

◀ PROGRAM CODE ▶

```
#include <iostream.h>
#include<fstream.h>
#include<string.h>
#include<stdio.h>
#include<stdlib.h>
#include<conio.h>
#include<dos.h>
#include<graphics.h>

int glob=1000; //global variable
int global=10;

class d_booking //class for domestic bookings
{
protected:
    int pnr;
    char f_d[10],toja[7],toj_d[7]; //protected members
    long int doj;
    int choice,src,dest;
public://public member functions
    void d_pnr()
    {
        glob++; // increment variable
        pnr=glob;
    }
    int j_detail() // function declaration and definition for domestic
journey
    {
        cout << "\nEnter DateOfJourney(DDMMYY)." << "Please enter a valid
date." << endl;
        cin >> doj;
        cout << "\1.DELHI (1) \t\2.MUMBAI(2) \t\3.BENGALURU(3)
\t\4.CHENNAI(4)" << endl << endl;
        cout << "\tEnter Source" << endl;
        cin >> src;
        cout << "\tEnter destination" << endl;
        cin >> dest;
        if((src==1 && dest==2) || (src==2 && dest==1))//condition
        {
            cout << "\t \t \tFlights Found" << endl << endl;
            cout << "Airline:\tDeparture:\tArrival:\tPrice:\t\tCategory:\n";
            cout << "\1.Air
India(1)\t08:00\t\t09:15\t\tRs.2500\t\tRefundable\n";
            cout << "\2.Jet Airways
(2)\t14:00\t\t15:00\t\tRs.2700\t\tRefundable\n";
            cout <<
"\3.Indigo(3)\t19:00\t\t20:05\t\tRs.3000\t\tRefundable\n";
        }
    }
}
```

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else if((src==1 && dest==3) || (src==3 && dest==1))//condition
{
    cout << "\t \t \tFlights Found" << endl << endl;
    cout << "Airline:\tDeparture:\tArrival:\tPrice:\t\tCategory:\n";
    cout << "\1.Air
India(1)\t08:00\t\t11:05\t\tRs.5000\t\tRefundable\n";
    cout <<
"\2.Indigo(2)\t14:00\t\t17:05\t\tRs.5500\t\tRefundable\n";
    cout <<
"\3.JetAirways(3)\t19:00\t\t22:05\t\tRs.6000\t\tRefundable\n";
}

else if((src==1 && dest==4) || (src==4 && dest==1))//condition
{
    cout << "\t \t \tFlights Found" << endl << endl;
    cout << "Airline:\tDeparture:\tArrival:\tPrice:\t\tCategory:\n";
    cout << "\1.Air
India(1)\t08:00\t\t11:05\t\tRs.4000\t\tRefundable\n";
    cout <<
"\2.Indigo(2)\t14:00\t\t17:05\t\tRs.4250\t\tRefundable\n";
    cout <<
"\3.JetAirways(3)\t19:00\t\t22:05\t\tRs.6100\t\tRefundable\n";
}

else if((src==2 && dest==3) || (src==3 && dest==2))//condition
{
    cout << "\t \t \tFlights Found" << endl << endl;
    cout << "Airline:\tDeparture:\tArrival:\tPrice:\t\tCategory:\n";
    cout << "\1.Air
India(1)\t08:00\t\t11:05\t\tRs.5400\t\tRefundable\n";
    cout <<
"\2.Indigo(2)\t14:00\t\t17:05\t\tRs.2500\t\tRefundable\n";
    cout <<
"\3.JetAirways(3)\t19:00\t\t22:05\t\tRs.2890\t\tRefundable\n";
}

else if((src==2 && dest==4) || (src==4 && dest==2))//condition
{
    cout << "\t \t \tFlights Found" << endl << endl;
    cout << "Airline:\tDeparture:\tArrival:\tPrice:\t\tCategory:\n";
    cout << "\1.Air
India(1)\t08:00\t\t11:05\t\tRs.5000\t\tRefundable\n";
    cout <<
"\2.Indigo(2)\t14:00\t\t17:05\t\tRs.4500\t\tRefundable\n";
    cout <<
"\3.JetAirways(3)\t19:00\t\t22:05\t\tRs.6000\t\tRefundable\n";
}
else if((src==3 && dest==4) || (src==4 && dest==3))//condition
{
    cout << "\t \t \tFlights Found" << endl << endl;
    cout << "Airline:\tDeparture:\tArrival:\tPrice:\t\tCategory:\n";
    cout << "\1.Air
India(1)\t08:00\t\t11:05\t\tRs.5800\t\tRefundable\n";
    cout <<
"\2.Indigo(2)\t14:00\t\t17:05\t\tRs.5508\t\tRefundable\n";
}

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        cout <<
"\3.JetAirways(3)\t19:00\t\t22:05\t\tRs.6050\t\tRefundable\n";
    }
    else if(src==dest)//condition
    {
        cout << "\nSource and destination can't be same.\nTry
again\n\n\n" << endl;
        return j_detail();
    }
    else
    {
        cout << "\nWrong input entered\nTry again\n\n\n" << endl;
        return j_detail();
    }
}

int select_flight() //function declaration and definition for
selecting flight
{
    cout << "\nEnter your choice" << endl;
    cin >> choice;
    switch(choice) // switch case
    {
        case 1://condition
            cout << "\nFlight selected:"<<endl;
            cout << "Air India"<<endl;
            strcpy(f_d,"Air India");//copy to string
            cout << "Departure Time : 08:00"<<endl;
            cout<<"Arrival Time: 11:05"<<endl;
            strcpy(tojd,"8:00"); //copy to string
            strcpy(toja,"11:05");// copy to string
            break;
        case 2://condition
            cout << "\nFlight selected:"<<endl;
            cout << "Indigo"<<endl;
            strcpy(f_d,"Indigo");//copy to string
            cout << "Departure Time : 14:00"<<endl;
            cout<<"Arrival Time: 17:05"<<endl;
            strcpy(tojd,"14:00");//copy to string
            strcpy(toja,"17:05");//copy to string
            break;
        case 3://condition
            cout << "\nFlight selected:" << endl;
            cout << "JetAirways" << endl;
            strcpy(f_d,"JetAirways");//copy to string
            cout << "Departure Time : 19:00" << endl;
            cout<<"Arrival Time: 22:05" << endl;
            strcpy(tojd,"19:00");//copy to string
            strcpy(toja,"22:05");//copy to string
            break;
        default://condition
            cout << "Wrong input entered.\nTry again" << endl;
            return select_flight();
    }
}

```

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};

class i_booking//class for international booking
{
protected://protected members
    int pnri;
    char f_i[10],tojai[7],tojdi[7];
    long int doji;
    int srci,desti,choicei;
public://public member functions
    void i_pnr()
    {
        global++;//increment variable
        pnri=global;
    }
    //brought to you by code-projects.org
    void i_pnr()
    {
        global++;//increment variable
        pnri=global;
    }

    int select_flighti()//function declaration and definition for
    selecting flight
    {
        cout << "\nEnter your choice" << endl;
        cin >> choicei;
        switch(choicei)//switch case
        {
            case 1://condition
                cout << "\nFlight selected:" <<endl;
                cout << "Vistara" << endl;
                strcpy(f_i,"Vistara");//copy to string
                cout << "Departure Time: 10:00" << endl;
                cout << "Arrival Time: 14:05" << endl;
                strcpy(tojdi,"10:00");//copy to string
                strcpy(tojai,"14:05");//copy to string
                break;
            case 2://condition
                cout << "\nFlight selected:" << endl;
                cout << "Indigo" << endl;
                strcpy(f_i,"Indigo");//copy to string
                cout << "Departure Time: 14:00" << endl;
                cout << "Arrival Time: 18:05" << endl;
                strcpy(tojdi,"14:00");//copy to string
                strcpy(tojai,"18:05");//copy to string
                break;
            case 3://condition
                cout << "\nFlight selected:" << endl;
                cout << "Emirates" << endl;
                strcpy(f_i,"Emirates");//copy to string
                cout << "Departure Time : 18:00" << endl;
                cout << "Arrival Time: 22:05" << endl;
                strcpy(tojdi,"18:00");//copy to string
                strcpy(tojai,"22:05");//copy to string

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        break;
    default://condition
        cout << "Wrong input entered" << endl;
        return select_flighti();
    }
}
};

