Airline reservation system

OODP MINI PROJECT

CONTENT

OBJECTIVE OF THE PROGRAM

- The objective of the Flight Management System (FMS) in C++ is to develop a software application that can effectively manage and automate various aspects of flight operations such as flight planning, navigation, communication, and monitoring. The FMS should be able to accurately calculate flight paths, fuel consumption, and other critical flight parameters while adhering to safety regulations and industry standards. Additionally, the system should provide user-friendly interfaces for pilots and ground crew to interact with, while maintaining high levels of system reliability and efficiency.

OODP MINI PROJECT

MODULES OF FLIGHT MANAGEMENT SYSTEM

- STRUCT
- INSERT
- SEARCH
- SHOW
- UPDATE
- DELETE
- LOGOUT

OODP MINI PROJECT

PROCEDURE

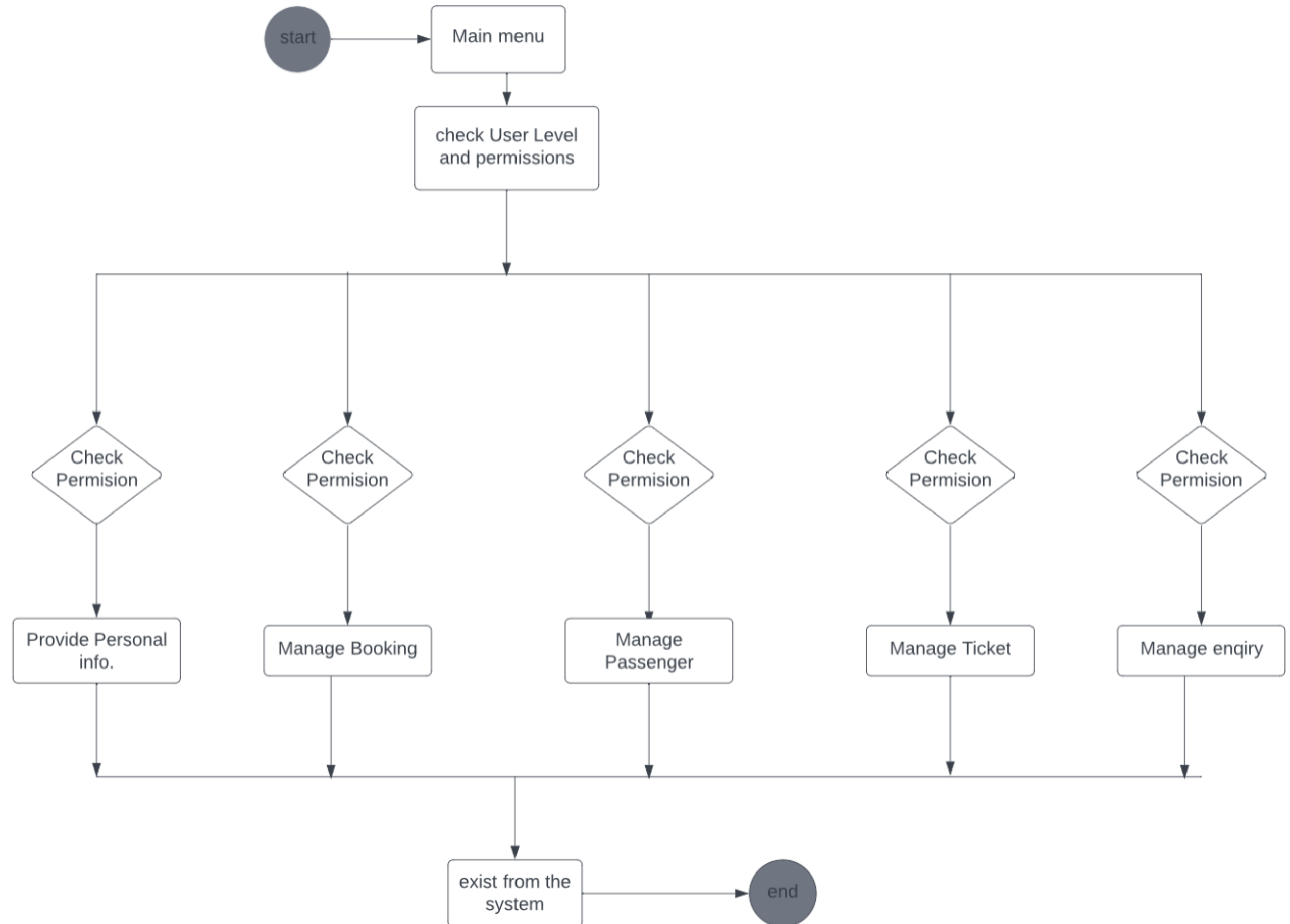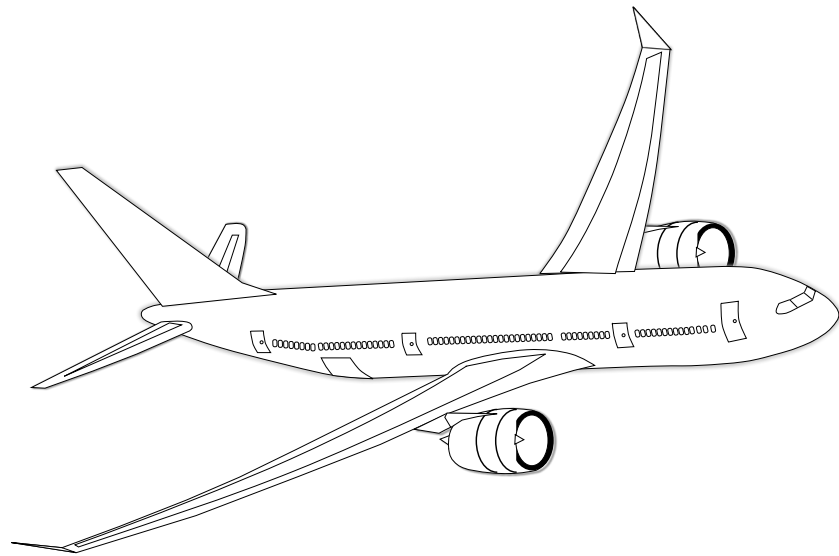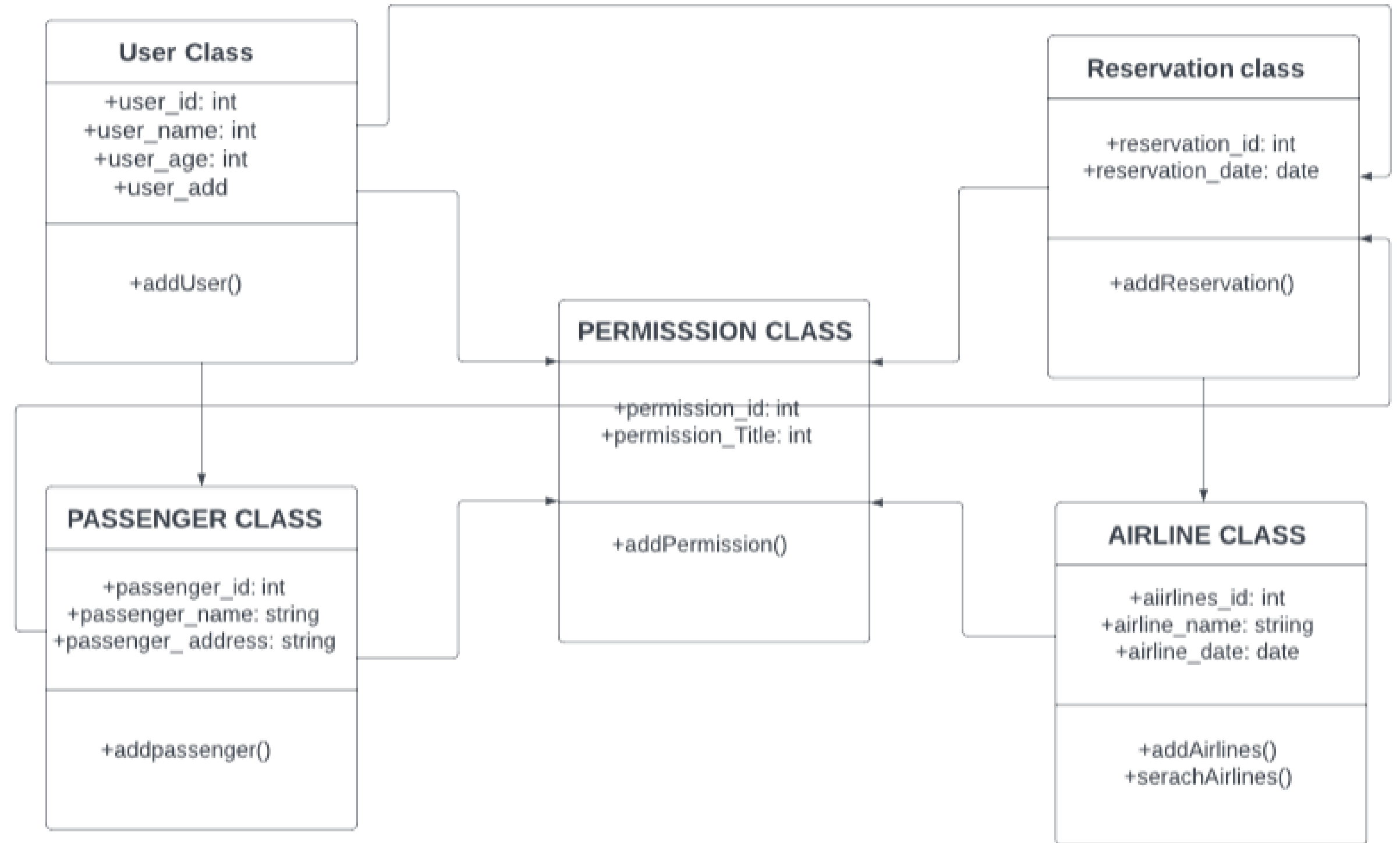|	
1	First, the programme displays the Main menu, which comprises [1.add the Customer Details, 2.flight Registration, 3.Ticket and Charges, 4.Exist] options.
