**Assignment 4**

[Maximum points: 35]

**Pair programming** is an agile software development technique in which two **programmers** work together at one workstation. One, the driver, writes code while the other, the observer or navigator, reviews each line of code as it is typed in.

The two **programmers** switch roles frequently.

Create a C# Console program that will demonstrate the use of arrays.

1. Write a program that functions as a concert/restaurant/airplane reservation system. This system must be sufficiently complex, with a minimum of 4 rows with 4 seats in each row. You must display the seats on the screen in some manner, you can decide how to do this. You can use any symbol you feel appropriate if you would like.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*Seat 1- 1\*Seat 1-2\*Seat 1-3\* Seat1-4\*

\*Seat 2-1\*Seat 2-2\*Seat 2-3\*seat 3-4\*

\*Seat 3-1\*Seat 3-2\*Seat 3-3\*seat 4-4\*

\*Seat 4-1\*Seat 4-2\*Seat 4-3\*seat 4-4\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1. Allow the user the following options:
   1. Add a customer to the concert
      1. Request the customer's name
      2. Display a chart of the seats in the venue
      3. If seats are available, let the customer choose a seat. Add the customer to the seating chart on the app.
2. \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*
3. \*Seat 1- 1\*Seat 1-2\*Seat 1-3\* S.Claus\*
4. \*Seat 2-1\*Seat 2-2\*Seat 2-3\*seat 3-4\*
5. \*Seat 3-1\*Seat 3-2\*Seat 3-3\*seat 4-4\*
6. \*Seat 4-1\*Seat 4-2\*Seat 4-3\*seat 4-4\*
7. \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*
   * 1. If no seats are available, inform the user
   1. Remove a customer from the concert
      1. Request the customer's name or seat number (both choices required)
      2. