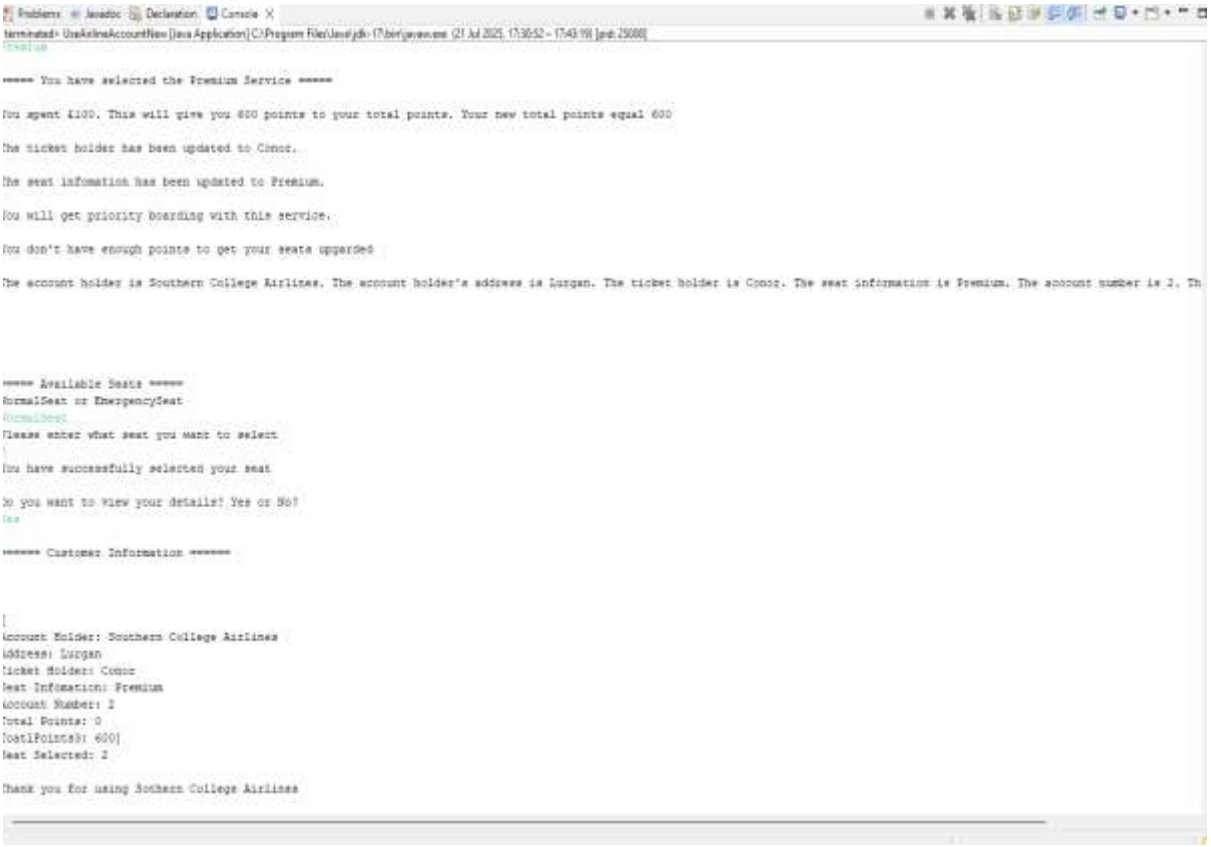
Airline Booking System

12th December 2023



Background:

