A
Project Report
On

A Airline Management System

Amrutvahini Polytechnic ,Sangamner

Department of Information Technology

In partial fulfilment of the requirement for the diploma in Information Technology

Submitted By –

Enrollment No.	Roll.No.	Name of Team Members
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Under The Guidance Of Prof.
Shinde P.B.

Amrutvahini Polytechnic, Sangamner
(Approved by AICTE, NEW DELHI and affiliated To MSBTE) 2023-2024

Amrutvahini Polytechnic ,Sangamner

Department of Information Technology

CERTIFICATE

This is to that the project report entitled,

A Airline Management System

It is benefited work carrier out by,

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In partial fulfilment of the requirement for the diploma in Information Technology

During the academic year 2023-2024

Prof.Shinde P.B
(Project Guide)

Prof.Chaudhari N.K
(H.O.D) IT

ACKNOAWLEDGEMENT

We have taken lots of efforts in this project. However, it would have been possible without the kind support and help of many individuals and organization. We would to kind to extend our sincere thanks to all of them.

First and foremost we want to thanks **Prof. Chaudhari N.K** H.O.D (Information Technology) Amrutvahini Polytechnic, Sangamner for giving us an opportunity to work on this project.

We are highly indebted to **Prof. Shinde P.B.** (Project Guide) for his guidance and constant supervision as well as for providing necessary information regarding the project and also for his support in the project.

We would like to express our gratitude towards our parents and members of Information Technology department for their kind Co- -operation and encouragement which helps us in completion of this micro project.

Our thanks and appreciations also go to our colleagoues in developing the micro-project and people who have willingly helped us with their abilities.

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MICRO PROJECT REPORT

1.0 Rational: To generate a program for Airline Management system using C++. The essential details are selected and taken as attributes for the same.

2.0 Aims :-

A program on "Airline Management System " using Inheritance.

Benefits:-

- Develop a C++ program to accept and display various entities like flights , passengers , and employees .
- This project is beneficial as it can store and maintain the handling different types of flights or airline-related entities.
- To develop a program to demonstrate a Airline Management System using C++.

3.0 Course Outcomes Addressed:-

CI301.1	**Convert**^{2} C Programs into C++ programs to solve problems.
CI301.2	**Implement**^{3} C++ Programs using classes and objects.
CI301.3	**Implement**^{3} concept of inheritance in C++ program.
CI301.4	**Use**^{3} Polymorphism in C++ program.
CI301.5	**Develop**^{3} C++ Programs to perform file operations.

4.0 Introduction :-

Airline reservation systems (**ARS**) are systems that allow an airline to sell their inventory (seats). It contains information on schedules and fares and contains a database of reservations (or passenger name records) and of tickets issued (if applicable). ARSs are of passenger service systems (PSS), which are applications supporting the direct contact with the passenger.

5.0 OBJECTIVE :-

Main objectives of a Airline management System are:

- Design a system for reservation of passengers.
- Reduce Railway station costs.
- Provide MIS (Management Information System) report on demand to management for better decision making.
- Better co-ordination among the different departments. Provide top management a single point of control

6.0 TOPIC USED: -

1.Multiple Inheritance:

Multiple Inheritance is a feature of C++ where a class can inherit from more than one class. i.e one subclass is inherited from more than one base class.

