

```

#include<bits/stdc++.h>
using namespace std;

class passenger{
public:
    string name;
    string insurance;
    int luggage;
    int extraLuggage;
    string priorityBoarding;

    void details()
    {
        cout<<"\n=====  ENTER DETAILS  =====\n"<<endl;
        cout<<"Enter name : ";
        cin>>name;
        cout<<"Do have insurance?(yes/no) : ";
        cin>>insurance;
        cout<<"Number of luggage : ";
        cin>>luggage;
        cout<<"Number of extra luggage : ";
        cin>>extraLuggage;
        cout<<"Do you want priority boarding?(yes/no) : ";
        cin>>priorityBoarding;
    }

    void display1()
    {
        cout<<"=====  DISPLAY  =====\n"<<endl;
        cout<<"Name : "<<name<<endl;
        cout<<"Insurance: "<<insurance<<endl;
        cout<<"Number of luggage: "<<luggage<<endl;
        cout<<"Number of extra luggage: "<<extraLuggage<<endl;
        cout<<"Priority boarding: "<<priorityBoarding<<endl;
    }
};

class order
{
    int number;
    float price;
    string state;
    string created;
    float payment;
    string paymentMade;
    string billingAddress;
public:
    void order1() {
        cout<<"\n=====  ENTER ORDER DETAILS  =====\n";
    }
};

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        cout<<"Enter order number : ";
        cin>>number;
        cout<<"Enter price : ";
        cin>>price;
        cout<<"Enter state : ";
        cin>>state;
        cout<<"What is the status of order? \n(Complete/Incomplete): ";
        cin>>created;
        cout<<"What is the status of payment? \n(Complete/Incomplete): ";
        cin>>paymentMade;
    }
    void display2()
    {
        cout<<"Order Number: "<<number<<endl;
        cout<<"Price : "<<price<<endl;
        cout<<"State: "<<state<<endl;
        cout<<"Status of order: "<<created<<endl;
        cout<<"Status of payment: "<<paymentMade<<endl;
    }
};

class customer: public passenger, public order
{
    string email;
    string ad;
    long long int telephone_num;
public:
    void addNew()
    {
        char ch;
        details();
        cout<<"Enter your E-mail ID: ";
        cin>>email;
        cout<<"Enter your telephone number : ";
        cin>>telephone_num;
        cout<<endl;
    }
    void edit() {
        int e;
        do {
            cout<<"=====  EDIT  =====<<endl;
            cout<<"\nEnter the option you want to edit: \n1. Name\n2.
Insurance\n3. Number of luggage\n4. Number of Extra luggage\n5. Priority
boarding\n6. E-mail ID\n7. Telephone Number\nEnter your option : ";
            cin>>e;
            switch(e) {
                case 1:
                    cout<<"Enter name: ";

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        cin>>name;
        break;
    case 2:
        cout<<"Do have insurance?(yes/no) : ";
        cin>>insurance;
        break;
    case 3:
        cout<<"Number of luggage : ";
        cin>>luggage;
        break;
    case 4:
        cout<<"Number of extra luggage : ";
        cin>>extraLuggage;
        break;
    case 5:
        cout<<"Do you want priority boarding?(yes/no) : ";
        cin>>priorityBoarding;
        break;
    case 6:
        cout<<"E-mail : ";
        cin>>email;
        break;

    case 7:
        cout<<"Enter telephone number : ";
        cin>>telephone_num;
        break;
    }
    cout<<"\nDo you want to edit any more? \n(press 1 if yes or 0 for
no) : ";
    cin>>e;
} while(e==1);
}
void display(){
    display1();
    cout<<"E-mail : "<<email<<endl;
    cout<<"Telephone number: "<<telephone_num<<endl;
}
};

class flight{
    long long int f_num;
public:
    void f_details(){
        cout << "\t \t \tAvailable flights" << endl << endl;
        cout<<"-----"<<endl;
        cout << "Airlines\tFlight
Number\tDeparture\tArrival\t\tPrice\n"<<endl;
        cout << "Air India\t123\t08:00\t\t11:05\t\tRs.5000\n";
    }
};

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        cout << "IndiGo\t\t456\t14:00\t\t17:05\t\tRs.5500\n";
        cout << "SpiceJet\t113\t19:00\t\t22:05\t\tRs.6000\n";
    }
};

class schedule: public flight
{
public:
    char date[20];
    int source, dest;

    void addFlight()
    {
        cout << "\nPlease enter date of Journey (DD/MM/YY):" << endl;
        cin >> date;
        cout << "-----"<<endl;
        cout<< "          SOURCE          "<<endl;
        cout << "-----"<<endl;
        cout << "1.Delhi(1)" << endl ;
        cout <<"2.Chennai(2)" << endl;
        cout <<"3.Kolkatta(3)" << endl;
        cout <<"4.Mumbai(4) " << endl;
        cout << "-----\n"<<endl;
        cout << "Enter your source:" << endl;
        cin >> source;

        cout << "-----"<<endl;
        cout<< "    DESTINATION    "<<endl;
        cout << "-----"<<endl;
        cout << "1.Delhi(1)" << endl;
        cout <<"2.Chennai(2)" << endl;
        cout <<"3.Bangalore(3)" << endl;
        cout <<"4.Kolkatta(4)" << endl;
        cout << "-----\n"<<endl;
        cout << "Enter your destination : " << endl;
        cin >> dest;

        if((source==1 && dest==2) || (source==2 && dest==1) || (source==1 &&
dest==3) || (source==3 && dest==1) || (source==1 && dest==4) || (source==4 &&
dest==1) || (source==2 && dest==3) || (source==3 && dest==2) || (source==2 &&
dest==4) || (source==4 && dest==2) || (source==3 && dest==4) || (source==4 &&
dest==3))
        {
            f_details();
        }

        else if(source==dest)
        {

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        cout << "\nSource and destination are the same.Please enter try
again.\n\n\n" << endl;
        addFlight();
    }
    else
    {
        cout << "\nYou have entered the wrong input entered.Please try
again\n\n\n" << endl;
        addFlight();
    }
}

void searchFlight()
{
    int option;
    cout<<"\n=====  SEARCH FLIGHT  =====<<endl;

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

    cout << "Airlines"<<endl;
    cout << "123. Air India\n";
    cout << "456. IndiGo\n";
    cout << "113. SpiceJet\n";

    cout<<"Enter your flight number : ";
    cin>>option;
    map<int, string> flight={{123, "Air India"}, {456, "Indigo"}, {113,
"SpiceJet"}};
    if(option==123){
        auto it=flight.find(123);
        cout<<"Flight is available!"<<endl;
        cout<<"======"<<endl;
        cout<<"Flight name : "<<it->second<<endl;
        cout << "Departure Time : 08:00"<<endl;
        cout<<"Arrival Time: 11:05"<<endl;
        cout<<"Price : Rs. 5000"<<endl;
    }
    if(option==456){
        auto it=flight.find(456);
        cout<<"Flight is available"<<endl;
        cout<<"======"<<endl;
        cout<<"Flight name : "<<it->second<<endl;
        cout << "Departure Time : 14:00"<<endl;
        cout<<"Arrival Time: 17:05"<<endl;
        cout<<"Price : Rs. 5500"<<endl;
    }
    if(option==113){
        auto it=flight.find(113);

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        cout<<"Flight is available"<<endl;
        cout<<"======"<<endl;
        cout<<"Flight name : "<<it->second<<endl;
        cout << "Departure Time : 18:00" << endl;
        cout<<"Arrival Time: 21:05" << endl;
        cout<<"Price : Rs. 6000"<<endl;
    }
}
};

class orderFlight: public schedule
{
public:
    void order_flight()
    {
        int option;
        addFlight();
        cout<<"Enter your flight number you want to book : ";
        cin>>option;
        map<int, string> flight={{123, "Air India"}, {456, "Indigo"}, {113,
"SpiceJet"}};
        if(option==123){
            auto it=flight.find(123);
            cout<<"\n\n======"<<endl;
            cout<<"Booking Successfull!"<<endl;
            cout<<"======"<<endl<<endl;
            cout<<"===== ORDER DETAILS =====\n"<<endl;
            cout<<"Flight Number : 123"<<endl;
            cout<<"Flight name : "<<it->second<<endl;
            cout << "Departure Time : 08:00"<<endl;
            cout<<"Arrival Time: 11:05"<<endl;
            cout<<"Price : Rs. 5000"<<endl;
            if(source==1)
                cout<<"Source : Delhi"<<endl;
            if(source==2)
                cout<<"Source : Chennai"<<endl;
            if(source==3)
                cout<<"Source : Kolkata"<<endl;
            if(source==4)
                cout<<"Source : Mumbai"<<endl;
            if(dest==1)
                cout<<"Destination : Delhi"<<endl;
            if(dest==2)
                cout<<"Destination : Chennai"<<endl;
            if(dest==3)
                cout<<"Destination : Bangalore"<<endl;
            if(dest==4)
                cout<<"Destination : Kolkata"<<endl;

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}
if(option==456){
auto it=flight.find(456);
cout<<"\n\n===== "<<endl;
cout<<"Booking Successfull!"<<endl;
cout<<"===== "<<endl<<endl;
cout<<"===== ORDER DETAILS =====\n"<<endl;
cout<<"Flight Number : 456"<<endl;
cout<<"Flight name : "<<it->second<<endl;
cout << "Departure Time : 14:00"<<endl;
cout<<"Arrival Time: 17:05"<<endl;
cout<<"Price : Rs. 5500"<<endl;
if(source==1)
cout<<"Source : Delhi"<<endl;
if(source==2)
cout<<"Source : Chennai"<<endl;
if(source==3)
cout<<"Source : Kolkata"<<endl;
if(source==4)
cout<<"Source : Mumbai"<<endl;
if(dest==1)
cout<<"Destination : Delhi"<<endl;
if(dest==2)
cout<<"Destination : Chennai"<<endl;
if(dest==3)
cout<<"Destination : Bangalore"<<endl;
if(dest==4)
cout<<"Destination : Kolkata"<<endl;
}
if(option==113){
auto it=flight.find(113);
cout<<"\n\n===== "<<endl;
cout<<"Booking Successfull!"<<endl;
cout<<"===== "<<endl<<endl;
cout<<"===== ORDER DETAILS =====\n"<<endl;
cout<<"Flight Number : 113"<<endl;
cout<<"Flight name : "<<it->second<<endl;
cout << "Departure Time : 18:00" << endl;
cout<<"Arrival Time: 21:05" << endl;
cout<<"Price : Rs. 6000"<<endl;
if(source==1)
cout<<"Source : Delhi"<<endl;
if(source==2)
cout<<"Source : Chennai"<<endl;
if(source==3)
cout<<"Source : Kolkata"<<endl;
if(source==4)
cout<<"Source : Mumbai"<<endl;

