

WMDD 4930

Object Oriented Design & Programming

Lab 5

7.19 (*Airline Reservations System*) A small airline has just purchased a computer for its new automated reservations system. You've been asked to develop the new system. You're to write an application to assign seats on each flight of the airline's only plane (capacity: 10 seats).

Your application should display the following alternatives: Please type 1 for First Class and Please type 2 for Economy. 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 6–10). Your application should then display a boarding pass indicating the person's seat number and whether it's 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 element 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's 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."

```
Output - ex7_19 (run) x
run:
Please type 1 for First Class
Please type 2 for Economy
choice: 1
First Class. Seat #1

Please type 1 for First Class
Please type 2 for Economy
choice: 2
Economy Class. Seat #6

Please type 1 for First Class
Please type 2 for Economy
choice: 2
Economy Class. Seat #7

Please type 1 for First Class
Please type 2 for Economy
choice: 2
Economy Class. Seat #8

Please type 1 for First Class
Please type 2 for Economy
choice: 2
Economy Class. Seat #9

Please type 1 for First Class
Please type 2 for Economy
choice:
2
Economy Class. Seat #10

Please type 1 for First Class
Please type 2 for Economy
choice: 2
Economy Class is full, First Class?
1. Yes, 2. No. Your choice: 1
First Class. Seat #2

Please type 1 for First Class
Please type 2 for Economy
choice: 1
First Class. Seat #3

Please type 1 for First Class
Please type 2 for Economy
choice: 1
First Class. Seat #4

Please type 1 for First Class
Please type 2 for Economy
choice: 1
First Class. Seat #5

The plane is now full.
BUILD SUCCESSFUL (total time: 54 seconds)
```