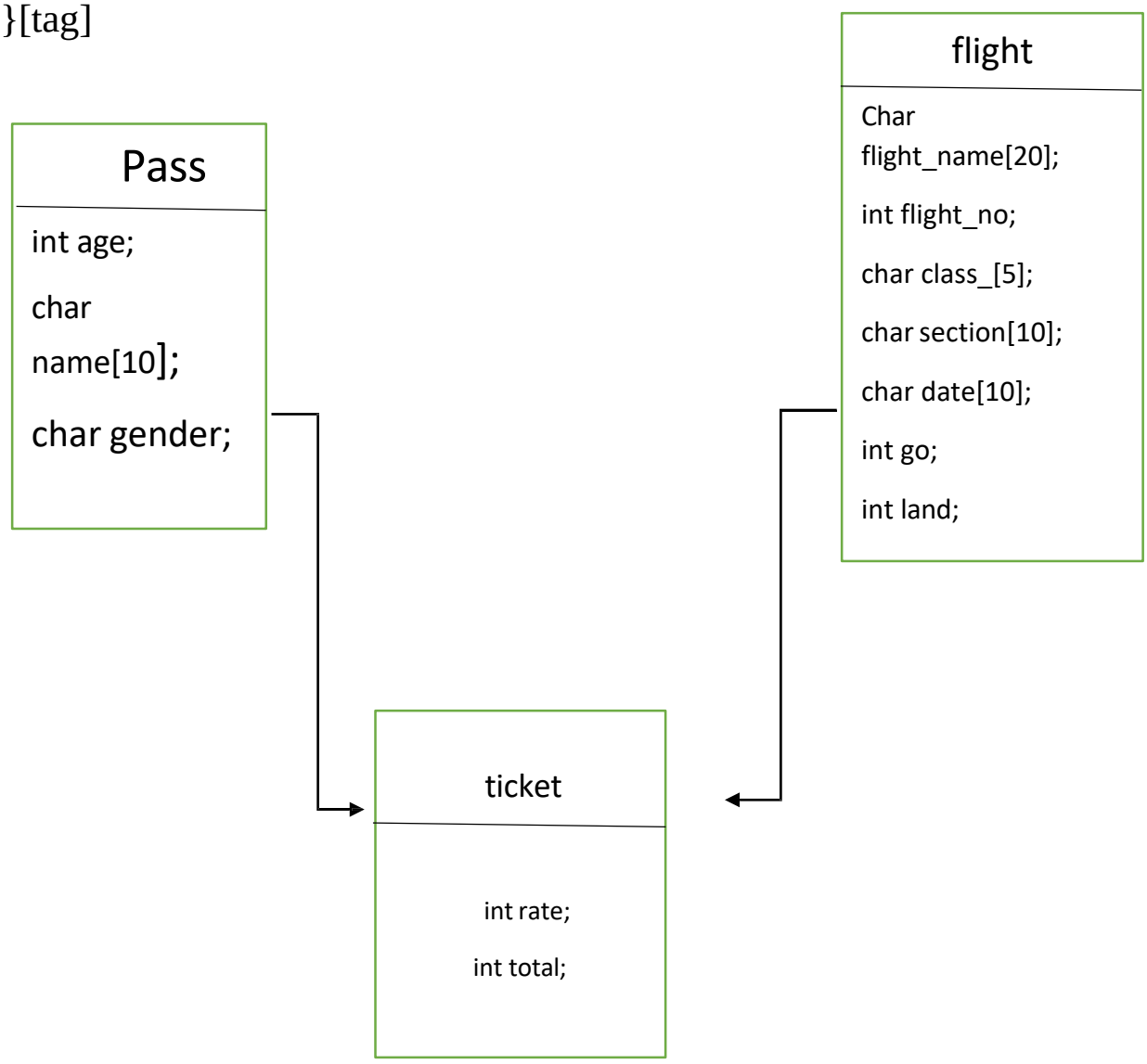
Syntax:

```
class A
    {
        Definition of Class A;
    };
class B
    {
        Definition of class B;
    };

class C: public A, public B
    {
        Definition of class C;
     };
```

2.structure: Structure is a collection of an different datatype and different variables.

Syntax:

```
struct sturucture_name
{
        datatype variable 1;
        datatype variable 2;
        datatype variable n;
}[tag]
```



7.0 Project code:-

```
#include <iostream>
using namespace std;
#define size 10
int num_of_pass, i;
class pass
{
private:
    char name[10];
    int age;
    char gender;
    struct pass_1
    {
        char name_2[20];
        int age_2;
        char gender_2;
    } p[size];

public:
    void input();
    void output();
};

void pass::input()
{
    cout << "\n\t\t_____________ Enter the passanger details_____________";
    cout << "\n\n Enter the number of members into your family  =";
    cin >> num_of_pass;
    cout << "\n Enter the passanger Name =";
    cin >> name;
    cout << "\n Enter the Age =";
    cin >> age;
    cout << "\n Enter the Gender (M||F) =";
    cin >> gender;
    if (num_of_pass > 1)
    {
        for (i = 0; i < num_of_pass - 1; i++)
        {
            cout << "\n Enter the passanger Name =";
            cin >> p[i].name_2;
            cout << "\n Enter the Age =";
```

```
            cin >> p[i].age_2;
            cout << "\n Enter the Gender (M||F) =";
            cin >> p[i].gender_2;
        }
    }
}

void pass::output()
{
    cout << "\n\n\n\t_____Passanger
details_____";
    cout << "\n\t\t\t No of passanger =" << num_of_pass;
    cout << "\n\t\t\t Passanger name =" << name;
    cout << "\n\t\t\t Age =" << age;
    cout << "\n\t\t\t Gender =" << gender;
    if (num_of_pass > 1)
    {
        for (i = 0; i < num_of_pass - 1; i++)
        {
            cout << "\n\t\t\t Passanger name =" << p[i].name_2;
            cout << "\n\t\t\t Age =" << p[i].age_2;
            cout << "\n\t\t\t Gender =" << p[i].gender_2;
        }
    }
}

class flight
{
private:
    char flight_name[10];
    int flight_no;
    char class_[5];
    char section[5];
    char date[10];
    int go;
    int land;

public:
    void in();
    void out();
};

void flight::in()
{
```