2	If the user selects option 1, he or she will be prompted to provide personal information such as age, gender, and address.
3	If the user selects option 2, he or she will be asked to select a flight.
4	If the user selects option 2, he or she will be asked to select a flight.aAfter picking a flight, the user will be able to examine the availability of flights as well as their prices.
5	After that, if the user selects option 4, the user will receive aeroplane tickets IN PDF FORMAT.
6	option 5 for quieting the interface
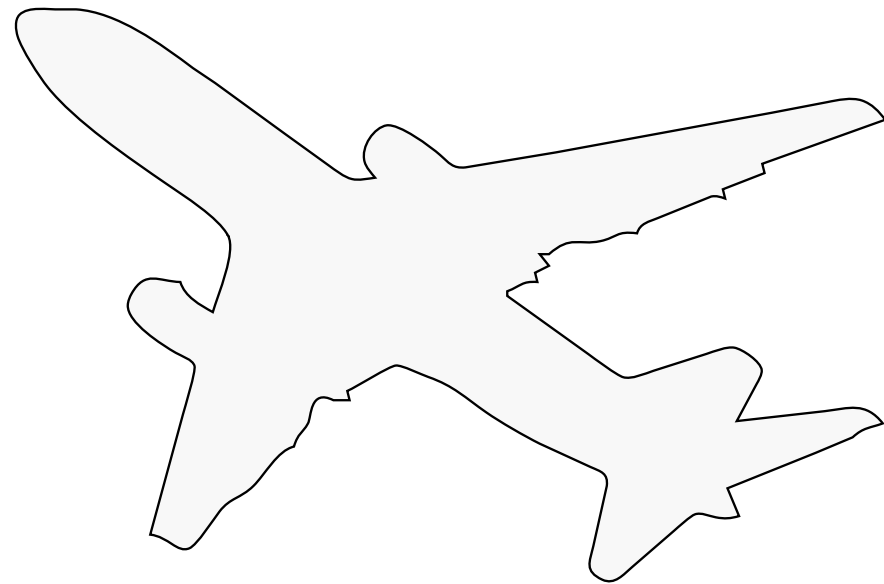
OODP MINI PROJECT