```

```

class passenger: public d_booking,public i_booking//class passenger
publicly inherited from class d_booking and i_booking
{
protected://protected members
    char f_name[20],l_name[20],email[50];
    int age,gender;
    long int c_no;
public://public member functions
    void p_detail(int x)//function declaration and definition
    {
        if(x==1)//if else for domestic and international booking selection
        {
            j_detail();//function call
            select_flight();//function call
        }
        else
        {
            j_detaili();//function call
            select_flighti();//function call
        }
        cout << "\n\n\nEnter passenger details";
        cout << "\nFirst Name:";
        cin >> f_name;
        cout << "Last Name:";
        cin >> l_name;
    }
    int gender_check();//to check gender input as valid
    {
        cout << "\nGender:\nMale-press:1:    :&:    Female-press:2:";
        cin >> gender;
        if(gender>2)//condition
        {
            cout << "\n\nWrong input entered.\nTry again\n\n" << endl;
            return gender_check();//function call
        }
    }
    void more_details();//to take more details of the passenger
    {
        cout << "Age:";
        cin >> age;
        cout << "Email Id:";
        cin >> email;
        cout << "Contact no.(6 digits):";
        cin >> c_no;
        cout << "\n\nDetails Entered:\n";
        cout << "Name:" << f_name << " " << l_name << endl;
        cout << "Gender:" << gender << endl;          //displaying details
        cout << "Age:" << age << endl;
        cout << "Email id:" << email << endl;
    }
}

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    cout << "Contact No.:" << c_no << endl;
}

int getpnr()//function to get pnr for domestic booking
{
    return pnr;
}

int getpnri()//function to get pnr for international booking
{
    return pnri;
}

void disp()//function to display details for domestic booking
{
    cout<<"PNR:" << pnr << endl;
    cout<<"Flight:" << f_d << endl;
    cout<<"Name:" << f_name << " " << l_name << endl;
    cout<<"DOJ:" << doj << endl;
    cout<<"Departure Time:" << tojd << endl;
    cout<<"Arrival Time:" << toja;
}

void dispi()//function to display details for international booking
{
    cout<<"PNR:" << pnri << endl;
    cout<<"Flight:" << f_i << endl;
    cout<<"Name:" << f_name << " " << l_name << endl;
    cout<<"DOJ:" << doji << endl;
    cout<<"Departure Time:" << tojdi << endl;
    cout<<"Arrival Time:" << tojai;
}

};

```

```

class payment//class for payment
{
protected://protected members
    long
    int choicel,bank,card,date,cvv,user_id;
    char password[10];
public://public members functions
    int pay_detail()//function declaration and definition for payment
method
    {
        cout << "\n\n\nHow would you like to pay?:\n";
        cout << "\n\n1.Debit Card(1) \n\n2.Credit Card(2) \n\n3.Net
Banking(3)";
        cout << "\n\nEnter your choice";
        cin >> choicel;
        switch(choicel)//switch case
        {
        case 1://condition
            cout << "\nEnter card no.:";

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        cin >> card;
        cout << "\nEnter expiry date:";
        cin >> date;
        cout << "\nEnter CVV no.:";
        cin >> cvv;
        cout << "\nTransaction Successful\n";
        break;
    case 2://condition
        cout << "\nEnter card no.:";
        cin >> card;
        cout << "\nEnter expiry date:";
        cin >> date;
        cout << "\nEnter password:";
        cin >> password;
        cout << "\nTransaction Successful\n";
        break;
    case 3://condition
        cout << "Banks Available: \1.West Pac Bank(1) \2.Nabil Bank(2)
\3.Standard Chartered Bank(3) \4.AMP Bank(4) \5.Others(5)";
        cout << "\nSelect your bank:";
        cin >> bank;
        cout << "\nYou have selected:" << bank;
        cout << "\nEnter user id:";
        cin >> user_id;
        cout << "\nEnter password:";
        cin >> password;
        cout << "\nTransaction Successful\n";
        break;
    default://condition
        cout << "\nWrong input entered.\nTry again\n\n";
        return pay_detail();
    }
}

};

void createfile(passenger p)//file creation for domestic booking
{
    ofstream fin("domesticair.txt",ios::binary|ios::app);
    fin.write((char*)&p,sizeof(p));//writing to file
    fin.close();//closing file
}

void cancelticket(int x)//function to cancel ticket
{
    passenger p;
    int f=0;
    ifstream fout("domesticair.txt",ios::binary|ios::app);//for reading
    file
    ofstream fin("domesticair1.txt",ios::binary|ios::app);//for writing to
    a new file
    fout.read((char *)&p,sizeof(p));//reading file
    while(fout)
    {
        if(p.getpnr()!=x)//checking pnr
            fin.write((char *)&p,sizeof(p));//writing to file
        else