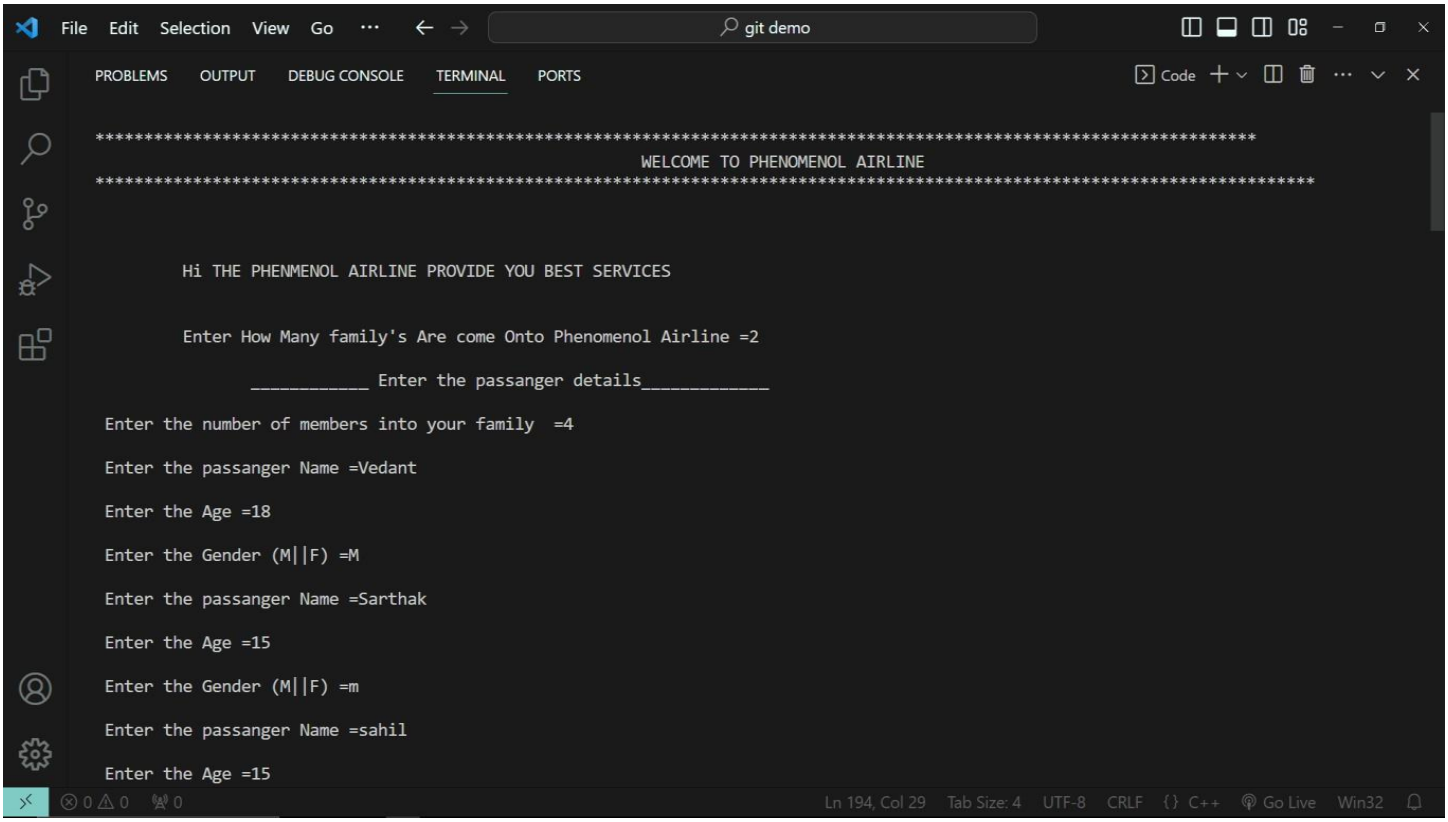
```
    cout << "\n Enter the Airplane name(boing_109,L32ng4) =";
    cin >> flight_name;
    cout << "\n Enter plane no =";
    cin >> flight_no;
    cout << "\n Enter calss (High||middle||low) =";
    cin >> class_;
    cout << "\n Enter section (A|B|C|D) =";
    cin >> section;
    cout << "\n Enter date =";
    cin >> date;
    cout << "\n  place for going =\n 1: New Dehli \n 2: Patana \n 3: Mumbia
\n 4:Bangaluru \n 5:Panjab \n 6:Hariyana ";
    cout << "\n Enter the choice =\n ";
    cin >> go;
    switch (go)
    {
    case 1:
        cout << "\t New Dehli";
        break;
    case 2:
        cout << "\t Patana";
        break;
    case 3:
        cout << "\t Mumbia";
        break;
    case 4:
        cout << "\t Bangaluru";
        break;
    case 5:
        cout << "\t Panjab";
        break;
    case 6:
        cout << "\t Hariyana";
        break;
    default:
        cout << "\t Invalid choice";
        break;
    }

    cout << "\n  place for landing =\n 1: New Dehli \n 2:Patana \n 3: Mumbia
\n 4:Bangaluru \n 5:Panjab \n 6:Hariyana ";
    cout << "\n Enter your choice =\n";
    cin >> land;
    switch (land)
```