```

```

        if(dest==1)
        cout<<"Destination : Delhi"<<endl;
        if(dest==2)
        cout<<"Destination : Chennai"<<endl;
        if(dest==3)
        cout<<"Destination : Bangalore"<<endl;
        if(dest==4)
        cout<<"Destination : Kolkata"<<endl;
    }
}

};

class Airport: public schedule
{
    long long int card,code, loc;
    string name, date;
public:
    void getFeesPrice()
    {
        searchFlight();
        cout<<"\n\nTRANSACTION THROUGH DEBIT CARD ONLY!"<<endl;
        cout<<"Name : ";
        cin>>name;
        cout << "Enter card number :";
        cin >> card;
        cout << "Enter expiry date :";
        cin >> date;
        cout << "Enter CVV number :";
        cin >> code;
        cout<<"Enter money : ";
        cin>>loc;
        cout << "Transaction Successful\n";
        cout<<endl<<endl;
        cout<<"==== TRANSACTION SUMMARY =====\n"<<endl;
        cout<<"Name : "<<name<<endl;
        cout<<"Transaction amount : "<<loc<<endl;
    }
};

int main()
{
    customer c;
    string ad;
    passenger p;
    order o;
    schedule s;
    Airport a;
    orderFlight of;

```



```

while(1)
{
    int options;
    cout<<endl<<"=====  MAIN MENU  =====<<endl;
    cout<<"1. Enter Details"<<endl<<"2. Edit"<<endl<<"3. Search
Flight"<<endl<<"4. All Flight Details"<<endl<<"5. Get Price"<<endl<<"6. Order
Flight"<<endl<<"7. Exit"<<endl<<endl;
    cout<<"Enter your option : ";
    cin>>options;

    switch(options)
    {
        case 1: c.addNew();
                c.display();
                break;
        case 2: c.edit();
                c.display();
                break;
        case 3: s.searchFlight();
                break;
        case 4: s.addFlight();
                break;
        case 5: a.getFeesPrice();
                break;
        case 6: of.order_flight();
                break;
        case 7: cout<<"Exiting..."<<endl;
                exit(0);
                break;
        default:cout<<"You have entered a wrong option, try again!"<<endl;
    }
}

return 0;
}

```

#### **IDEAS APPLIED:**

- Used inheritance to get the properties of other classes, I have used inheritance for the classes like orderFlight, schedule, etc.
- Used the concept of map to search flights availability.
- Used switch case for the MENU to make it more user friendly.

OUTPUT:

```
===== MAIN MENU =====
```

1. Enter Details
2. Edit
3. Search Flight
4. All Flight Details
5. Get Price
6. Order Flight
7. Exit

Enter your option : 1

```
===== ENTER DETAILS =====
```

Enter name : Moumita  
Do have insurance?(yes/no) : yes  
Number of luggage : 3  
Number of extra luggage : 1  
Do you want priority boarding?(yes/no) : yes  
Enter your E-mail ID: mazumdarm2002@gmail.com  
Enter your telephone number : 700328989

```
===== DISPLAY =====
```

Name : Moumita  
Insurance: yes  
Number of luggage: 3  
Number of extra luggage: 1  
Priority boarding: yes  
E-mail : mazumdarm2002@gmail.com  
Telephone number: 700328989

```
===== MAIN MENU =====
```

1. Enter Details
2. Edit
3. Search Flight
4. All Flight Details

5. Get Price
6. Order Flight
7. Exit

Enter your option : 2

===== EDIT =====

Enter the option you want to edit:

1. Name
2. Insurance
3. Number of luggage
4. Number of Extra luggage
5. Priority boarding
6. E-mail ID
7. Telephone Number

Enter your option : 1

Enter name: Mou

Do you want to edit any more?