```

```

    {
        p.disp();//display details
        cout<<"\nYour Above ticket is being canceled:\n" << "Amount
refunded: Rs 1000\n";
        f++;//incrementing f if pnr found
    }
    fout.read((char *)&p,sizeof(p));//reading another record from file
}
if(f==0)//if f==0,pnr not found
    cout<<"Ticket not found\n";
fout.close();//closing file
fin.close();//closing file
remove("domesticair.txt");//deleting old file
rename("domesticair1.txt","domesticair.txt");//renaming new file

}

void checkticket(int x)//function to check pnr or ticket
{
    passenger p;
    int f=0;
    ifstream fout("domesticair.txt",ios::binary);//opening file
    fout.read((char *)&p,sizeof(p));//reading file
    while(fout)
    {
        if(p.getpnr()==x)//checking pnr
        {p.disp();//display details
        cout<<"\nYour ticket"<<endl;
        f++;//incrementing f if onr found
        break;
        }
        fout.read((char *)&p,sizeof(p));//reading another record from the
same file

    }
    fout.close();//closing file
    if(f==0)//if f==0, pnr not found
        cout<<"Ticket not found"<<endl;

}

void createfilei(passenger p)//opening a file for international booking
{
    ofstream fin("internationalair.txt",ios::binary|ios::app);
    fin.write((char*)&p,sizeof(p));//writing to file
    fin.close();//closing file
}

void cancelticketi(int x)//function to cancel ticket
{
    passenger p;
    int f=0;
    ifstream fout("internationalair.txt",ios::binary|ios::app);//opening
file
    ofstream fin("internationalair1.txt",ios::binary|ios::app);//writing to
a new file
    fout.read((char *)&p,sizeof(p));//reading old file
    while(fout)
    {
        if(p.getpnri()!=x)//checking pnr

```



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        fin.write((char *)&p,sizeof(p)); //writing to new file;
    else
    {
        p.dispi(); //display details
        cout<<"Your Above ticket is being deleted:\n"<<"Amount refunded: Rs
1000\n";
        f++; //incrementing f if pnr found
    }
    fout.read((char *)&p,sizeof(p)); //reading another record from old
file
}
if(f==0) //if f==0, pnr not found
    cout<<"\nTicket not found\n";
fout.close(); //closing file
fin.close(); //closing file
remove("internationalair.txt"); //deleting old file
rename("internationalair1.txt","internationalair.txt"); //renaming new
file

```

```

}
void checkticketi(int x) //function to check pnr or ticket
{
    passenger p;
    int f=0;
    ifstream fout("internationalair.txt",ios::binary); //opening file
    fout.read((char *)&p,sizeof(p)); //reading file
    while(fout)
    {
        if(p.getpnri()==x) //checking pnr
        {
            p.dispi(); //display details
            cout<<"\nYour ticket"<<endl;
            f++; //incrementing f if pnr found
            break;
        }
        fout.read((char *)&p,sizeof(p)); //reading another record from the
file
    }
    fout.close(); //closing file
    if(f==0) //if f==0, pnr not found
        cout<<"Ticket not found"<<endl;
}

```

```

int main() //main function
{
    int m=DETECT,n1;
    initgraph(&m, &n1, "");

    class d_booking d1; //object for class d_booking
    class i_booking i1; //object for class i_booking
    class passenger p1; //object for class passenger
    class payment p2; //object for class payment
    int ch,ch1,n; //integer variables

```

```

    char input;//character variables
    do//do while loop
    {
cleardevice();
setbkcolor(BLACK);
gotoxy(10,20);
    setcolor(9);
    settextstyle(3,0,80);

        outtextxy(10,20,"AERO");
        gotoxy(20,30);
        setcolor(12);
        settextstyle(3,0,80);

            outtextxy(2,20,".    VEL");
            cout<<"    <><><>    AEROVEL.COM    <><><> \n";
            cout<<"    <> fly in sky with no limit <> ";
            _setcursortype(_NOCURSOR);

        window(12,21,50,25);
        for(int x=0;x<40;x++)
    { printf("%c",219);
        delay(60);
    }
    gotoxy(14,21);
    cout<<"    \n\n READY TO TAKE OFF >>>";
    for (int i=0;i<15;i++)
    { cout<<" >";
        delay(100);
    }

        getch();

        delay(40);
        system("CLS");
        cout << "\n\n \t\tWelcome To Flight Reservation System" << endl <<
endl;
        cout <<"\t    <><><><><><><><><><><><><><><><><><>\n";
        cout << "\t    Book your Flight tickets at affordable prices!" << endl;
        cout <<"\t    <><><><><><><><><><><><><><><><><><>";

        cout << "\n\n\t\t\t\t1.Book Flight(1) \n\t\t\t\t2.Cancel Fight(2)
\n\t\t\t\t3.Check Ticket(3) \n\t\t\t\t4.Exit(4)" << endl;
        cout << "\n\t\t\t Please enter your choice:";
        cin >> ch;
        switch(ch)//switch case
        {
            case 1://condition
                system("CLS");
                cout << "\n\n\t\t1.Domestic Fights(1) \n\t\t2.International
Flights(2)" << endl;
                cout << "\nPlease enter your option" << endl;
                cin >> ch1;

```