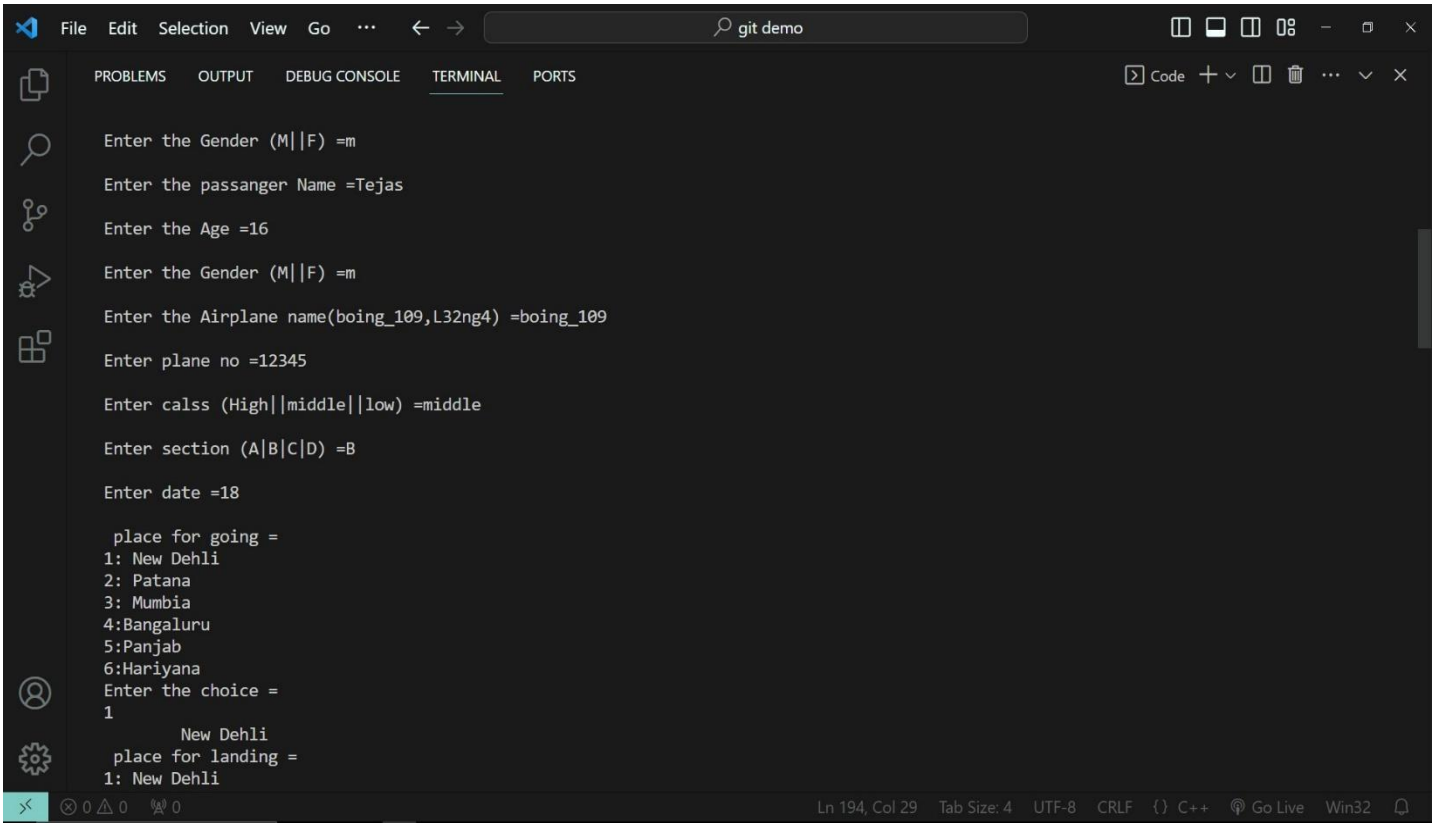
```
    {
    case 1:
        cout << "\t New Dehli";
        break;
    case 2:
        cout << "\t Patana";
        break;
    case 3:
        cout << "\t Mumbia";
        break;
    case 4:
        cout << "\t Bangaluru";
        break;
    case 5:
        cout << "\t Panjab";
        break;
    case 6:
        cout << "\t Hariyana";
        break;
    default:
        cout << "\t Invalid choice";

        break;
    }
}

void flight::out()
{
    cout << "\n\t\t\t Flight name = " << flight_name;
    cout << "\n\t\t\t Flight no = " << flight_no;
    cout << "\n\t\t\t Class = " << class_;
    cout << "\n\t\t\t Section = " << section;
    cout << "\n\t\t\t Date = " << date;
    cout << "\n\t\t\t Going form = " << go;
    cout << "\n\t\t\t Landing To = " << land;
}

class ticket : public pass, public flight
{
private:
    int rate;
    int total;

public:
```

