])<=13)

printf("| Airlines : \t %s Airlines\t\t |\n",airlines[ch]);

else

printf("| Airlines : \t %s Airlines\t |\n",airlines[ch]);

printf("| Departure : \t %s hrs \t |\n",deptime[ch]);

printf("| Arrival : \t %s hrs \t |\n",arrtime[ch]);

printf("| Duration : \t %s hrs \t |\n",duration[ch]);

printf("| Date : \t %d/ %d/ %d \t\t |\n",day,month,year);

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

if(strlen(source\_city)<=5)

printf("| FROM : \t %s \t\t\t\t |\n",source\_city);

else if(strlen(source\_city)<=13)

printf("| FROM : \t %s \t\t\t |\n",source\_city);

else

printf("| FROM : \t %s \t\t |\n",source\_city);

if(strlen(dest\_city)<=5)

printf("| TO : \t %s \t\t\t\t |\n",dest\_city);

else if(strlen(dest\_city)<=13)

printf("| TO : \t %s \t\t\t |\n",dest\_city);

else

printf("| TO : \t %s \t\t |\n",dest\_city);

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

printf("| COST INCLUSIVE OF 15%% GST IS \t : Rs. %d /- |\n",finalcost[i]);

printf("|\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_|\n");

printf("\n\n");

}

// printf("\nThe TOTAL COST for all passengers being = Rs. %d /-\n",amt);

printf("\n^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^\n\n");

printf("\n\t\tBOOKING SUCCESFUL\n\tWishing you a safe and happy journey\nThank you for choosing us,looking forward to serve you again soon\n ");

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

return 0;

}