CLASS DIAGRAM

User Class

+user_id: int
+user_name: int
+user_age: int
+user_add

+addUser()

Reservation class

+reservation_id: int
+reservation_date: date

+addReservation()

PERMISSSION CLASS

+permission_id: int
+permission_Title: int

+addPermission()

PASSENGER CLASS

+passenger_id: int
+passenger_name: string
+passenger_ address: string

+addpassenger()

AIRLINE CLASS

+aiirlines_id: int
+airline_name: striing
+airline_date: date

+addAirlines()
+serachAirlines()

OODP MINI PROJECT

CODE

```cpp
        cout<<"\n Enter the Customer Name(first name only): ";
        cin>>name;
        cout<<"\n Enter the age: ";
        cin>>age;
        cout<<"\n Address: ";
        cin>>address;
        cout<<"\n Gender: ";
        cin>>gender;

        cout<<"YOUR DETAILS ARE SAVE WITH US "<<endl;
    }
};
//above codes are correct do not change
int Details::cId;
string Details::name;
string Details::gender;

You, 1 hour ago | 1 author (You)
class registration
{
    public:
        static int choice;
        int choice1;
        int back;
        static float charges;

        void flights()
        {
            string  flightN[]={ "Dubai","canada","uk","USA",};

            for(int a=0;a<4;a++)
            {
                cout<<(a+1)<<".flight to "<<flightN[a]<<endl;
            }
            cout<<"\n Welcome to the Airlines Booking System: "<<endl;
            cout<<"press the number of the country you want to travel to: "<<endl;
            cin>>choice;
```

```cpp
            switch(choice)
            {
                case 1:

                    cout<<"_____Welcome to Dubai Emirates_____\n"<<endl;

                    cout<<"Your comfort is our priority"<<endl;
                    cout<<"following are the flights \n "<<endl;

                    cout<<"1.Dub - 498"<<endl;
                    cout<<"\t08-01-2023 8:00AM 10hrs Rs. 14000"<<endl;
                    cout<<"2.Dub - 458"<<endl;
                    cout<<"\t09-01-2023 4:00AM 11hrs Rs. 10000"<<endl;
                    cout<<"3.Dub - 698"<<endl;
                    cout<<"\t11-01-2023 8:00AM 12hrs Rs. 9000"<<endl;

                    cout<<"\n Select the flight you want to travel: "<<endl;
                    cin>>choice1;
                    if(choice1==1)
                    {
                        charges=14000;
                        cout<<"\nYou have successfully booked your flight DUB - 498"<<endl;
                        cout<<"You can go to back to menu and take your ticket"<<endl;

                    }
                    else if(choice1==2)
                    {
                        charges=10000;
                        cout<<"\nYou have successfully booked your flight DUB - 458"<<endl;
                        cout<<"You can go to back to menu and take your ticket"<<endl;

                    }
                    else if(choice1==3)
                    {
                        charges=9000;
                        cout<<"\nYou have successfully booked your flight DUB - 698"<<endl;
                        cout<<"You can go to back to menu and take your ticket"<<endl;
```

```cpp
                        cout<<"You can go to back to menu and take your ticket"<<endl;

                    }
                    else
                    {
                        cout<<"Invalid input , shifting to yhe prevoius menu"<<endl;
                        flights();
                    }

                    cout<<"\nPress 1 to go back to main menu"<<endl;
                    cin>>back;

                    if(back==1)
                    {
                        mainMenu();
                    }
                    else
                    {
                        mainMenu();
                    }
                }
                case 2:
                {
                    cout<<"_____Welcome to Canadaian Airlines_____\n"<<endl;

                    cout<<"Your comfort is our priority"<<endl;
                    cout<<"following are the flights \n "<<endl;

                    cout<<"1.CA - 198"<<endl;
                    cout<<"\t08-01-2023 2:00PM 10hrs Rs. 34000"<<endl;
                    cout<<"2.CA - 158"<<endl;
                    cout<<"\t011-01-2023 4:00AM 17hrs Rs. 29000"<<endl;
                    cout<<"3.CA - 208"<<endl;
                    cout<<"\t14-01-2023 8:00AM 20hrs Rs. 40000"<<endl;

                    cout<<"\n Select the flight you want to travel: "<<endl;
                    cin>>choice1;
                    if(choice1==1)
```

OODP MINI PROJECT

CODE

Screenshot 1 (top-left):

```
                cin>>choice1;
141             if(choice1==1)
142             {
143                 charges=34000;
144                 cout<<"\nYou have successfully booked your flight Can - 498"<<endl;
145                 cout<<"You can go to back to menu and take your ticket"<<endl;
146
147             else if(choice1==2)
148             {
149                 charges=29000;
150                 cout<<"\nYou have successfully booked your flight CA - 158"<<endl;
151                 cout<<"You can go to back to menu and take your ticket"<<endl;
152
153             }
154             else if(choice1==3)
155             {
156             charges=40000;
157                 cout<<"\nYou have successfully booked your flight CA - 208"<<endl;
158                 cout<<"You can go to back to menu and take your ticket"<<endl;
159
160             }
161             else
162             {
163             cout<<"Invalid input , shifting to yhe prevoius menu"<<endl;
164             flights();
165             }
166             cout<<"\nPress 1 to go back to main menu"<<endl;
167             cin>>back;
168
169             if(back==1)
170             {
171                 mainMenu();
172             }
173             else
174             {
175                 mainMenu();
176             }
177         }
```