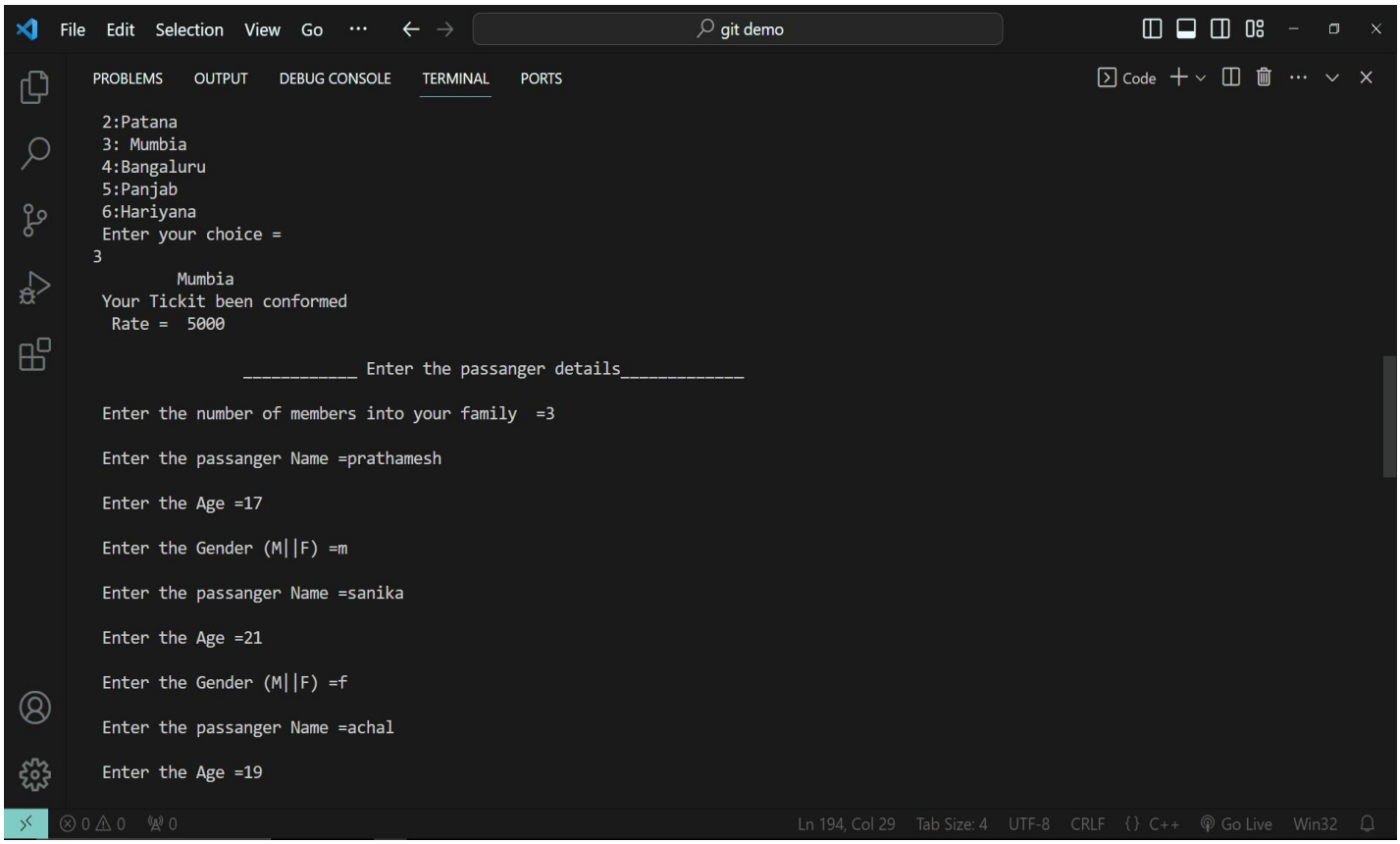
```
    void set();
    void get();
};

void ticket::set()
{
    cout << "\n Your Tickit been conformed";
    cout << "\n  Rate =  5000 ";
    cout << "\n";
    total = 5000 * num_of_pass;
}

void ticket::get()
{
    cout << "\n\t\t\t Total rate =" << total;
    cout << "\n\n";
}

int main()
{
    int family_no;
    int i;

    cout <<
"\n*************************************************************************
*****************************************\n";
    cout << "\t\t\t\t\t \t\tWELCOME TO PHENOMENOL AIRLINE \n";
    cout <<
"*************************************************************************
*************************************************\n";
    cout << "\n\n\n \t Hi THE PHENMENOL AIRLINE PROVIDE YOU BEST SERVICES
\n";

    cout << "\n\n\t Enter How Many family's Are come Onto Phenomenol Airline
=";
    cin >> family_no;
    if (family_no > 0)
    {
        ticket t[size];
        for (i = 0; i < family_no; i++)
        {
            t[i].input();
            t[i].in();
            t[i].set();
```