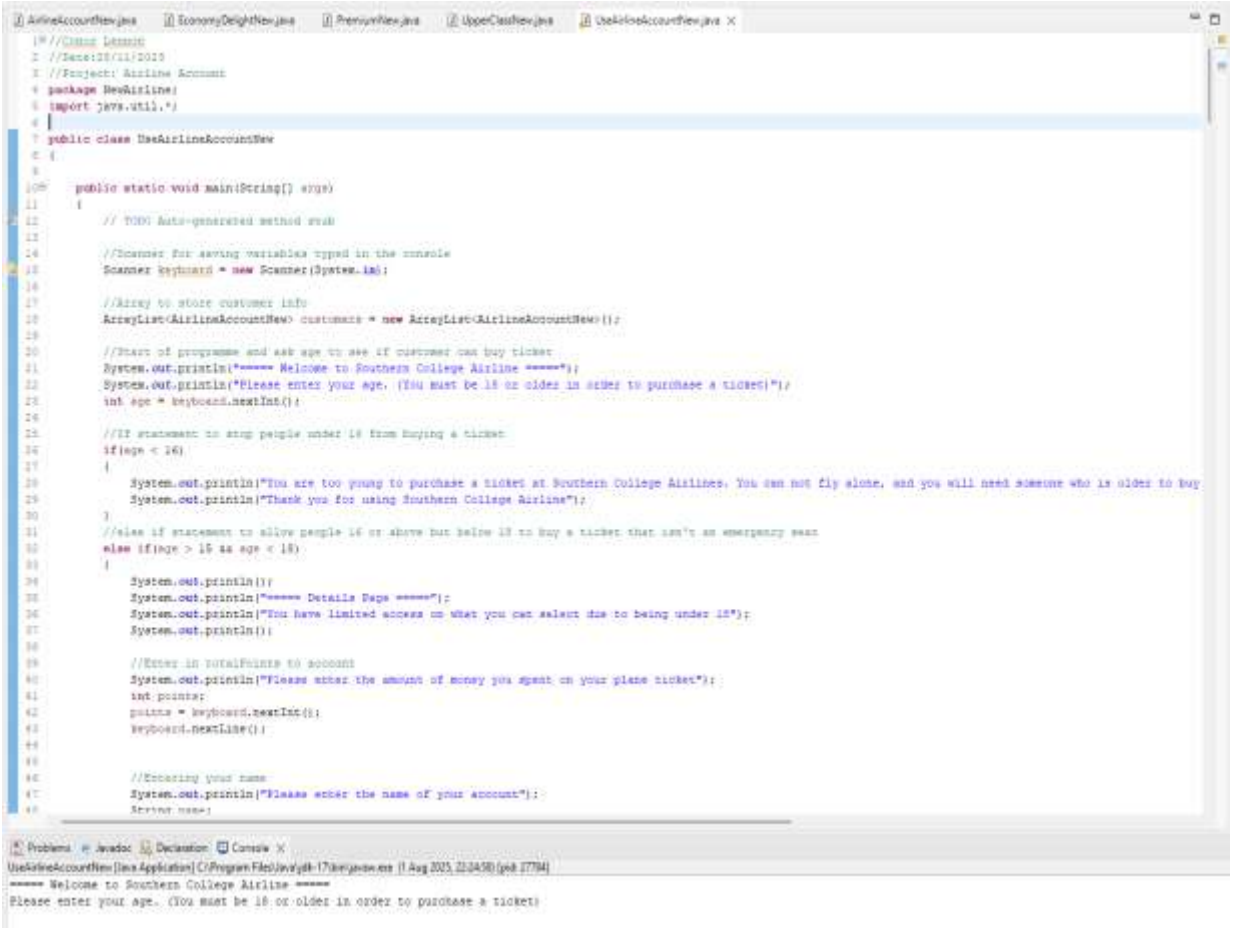
In September of 2023 I was set out to create an airline booking system using Java to code it in Eclipse. I wanted to create an airline system that has different classes of seating areas in the plane such as economy, premium, and upper class, whole having different perks for each class to give them a reason to be chosen over the other. I wanted to make sure that the person booking has to be over 19 to book their flight and also have to put in their details in order to book their flight.