Screenshot 2 (top-right):

```
178
179             case 3:
180             {
181                 cout<<"_____Welcome to UK Aitways_____\n"<<endl;
182
183                 cout<<"Your comfort is our priority"<<endl;
184                 cout<<"following are the flights \n "<<endl;
185
186                 cout<<"1.UK - 798"<<endl;
187                 cout<<"\t12-01-2023 8:00AM 12hrs Rs. 44000"<<endl;
188
189
190                 cout<<"\n Select the flight you want to travel: "<<endl;
191                 cin>>choice1;
192                 if(choice1==1)
193                 {
194                     charges=44000;
195                     cout<<"\nYou have successfully booked your flight UK - 798"<<endl;
196                     cout<<"You can go to back to menu and take your ticket"<<endl;
197
198                 }
199                 else
200                 {
201                     cout<<"Invalid input , shifting to yhe prevoius menu"<<endl;
202                     flights();
203                 }
204                 cout<<"\nPress 1 to go back to main menu"<<endl;
205                 cin>>back;
206
207
208                 if(back==1)
209                 {
210                     mainMenu();
211                 }
212                 else
213                 {
214                     mainMenu();
215                 }
```

Screenshot 3 (bottom-left):

```
214                 mainMenu();
215             }
216         }
217             case 4:
218             {
219                 cout<<"_____Welcome to US Airways_____\n"<<endl;
220
221                 cout<<"Your comfort is our priority"<<endl;
222                 cout<<"following are the flights \n "<<endl;
223
224                 cout<<"1.US - 567"<<endl;
225                 cout<<"\t10-01-2023 8:00AM 10hrs Rs. 37000"<<endl;
226                 cout<<"2.US - 458"<<endl;
227                 cout<<"\t09-01-2023 4:00AM 11hrs Rs. 10000"<<endl;
228                 cout<<"3.US - 698"<<endl;
229                 cout<<"\t11-01-2023 8:00AM 12hrs Rs. 80000"<<endl;
230
231                 cout<<"\n Select the flight you want to travel: "<<endl;
232                 cin>>choice1;
233                 if(choice1==1)
234                 {
235                     charges=37000;
236                     cout<<"\nYou have successfully booked your flight US - 567"<<endl;
237                     cout<<"You can go to back to menu and take your ticket"<<endl;
238
239                 }
240                 else if(choice1==2)
241                 {
242                     charges=10000;
243                     cout<<"\nYou have successfully booked your flight US - 458"<<endl;
244                     cout<<"You can go to back to menu and take your ticket"<<endl;
245
246                 }
247                 else if(choice1==3)
248                 {
249                     charges=80000;
250                     cout<<"\nYou have successfully booked your flight US - 698"<<endl;
251                     cout<<"You can go to back to menu and take your ticket"<<endl;
```

Screenshot 4 (bottom-right):

```
251                 cout<<"You can go to back to menu and take your ticket"<<endl;
252
253                 else
254                 {
255                     cout<<"Invalid input , shifting to yhe prevoius menu"<<endl;
256                     flights();
257                 }
258                 cout<<"\nPress 1 to go back to main menu"<<endl;
259                 cin>>back;
260
261                 if(back==1)
262                 {
263                     mainMenu();
264                 }
265                 else
266                 {
267                     mainMenu();
268                 }
269             }
270         }
271             default:
272             {
273                 cout<<"Invalid input , shifting to the prevoius menu"<<endl;
274                 mainMenu();
275                 break;
276             }
277         }
278     }
279 };
280 float registration::charges;
281 int registration::choice;
282 // above codes are correct do not change them
    You, 1 hour ago | 1 author (You)
283 class ticket : public registration, Details
284 {
285     public:
286         void Bill()
287         {
288             string destination="";
```