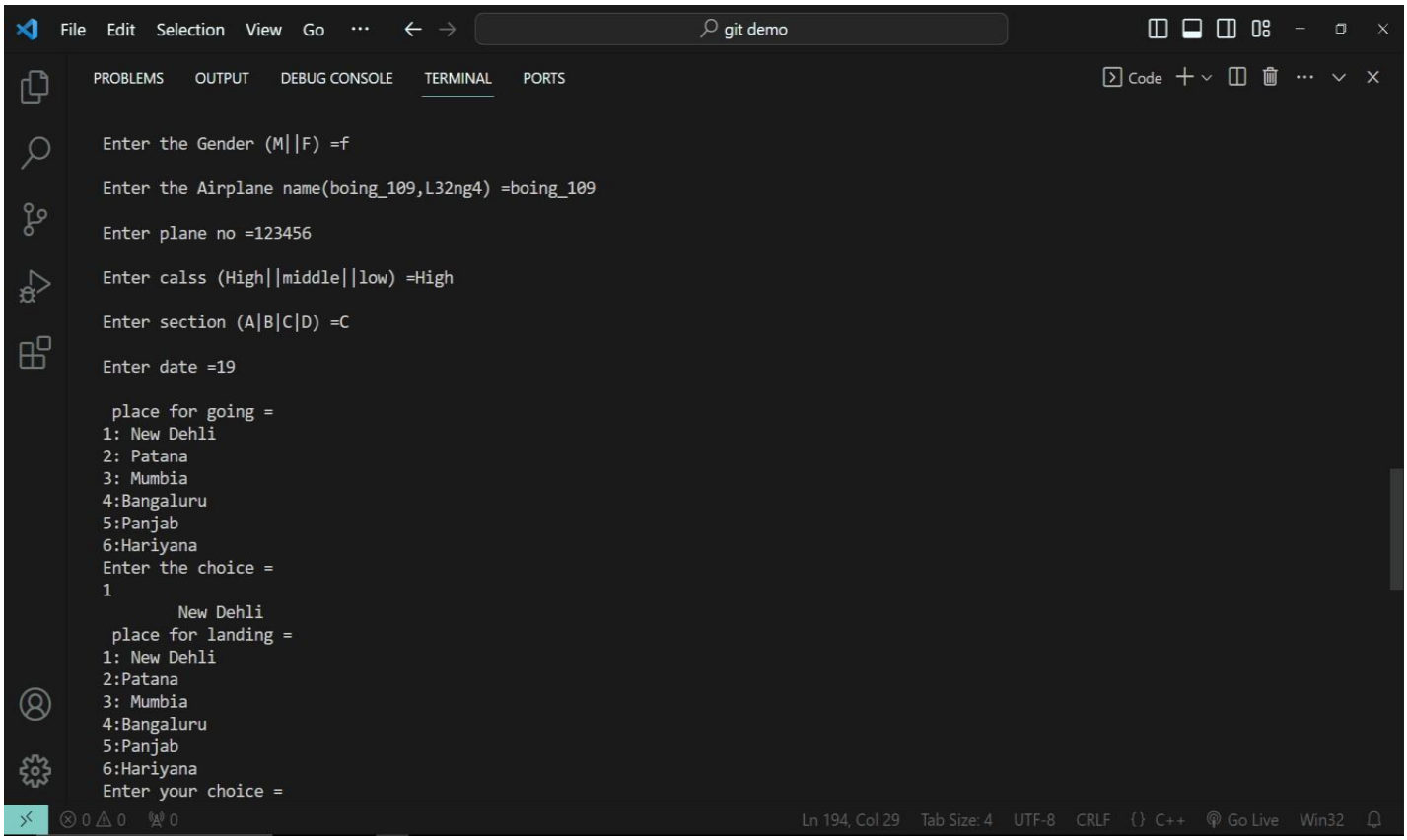
```
        }
        cout << "\n\t\t\t_________________ Your's details _____________> ";
        for (i = 0; i < family_no; i++)
        {
            t[i].output();
            t[i].out();
            t[i].get();
        }
    }
    else
    {
        cout << "\n Invalid choice \n plz Enter the valid choice ";
    }
    cout << "\n\t\t\t****************************************THANKYOU FOR
VISITE OUR AIRLINE*****************************************";
    cout <<
"\t\t\t\t**************************************************END*************
*********************************";
    return 0;
}
```

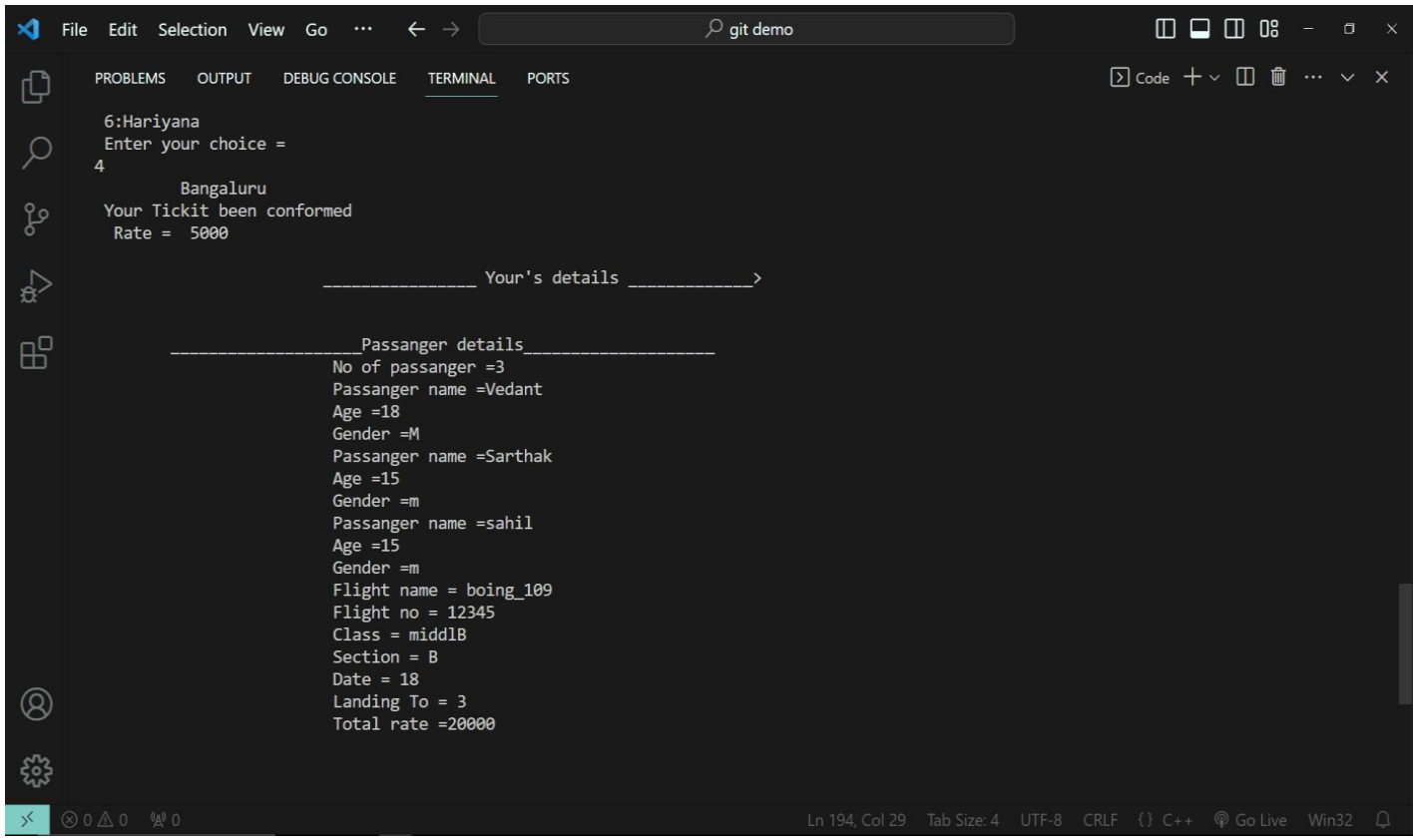
8.0 output:

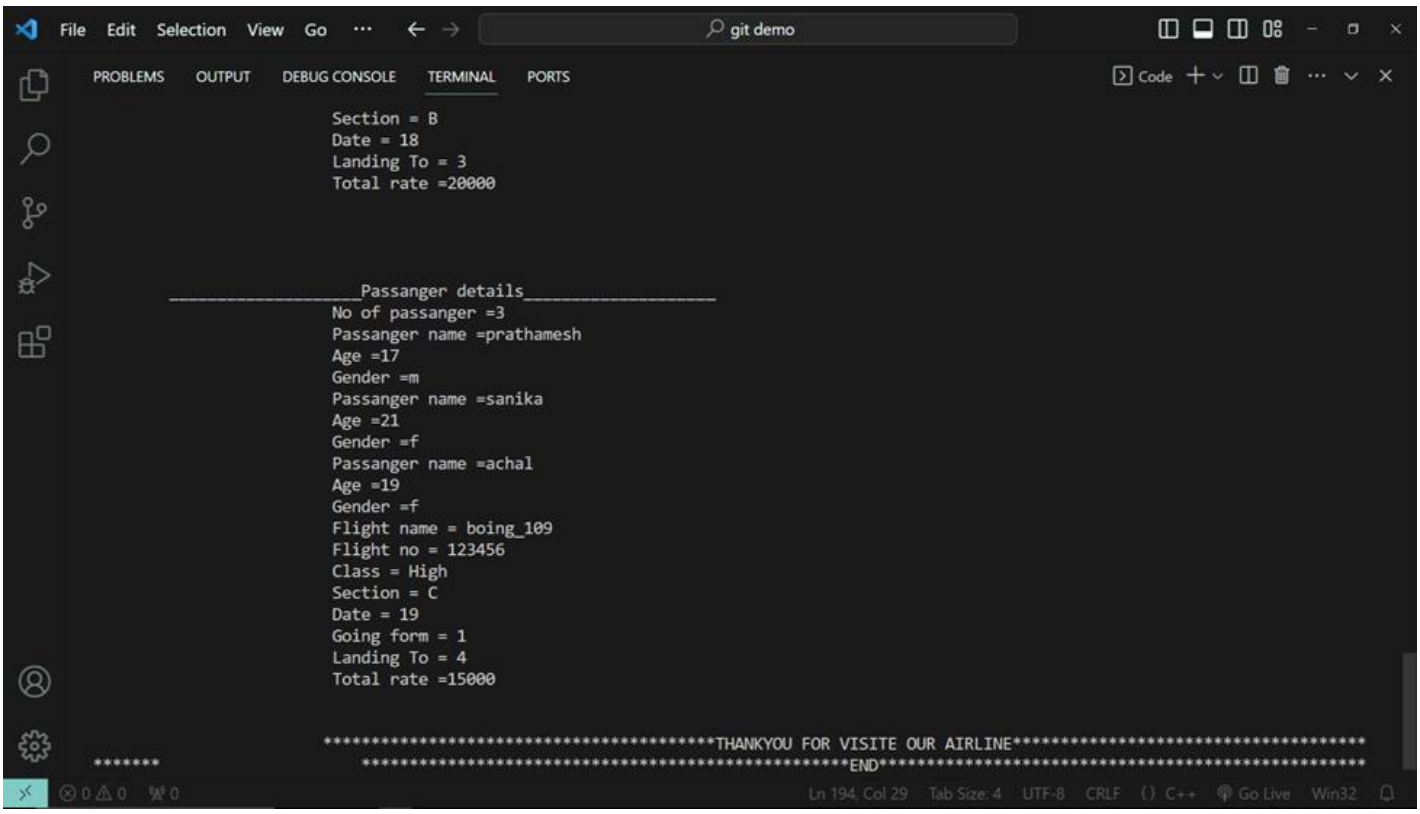

File Edit Selection View Go
git demo
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
****
WELCOME TO PHENOMENOL AIRLINE
****
Hi THE PHENMENOL AIRLINE PROVIDE YOU BEST SERVICES
Enter How Many family's Are come Onto Phenomenol Airline =2
_____ Enter the passanger details_____
Enter the number of members into your family =4
Enter the passanger Name =Vedant
Enter the Age =18
Enter the Gender (M||F) =M
Enter the passanger Name =Sarthak
Enter the Age =15
Enter the Gender (M||F) =m
Enter the passanger Name =sahil
Enter the Age =15
Ln 194, Col 29 Tab Size: 4 UTF-8 CRLF C++ Go Live Win32