Planning Stage:

Before I created the project, I first set out a list of idea for what the system can have which include:

- Having to be 18 or older to make a booking
- Have different flight classes such as economy, premium, and upper class
- Having each flight class have different perks
- Let you pick which seat you want
- Have the code read your full flight details at the end of the programme

How the Programme Works / UseAirlineAccount Class:



```
//Chase Lennox
//Date:25/11/2025
//Project: Airline Account
package NewAirline;
import java.util.*;

public class UseAirlineAccountNew
{

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub

        //Scanner for saving variables typed in the console
        Scanner keyboard = new Scanner(System.in);

        //Array to store customer info
        ArrayList<AirlineAccountNew> customers = new ArrayList<AirlineAccountNew>();

        //Start of programme and ask age to see if customer can buy ticket
        System.out.println("===== Welcome to Southern College Airline =====");
        System.out.println("Please enter your age. (You must be 16 or older in order to purchase a ticket)");
        int age = keyboard.nextInt();

        //If statement to stop people under 16 from buying a ticket
        if(age < 16)
        {
            System.out.println("You are too young to purchase a ticket at Southern College Airlines. You can not fly alone, and you will need someone who is older to buy
            System.out.println("Thank you for using Southern College Airline");
        }
        //else if statement to allow people 16 or above but below 18 to buy a ticket that isn't an emergency seat
        else if(age > 16 && age < 18)
        {
            System.out.println();
            System.out.println("===== Details Page =====");
            System.out.println("You have limited access on what you can select due to being under 18");
            System.out.println();

            //Enter in totalPoints to account
            System.out.println("Please enter the amount of money you spent on your plane ticket");
            int points;
            points = keyboard.nextInt();
            keyboard.nextLine();


            //Entering your name
            System.out.println("Please enter the name of your account");
            String name;
```

```
===== Welcome to Southern College Airline =====
Please enter your age. (You must be 16 or older in order to purchase a ticket)
```

When making my project I first made my AirlineAccount class which stores all the data of the programme and user. After I made this main class, I made the classes for the different airline options with the EconomyDelight, Premium, and UpperClass class. I gave each class their only variables that fits the theme of the class and each variable will be used if you select one over the other. Once I had the classes that I need for making my project, I then made my main class called UseAirlineAccount which runs the programme when you run the project on this class. This works by the main class in it that has all the functions of running the programme and it is linked to other classes to access the data and variables of them. All these classes working together helps make the programme work and lets users to book their airline seat and service.

Airline Account Class:

AirlineAccountNew... | EconomyDelightNew... | PremiumNew.java | UpperClassNew.java | UseAirlineAccount...

```java
//Conor Lennon
//Date:28/11/2023
//Project: Airline Account

package NewAirline;

public class AirlineAccountNew
{
    //declaring variables
    protected String accountHolder;
    protected String address;
    protected String ticketHolder;
    protected String seatInfo;
    protected int accNum;
    protected int totalPoints;

    //Airline Account Constructor
    public AirlineAccountNew(String newAccountHolder, String newAddress, String newTicketHolder,
    {
        this.accountHolder = newAccountHolder;
        this.address = newAddress;
        this.ticketHolder = newTicketHolder;
        this.seatInfo = newSeatInfo;
        this.accNum = newAccNum;
        this.totalPoints = newTotalPoints;
    }

    //Airline Account Default Constructor
    public AirlineAccountNew()
    {
        this.accountHolder = null;
        this.address = null;
        this.ticketHolder = null;
        this.seatInfo = null;
        this.accNum = 0;
        this.totalPoints = 0;
    }

    //Setting Accounting Holder
    public void setAccountHolder(String newAccountHolder)
    {
        this.accountHolder = newAccountHolder;
    }

    //Getting / Returning Account Holder
    public String getAccountHolder()
    {
        return accountHolder;
    }

    //Setting Address
```

The Airline Account class stores all the variables and creates the constructor that is used and updated throughout the programme, without this class the whole programme won't work without it, and this class gives the programme the bases / working ground to work off from in order for it to function. These variables store all the data that is being used and updated through the programme, and at the end of the programme where you ask to see your booking details, the programme shows you the final updated records of the data of your flight by displaying the variables that was created here and was used / updated throughout the programme.