```

switch(ch1)//inner switch case
{
    case 1://for booking domestic ticket
        p1.d_pnr();
        p1.p_detail(1);//function calls
        p1.gender_check();
        p1.more_details();
        p2.pay_detail();
        p1.disp();
        createfile(p1);//call to create file
        break;
    case 2: //for booking international ticket
        p1.p_detail(2);//function calls
        p1.i_pnr();
        p1.gender_check();
        p1.more_details();
        p2.pay_detail();
        p1.dispi();
        createfilei(p1);//call to create file
        break;
    default://wrong input
        cout << "Wrong input entered\nTry again\n\n\n" << endl;
        return main();
}
break;
case 2:
    //for canceling ticket
    system("CLS");
    cout << "\1.Domestic Flights(1) \n\2.International Flights(2)"
<< endl;

    cout << "\nPlease enter your option" << endl;
    cin >> ch1;
    if(ch1==1)
    {
        cout << "Please enter your PNR no.:" << endl;
        cin>>n;
        cancelticket(n);//function call for domestic booking
cancellation
    }
    else if(ch1==2)
    { cout << "Please enter your PNR no.:" << endl;
      cin>>n;
      cancelticketi(n);//function call for international
cancellation
    }
    else
    {
        cout << "Wrong input entered\nTry again\n\n\n";
        return main();
    }
    break;
case 3://for displaying booked ticket details
system("CLS");
    cout << "\1.Domestic Flights(1) \n\2.International Flights(2)"
<< endl;

```

```

        cout << "\nPlease enter your option" << endl;
        cin >> ch1;
        if(ch1==1)
        {cout << "Please enter your PNR no.:" << endl;
          cin>>n;
          checkticket(n);//function call to display domestic ticket details
        }
        else if(ch1==2)
        {   cout << "Please enter your PNR no.:" << endl;
            cin>>n;
            checkticketi(n);//function call to display domestic ticket details
        }
        else
        {
            cout << "Wrong input entered.\nTry again\n\n\n";
            return main();
        }
        break;
    case 4: {
        system("cls");
        _setcursortype(_NOCURSОР);
        _textattr(128+12);
        cprintf("\n\n\n\n\n\n\n\n\n\n      <><> PRESENTED BY:-\nABHINAV YADAV  <><>" );
        delay(100);
        getch();

        exit(0);
        return 0;
    }
    default://for wrong input
    { cout << "Wrong input entered\nTry again.\n\n\n\n" << endl;
      return main();
    }
}
cout<<"\n\n\nDo you wish to continue:(y/Y)" << endl;
cin >> input;
}while(input=='Y' || input=='y');//condition for do while loop
getch();
return 0;

```

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<>INDEX<>

1. About the project

2. Header Files used

3. Details of the functions used

4. Program Code

5. Output Screen

HEADER FILES USED

1.iostream.h

2.fstream.h

3.string.h

4.stdio.h

5.stdlib.h

6.conio.h

7.dos.h

8.graphics.h

<> **ABOUT THE PROJECT** <>

Flight Reservation System is based on a concept of booking and cancelling flight reservations. Here, the system contains no login feature. The users can easily book flights, cancel flight reservation, and check tickets. It contains different payment options for the reservations. This mini project contains fewer features but the essential ones.

Talking about the features of Flight Reservation System, for a flight reservation the user has to select whether he/she want domestic or international and date of journey. Then the system displays the city and the countries name and the user has to provide Source and Destination. After this, the system checks whether the flight is available or not, if it's available then the system displays Airlines list with Departure and Arrival time, Price and Category. The system asks for the passenger's information such as name, contact details, gender, email id. At last, for the payment process, the user has to select whether to pay from Debit, Credit or Net banking.

When the user selects Debit and Credit card, the system asks for Debit/Credit card information such as CV number and Card number. And for Net banking first, he/she has to select the available bank and provide their user id and password. After all these procedures, a reservation is done. As a reservation proof, the system provides PNR, Flight, Passenger's name, DOJ, Departure, and Arrival Time. In order to check tickets, the user has to provide PNR no. then only the system check for the respective tickets in the database and displays a result. Cancelling a flight reservation is easy through the system; the user just has to provide their PNR number. The system asks for confirmation before cancelling and also refunds some amount.

Flight Reservation system is developed using C++ Programming Language and different variables, strings have been used for the development of it.