**Problem Description:**

XYZ Travel Agency wants automation of Railway ticket and Air ticket reservation.

Write a JAVA program to implement the following class diagram.

-transectionNumber :int

-category : String

-customerName : String

Reservation

+Reservation(String category, String customerName)

+getTransectionNumber() : int

+getCategory() : String

+getCustomerName() : String

+validateCategory() : boolean

+calulateAmount() : void

AirTicketReservation

RailwayReservation

-flightName : String

-numberOfTickets :int

-bookingClass : String

-trainName: String

-numberOfTickets:int

-bookingClass : String

+AirTicketReservation(String category, String customerName, String flightName,intnumberOfTickets, String bookingClass)

+getFlightName() : String

+getNumberOfTickets(): int

+calulateAmount() : void

+RailwayReservation(String category,String customerName,StringtrainName,intnumberOfTickets,StringbookingClass)

+getTrainName() : String

+getNumberOfTickets(): int

+calulateAmount() : void

**Note:**

* Whenever Air ticket is booked or Train Ticket is booked**transectionNumber**has to be auto generated and should start from 1. Use the **transectionNumbe**r variable provided in Reservation class.
* Use case-insensitive string comparison wherever applicable

**Implementation Details:**

**Reservation Class**

***validateCategory()* method:**

* If the value for category is either **“train”** or **“flight”(**use case-insensitive comparison)
  + return true
* If not
  + return false

***getTransectionNumber()***

* Auto generate(use the **transectionNumbe**r variable) the transaction number and
* return the newly generated transaction number

**RailwayReservation class**

***calculateAmount()* method:**

* see **Table1**foramount per tickets for each **bookingclass**

**TABLE 1**

|  |  |
| --- | --- |
| **bookingClass** | **Amount Per Ticket** |
| AC1 | 1500 |
| AC2 | 1100 |
| AC3 | 700 |

* Calculate amount as ;

***amount =numberOfTickets \* amount;***

* Display the amount calculated as

amount : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Note:use case-insensitive string comparison

**AirTicketReservation**

***calculateAmount()* method:**

* see **Table2**foramount per tickets for each **bookingclass**

**TABLE 1**

|  |  |
| --- | --- |
| **bookingClass** | **Amount Per Ticket** |
| business | 4500 |
| economy | 3500 |

* Calculate amount as ;

***amount =numberOfTickets \* amount;***

* Display the amount calculated as

amount : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Note:use case-insensitive string comparison

**main() Method:**

* Create a class called ***Demo*** with the main method
* Create an object of **RailwayReservation**class with name objRailReservation. The values to be passed to the constructor are given in **Table 3**

**Table 3:**

|  |  |
| --- | --- |
| **Instance variables** | **Value to be passed** |
| category | train |
| customerName | ashok |
| trainName | rajdhani |
| numberOfTickets | 2 |
| bookingClass | AC2 |

* Create an object of**AirTicketReservation**class with name objAirTicketReservation. The values to be passed to the constructor are given in **Table 3**

**Table 3:**

|  |  |
| --- | --- |
| **Instance variables** | **Value to be passed** |
| category | flight |
| customerName | anjana |
| flightName | airINDIA |
| numberOfTickets | 3 |
| bookingClass | economy |

* Invoke corresponding getter methods of the **RailwayReservation**class and display the details as follows:

Transaction Number : \_\_\_\_\_\_\_\_\_

Ticket Category : \_\_\_\_\_\_\_\_\_

Customer Name : \_\_\_\_\_\_\_\_\_

Train Name : \_\_\_\_\_\_\_\_\_

Number of Tickets : \_\_\_\_\_\_\_\_\_

* Invoke the ***calculateAmount() method*** of the **RailwayReservation**class
* Invoke corresponding getter methods of the **AirTicketReservation**class and display the details as follows:

Transaction Number : \_\_\_\_\_\_\_\_\_

Ticket Category : \_\_\_\_\_\_\_\_\_

Customer Name : \_\_\_\_\_\_\_\_\_

Flight Name : \_\_\_\_\_\_\_\_\_

Number of Tickets : \_\_\_\_\_\_\_\_\_

* Invoke the ***calculateAmount() method*** of the **AirTicketReservationda**class