OODP MINI PROJECT

CODE

```cpp
void Bill()
{
    string destination="";
    ofstream outf("ticketDetails.pdf");
    {
        outf<<"_____ Airlines Booking System_____ _____"<<endl;
        outf<<"_____TICKET_____"<<endl;
        outf<<"_____"<<endl;

        outf<<"Customer ID: "<<Details::cId<<endl;
        outf<<"Customer Name(first name only): "<<Details::name<<endl;
        outf<<"Customer Gender: "<<Details::gender<<endl;
        outf<<"\tDescription"<<endl;

        if(registration::choice==1)
        {
            destination="Dubai";
        }
        else if(registration::choice==2)
        {
            destination="Canada";
        }
        else if(registration::choice==3)
        {
            destination="UK";
        }
        else if(registration::choice==4)
        {
            destination="USA";
        }

        outf<<"Destination\t\t"<<destination<<endl;
        outf<<"Flight cost : \t\t"<<registration::charges<<endl;
    }
    outf.close();
}
void dispBill()
```

```cpp
void dispBill()
{
    ifstream ifs("ticketDetails.pdf");
        if(!ifs)
        {
            cout<<"File error!"<<endl;
        }
        while(!ifs.eof())
        {
            ifs.getline(arr, 100);
            cout<<arr<<endl;
        }
    ifs.close();
};
// above codes are correct do not change them
void mainMenu()
{
    int lchoice;
    int schoice;
    int back;

    cout<<"\t WELL COME TO FLY INDIA AIRLINES\n"<<endl;
    cout<<"\t _____MAIN MENU_____"<<endl;

    cout<<"\t _____"<<endl;
    cout<<"\t|\t \t\t\t\t\t| "<<endl;
    //create a structure whuch will ask the to prees a particular button to open a particular functionality

    cout<<"\t|\t Press 1 to add the customer Details    \t|"<<endl;
    cout<<"\t|\t Press 2 to for flight registration      \t|"<<endl;
    cout<<"\t|\t Press 3 to Ticket and charges           \t|"<<endl;
    cout<<"\t|\t Press 4 to  Exit                        \t|"<<endl;
    cout<<"\t|\t \t\t\t\t\t| "<<endl;
    cout<<"\t _____"<<endl;
```

```cpp
    cout<<"\t _____"<<endl;

    cout<<"\t Enter your choice: ";
    cin>>lchoice;

    Details d;
    registration r;
    ticket t;

    switch(lchoice)
    {
        case 1: //for customer details
        {
            cout<<"_____Customer_____\n"<<endl;
            d.information();
            cout<<"\nPress 1 to go back to main menu"<<endl;
            cin>>back;

            if(back==1)
            {
                mainMenu();
            }
            else
            {
                mainMenu();
            }
            break;
        }
        case 2: //for flight registration
        {
            cout<<"_____Book a flight using this system_____\n"<<endl;
            r.flights(); // r is nmae of object and flight is a function
            break;
        }
        case 3: //for ticket and collection
        {
```

```cpp
        case 3: //for ticket and collection
        {
            cout<<"_____GET YOUR TICKET_____\n"<<endl;
            t.Bill();
            cout<<"Your tickey is printed, you can colect it \n"<<endl;
            cout<<"press 1 to display your ticket";

            cin>>back;

            if(back==1)
            {
                t.dispBill();
                cout<<"\nPress 1 to go back to main menu";
                cin>>back;
                if(back==1)
                {
                    mainMenu();
                }
                else
                {
                    mainMenu();
                }
            }
            else
            {
                mainMenu();
            }
            break;
        }
        case 4: //for exit
        {
            cout<<"Thank you for using our system"<<endl;
            break;
        }
        default :
        {
            cout<<"Invalid choice please try agaain"<<endl;
```
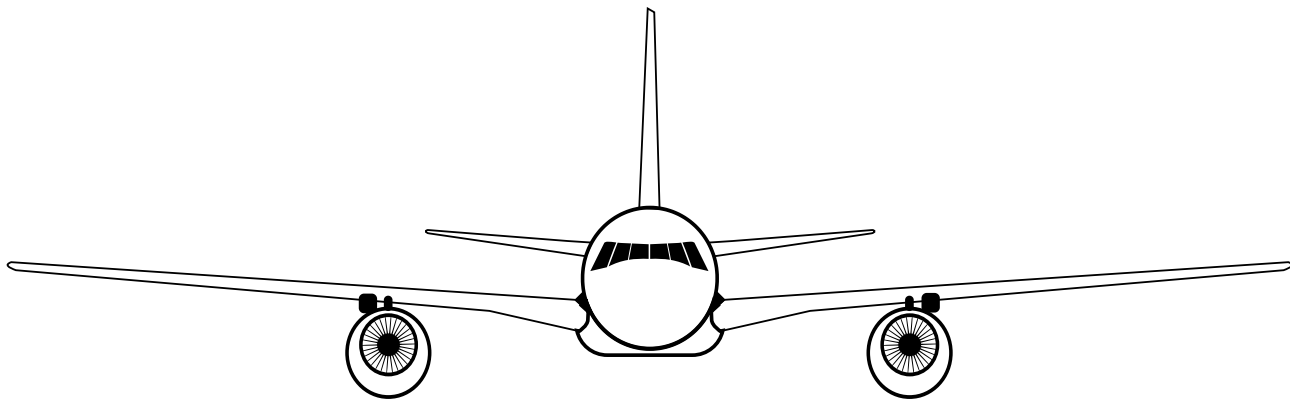
CODE