File Edit Selection View Go
git demo
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
Enter the Gender (M||F) =m
Enter the passanger Name =Tejas
Enter the Age =16
Enter the Gender (M||F) =m
Enter the Airplane name(boing_109,L32ng4) =boing_109
Enter plane no =12345
Enter calss (High||middle||low) =middle
Enter section (A|B|C|D) =B
Enter date =18
place for going =
1: New Dehli
2: Patana
3: Mumbia
4:Bangaluru
5:Panjab
6:Hariyana
Enter the choice =
1
New Dehli
place for landing =
1: New Dehli
Ln 194, Col 29 Tab Size: 4 UTF-8 CRLF C++ Go Live Win32


File Edit Selection View Go
git demo
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
2:Patana
3: Mumbia
4:Bangaluru
5:Panjab
6:Hariyana
Enter your choice =
3
Mumbia
Your Tickit been conformed
Rate = 5000
_____ Enter the passanger details_____
Enter the number of members into your family =3
Enter the passanger Name =prathamesh
Enter the Age =17
Enter the Gender (M||F) =m
Enter the passanger Name =sanika
Enter the Age =21
Enter the Gender (M||F) =f
Enter the passanger Name =achal
Enter the Age =19
Ln 194, Col 29 Tab Size: 4 UTF-8 CRLF C++ Go Live Win32


File Edit Selection View Go
git demo
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
Enter the Gender (M||F) =f
Enter the Airplane name(boing_109,L32ng4) =boing_109
Enter plane no =123456
Enter calss (High||middle||low) =High
Enter section (A|B|C|D) =C
Enter date =19
place for going =
1: New Dehli
2: Patana
3: Mumbia
4:Bangaluru
5:Panjab
6:Hariyana
Enter the choice =
1
New Dehli
place for landing =
1: New Dehli
2:Patana
3: Mumbia
4:Bangaluru
5:Panjab
6:Hariyana
Enter your choice =
Ln 194, Col 29 Tab Size: 4 UTF-8 CRLF C++ Go Live Win32


File Edit Selection View Go ··· git demo
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
6:Hariyana
Enter your choice =
4
Bangaluru
Your Tickit been conformed
Rate = 5000
_____ Your's details _____>
_____Passanger details_____
No of passanger =3
Passanger name =Vedant
Age =18
Gender =M
Passanger name =Sarthak
Age =15
Gender =m
Passanger name =sahil
Age =15
Gender =m
Flight name = boing_109
Flight no = 12345
Class = middlB
Section = B
Date = 18
Landing To = 3
Total rate =20000
Ln 194, Col 29 Tab Size: 4 UTF-8 CRLF C++ Go Live Win32


File Edit Selection View Go ··· git demo
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
Section = B
Date = 18
Landing To = 3
Total rate =20000
_____Passanger details_____
No of passanger =3
Passanger name =prathamesh
Age =17
Gender =m
Passanger name =sanika
Age =21
Gender =f
Passanger name =achal
Age =19
Gender =f
Flight name = boing_109
Flight no = 123456
Class = High
Section = C
Date = 19
Going form = 1
Landing To = 4
Total rate =15000
**********THANKYOU FOR VISITE OUR AIRLINE**********
****
**********END**********
Ln 194, Col 29 Tab Size: 4 UTF-8 CRLF C++ Go Live Win32

8.0 ADVANTAGES:-

1. No more queues.
2. Safe Payment
3. Easy access to the ticket.
4. Preferential treatment
5. Low cost selling through accommodation services.

9.0 REFERENCE:-

1. Object Oriented Programming Using C++: Technical Publication
2. Object Oriented Programming using C++: Techmax Publication
3. Object Oriented Programming With C ++: Tata Mc Graw Hill
4. Education private Limited Publication

10.0 CONCLUSION:-

The development of the Airline Management System in C++ has yielded significant benefits for both airlines and passengers. This project aimed to enhance various aspects of airline operations, leading to improved efficiency, an enhanced customer experience, optimized resource allocation, robust data management, scalability, and a focus on reliability and security. The system's ongoing development and adaptability highlight its commitment to modernizing and streamlining airline management, showcasing technology's potential to revolutionize traditional industries. Continuous improvement and user feedback are integral to its mission, ensuring it remains at the forefront of airline management solutions, contributing to airline success and passenger satisfaction in the years to come.

11.0 ACTUAL RESOURCES USED:-

Sr. No	Instrument/Object	Specifications	Remark
01	Computer system	Intel i5 12th Gen 8GB RAM 512GB SSD	System
02	Software	TUTBO C++ or G++	Compiler
03	Any other resources use	VS CODE	Code Runner

12.0 LEARNING OUTCOMES :-

1. Critical Thinking
2. Leadership
3. Active listening Skill
4. Scheduling and Time Management
5. Technical Skill

Signature of Teacher :-
Prof. Shinde P.B