Lab 4: Airline Reservations System **Due date: Tuesday, 12/10/19 @ 11:59pm**

Description of the Problem

A small airline has just purchased a computer for its new automated reservations system. You have been asked to develop the new system. You are to write an application to assign seats on each flight of the airline's only plane (capacity: 15 seats). Your application should display the following alternatives: Please type 1 for First Class, Please type 2 for Economy, or Please type 0 to exit. If the user types 1, your application should assign a seat in the first-class section (seats 1–5). If the user types 2, your application should assign a seat in the economy section (seats 6–15). Your application should then display a boarding pass indicating the person's seat number and whether it is in the first-class or economy section of the plane.

Use a one-dimensional array of primitive type Boolean to represent the seating chart of the plane. Initialize all the elements of the array to false to indicate that all the seats are empty. As each seat is assigned, set the corresponding elements of the array to true to indicate that the seat is no longer available. Your application should never assign a seat that has already been assigned. When the economy section is full, your application should ask the person if it is acceptable to be placed in the first-class section (and vice versa). If yes, make the appropriate seat assignment. If no, display the message "Next flight leaves in 3 hours."

Hints:

- Use an array of booleans to represent the seats on the airplane.
- Use ints to keep track of the next available seat for each of the seat types.

Sample Run:

```
Please type 1 for First Class
Please type 2 for Economy
Please type 0 to exit
choice: 1
First Class. Seat #1

Please type 1 for First Class
Please type 2 for Economy
Please type 0 to exit
choice: 2
First Class. Seat #6
.
.
.
Please type 1 for First Class
Please type 2 for Economy
Please type 0 to exit
choice: 1
First Class is full. Economy Class?
1.  Yes. 2. No. Your choice: 1
Economy Class. Seat #7
```

Write a Java application that implements the problem described above.

IMPORTANT.

Follow the various style conventions we've discussed in class (variable naming, constants, spaces, etc) including putting comments in your program.
1) The program must compile without errors.
2) Your program must have the following comments at the top.

```
/*********************************************************************************
 * First and Last Name   CSCI 6302.01 Fall 2019          Lab 04: Airline Reservations System      *
 *                                                                                                *
  *********************************************************************************/
```

3) Name your file as `Plane_lastnameFirstname.java`.
4) When done, submit your java file via blackboard.