ACCESS ALL SOURCES AND THIS PPT AT-
https://github.com/anuj-rishu/Airline-Reservation-
System

OODP MINI PROJECT

RESULT


```
cd "/Users/anujrishutiwari/Documents/Airline-Reservation-System/" && g++
anujrishutiwari@Anujs-MacBook-Air Airline-Reservation-System % cd "/User
pp -o airlinecode && "/Users/anujrishutiwari/Documents/Airline-Reservati
            WELL COME TO FLY INDIA AIRLINES


_____MAIN MENU_____

    _____
   |                                                           |
   |           Press 1 to add the customer Details             |
   |           Press 2 to for flight registration              |
   |           Press 3 to Ticket and charges                   |
   |           Press 4 to  Exit                                |
   |                                                           |
   |_____|

   _____
   Enter your choice:
```

```
Enter the Customer ID: 123

Enter the Customer Name(first name only): ANUJ

Enter the age: 18

Address: MALE

Gender: MALE
YOUR DETAILS ARE SAVE WITH US

Press 1 to go back to main menu
```
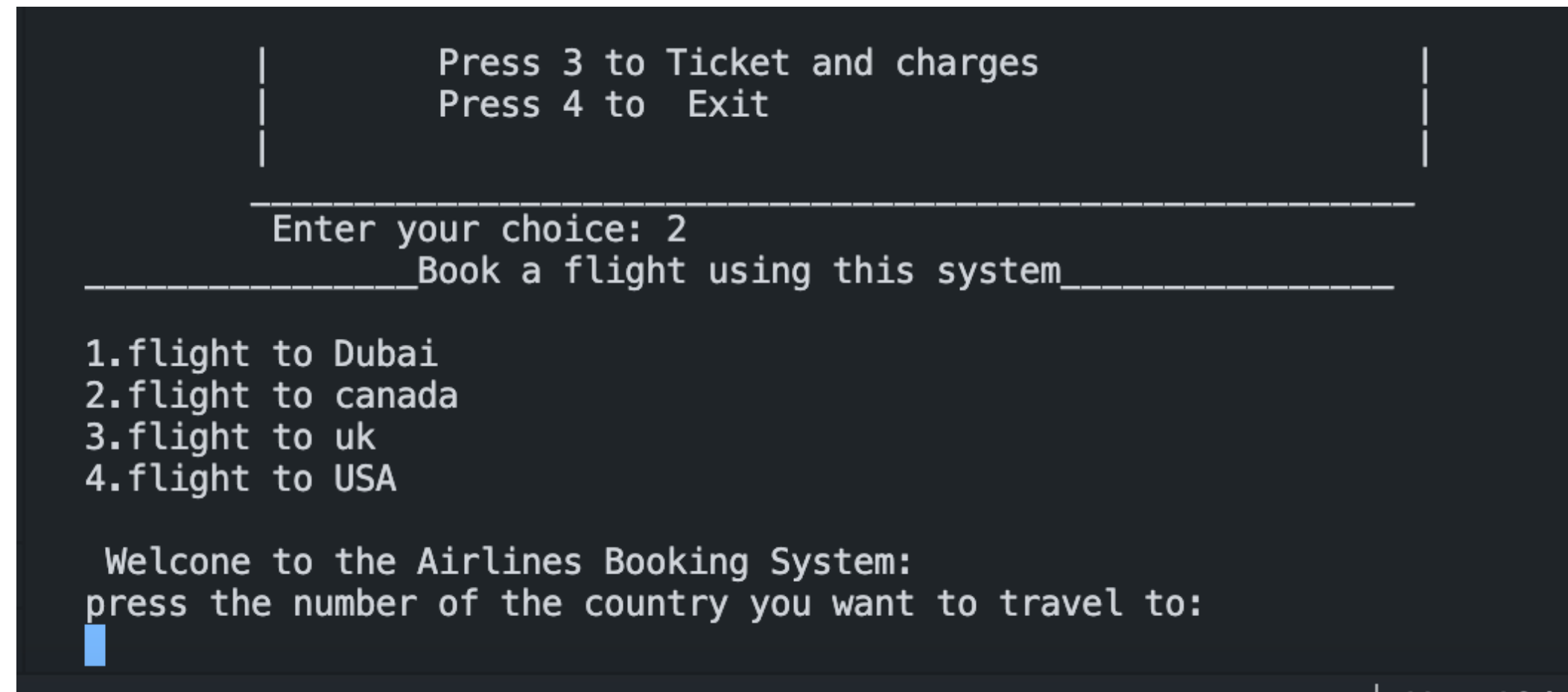
OODP MINI PROJECT