Economy Delight Class:

AirlineAccoun... | EconomyDeligh... | PremiumNew.java | UpperClassNe... | UseAirlineAcc...

```
1  package NewAirline;
2
3  public class EconomyDelightNew extends AirlineAccountNew
4  {
5
6      //Declaring variables
7      private int totalPoints2;
8
9      //Creating Economy Delight Constructor
10     public EconomyDelightNew(String accountHolder, String address, String ticketHolde
11     {
12         super(accountHolder, address, ticketHolder, seatInfo, accNum, totalPoints);
13
14
15         this.totalPoints2 = totalPoints2;
16     }
17
18
19     //Add 4 points for every pound spent method
20     public void AddPointsED(int pound)
21     {
22         int points;
23         points = pound * 4;
24         totalPoints2 = totalPoints2 + points;
25         System.out.println("You spent £" + pound + ". This will give you " + points +
26     }
27
28     //complimentary food method
29     public void ComplimentaryFood()
30     {
31         System.out.println("You will get complimentary food with this service.");
32     }
33
34     //To String Method
35         public String toString()
36         {
37             String s = "";
38
39             s = super.toString();
40             s = s + "\nToatlPoints2: " + totalPoints2;
41             System.out.println();
42
43             return s;
44         }
45
46 }
```

The Economy Delight class has a few methods in it such as the constructor in it to store the variables of the Airline Account class in it for both classes to communicate and update the variables in them when running the programme. The Economy Delight class gives the customer 4 points for every pound they spend, and comes with complimentary food.

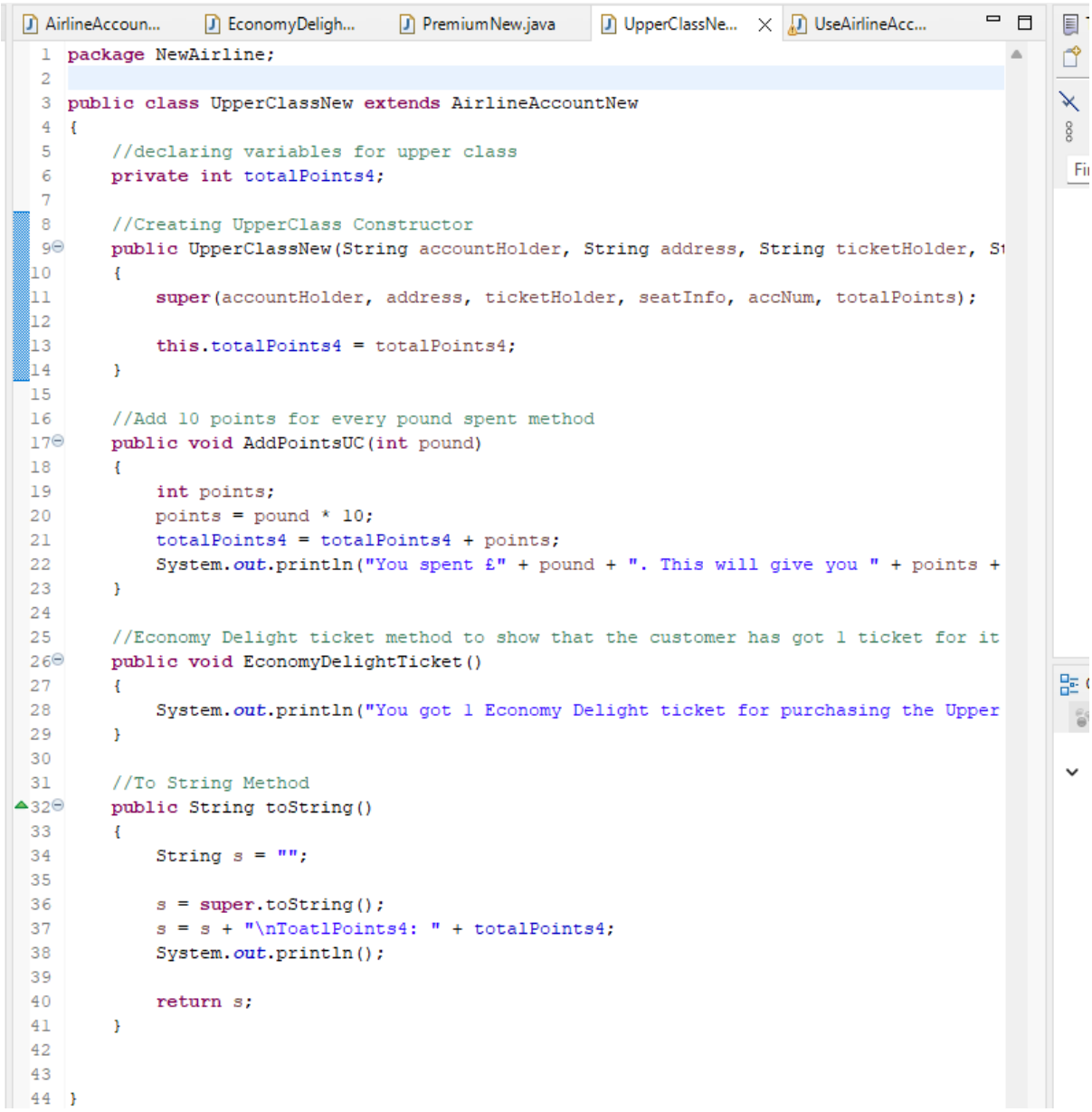
Premium Class:

EconomyDeli... | PremiumNew.java | UpperClassN... | UseAirlineAc...

```
1  package NewAirline;
2
3  public class PremiumNew extends AirlineAccountNew
4  {
5      private int totalPoints3;
6
7
8      //Creating Premium Constructor
9      public PremiumNew(String accountHolder, String address, String ticketHolder,
10     {
11         super(accountHolder, address, ticketHolder, seatInfo, accNum, totalPoint
12
13         this.totalPoints3 = totalPoints3;
14
15
16     }
17
18     //Add 6 points for every pound spent method
19     public void AddPointsP(int pound)
20     {
21         int points;
22         points = pound * 6;
23         totalPoints3 = totalPoints3 + points;
24         System.out.println("You spent £" + pound + ". This will give you " + poi
25     }
26
27     //priority boarding method
28     public void PriorityBoarding()
29     {
30         System.out.println("You will get priority boarding with this service.");
31     }
32
33     //Seat upgrade method
34     public void UpgradeSeats()
35     {
36         System.out.println("Your total points has reached the fresh hold of gett
37     }
38
39     //To String Method
40     public String toString()
41     {
42         String s = "";
43
44         s = super.toString();
45         s = s + "\nToatlPoints3: " + totalPoints3;
46         System.out.println();
47
48         return s;
49     }
50 }
```

The Premium class has a few methods in it such as the constructor in it to store the variables of the Airline Account class in it for both classes to communicate and update the variables in them when running the programme. The Premium class gives the customer 6 points for every pound they spend, and comes with priority boarding for their seats for their flight and gives you the ability to upgrade your seat if wanted.

Upper Class:



The UpperClass class has a few methods in it such as the constructor in it to store the variables of the Airline Account class in it for both classes to communicate and update the variables in them when running the programme. The UpperClass class gives the customer 10 points for every pound they spend, and comes with 1 Economy Delight ticket for a plus one that the customer is bringing and this gives them that Economy Delight ticket with the perks of it and the UpperClass ticket too.