(press 1 if yes or 0 for no) : 1

===== EDIT =====

Enter the option you want to edit:

1. Name
2. Insurance
3. Number of luggage
4. Number of Extra luggage
5. Priority boarding
6. E-mail ID
7. Telephone Number

Enter your option : 3

Number of luggage : 4

Do you want to edit any more?

(press 1 if yes or 0 for no) : 0

===== DISPLAY =====

Name : Mou  
Insurance: yes  
Number of luggage: 4  
Number of extra luggage: 1  
Priority boarding: yes  
E-mail : mazumdarm2002@gmail.com  
Telephone number: 700328989

===== MAIN MENU =====

1. Enter Details
2. Edit
3. Search Flight
4. All Flight Details
5. Get Price
6. Order Flight
7. Exit

Enter your option : 3

===== SEARCH FLIGHT =====

-----  
Airlines

123. Air India

456. IndiGo

113. SpiceJet

Enter your flight number : 456

Flight is available

=====

Flight name : Indigo

Departure Time : 14:00

Arrival Time: 17:05

Price : Rs. 5500

===== MAIN MENU =====

1. Enter Details
2. Edit

3. Search Flight
4. All Flight Details
5. Get Price
6. Order Flight
7. Exit

Enter your option : 4

Please enter date of Journey (DD/MM/YY):

23/09/2022

-----

SOURCE

-----

- 1.Delhi(1)
- 2.Chennai(2)
- 3.Kolkatta(3)
- 4.Mumbai(4)

-----

Enter your source:

3

-----

DESTINATION

-----

- 1.Delhi(1)
- 2.Chennai(2)
- 3.Bangalore(3)
- 4.Kolkatta(4)

-----

Enter your destination :

1

Available flights

-----

Airlines	Flight Number	Departure	Arrival	Price
----------	---------------	-----------	---------	-------

## Available flights

Airlines	Flight Number	Departure	Arrival	Price
Air India	123	08:00	11:05	Rs.5000
IndiGo	456	14:00	17:05	Rs.5500
SpiceJet	113	19:00	22:05	Rs.6000

===== MAIN MENU =====

1. Enter Details
2. Edit
3. Search Flight
4. All Flight Details
5. Get Price
6. Order Flight
7. Exit

Enter your option : 5

===== SEARCH FLIGHT =====

Airlines

123. Air India

456. IndiGo

113. SpiceJet

Enter your flight number : 123

Flight is available!

=====

Flight name : Air India

Departure Time : 08:00

Arrival Time: 11:05

Price : Rs. 5000

TRANSACTION THROUGH DEBIT CARD ONLY!

Name : Moumita

Enter card number :567832145679

Enter expiry date :2030

Enter CVV number :567

Enter money : 5000

Transaction Successful

===== TRANSACTION SUMMARY =====

Name : Moumita

Transaction amount : 5000

===== MAIN MENU =====

1. Enter Details
2. Edit
3. Search Flight
4. All Flight Details
5. Get Price
6. Order Flight
7. Exit

Enter your option : 6

Please enter date of Journey (DD/MM/YY):

23/09/2022

-----

SOURCE

-----

- 1.Delhi(1)
- 2.Chennai(2)
- 3.Kolkatta(3)
- 4.Mumbai(4)

-----

Enter your source:

3

-----

## DESTINATION

- 1.Delhi(1)
- 2.Chennai(2)
- 3.Bangalore(3)
- 4.Kolkatta(4)

Enter your destination :

1

## Available flights

Airlines	Flight Number	Departure	Arrival	Price
Air India	123	08:00	11:05	Rs.5000
IndiGo	456	14:00	17:05	Rs.5500
SpiceJet	113	19:00	22:05	Rs.6000

Enter your flight number you want to book : 123

Booking Successfull!

## ===== ORDER DETAILS =====

Flight Number : 123  
Flight name : Air India  
Departure Time : 08:00  
Arrival Time: 11:05  
Price : Rs. 5000  
Source : Kolkata  
Destination : Delhi

## ===== MAIN MENU =====

1. Enter Details



2. Edit
3. Search Flight
4. All Flight Details
5. Get Price
6. Order Flight
7. Exit

Enter your option : 7

Exiting...

PS C:\Users\HP\Desktop\C ++> █