RESULT


```
|              Press 3 to Ticket and charges            |
|              Press 4 to  Exit                         |
|                                                       |
|                                                       |
_____
         Enter your choice: 2
_____Book a flight using this system_____

1.flight to Dubai
2.flight to canada
3.flight to uk
4.flight to USA

 Welcone to the Airlines Booking System:
press the number of the country you want to travel to:
▌
```

```
2
_____Welcome to Canadaian Airlines_____

Your comfort is our priority
following are the flights

1.CA – 198
        08-01-2023 2:00PM 10hrs Rs. 34000
2.CA – 158
        011-01-2023 4:00AM 17hrs Rs. 29000
3.CA – 208
        14-01-2023 8:00AM 20hrs Rs. 40000

 Select the flight you want to travel:
▌
```
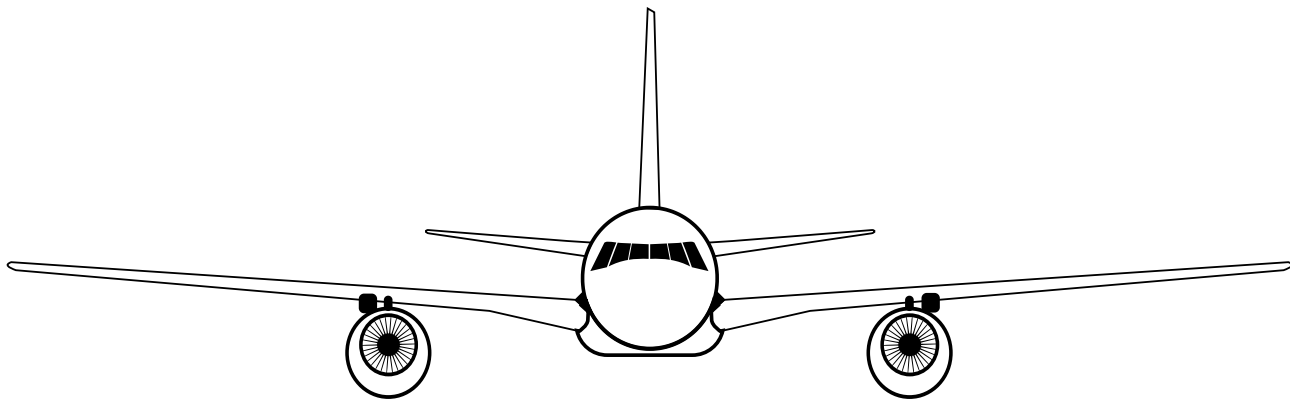
OODP MINI PROJECT

RESULT


```
1.CA - 198
        08-01-2023 2:00PM 10hrs Rs. 34000
2.CA - 158
        011-01-2023 4:00AM 17hrs Rs. 29000
3.CA - 208
        14-01-2023 8:00AM 20hrs Rs. 40000

 Select the flight you want to travel:
1

You have successfully booked your flight Can - 498
You can go to back to menu and take your ticket

Press 1 to go back to main menu
```

```
Press 1 to go back to main menu1
          WELL COME TO FLY INDIA AIRLINES

_____MAIN MENU_____

 _____
|                                                        |
|         Press 1 to add the customer Details            |
|         Press 2 to for flight registration             |
|         Press 3 to Ticket and charges                  |
|         Press 4 to  Exit                               |
|                                                        |
|_____|

Enter your choice:
```

THE END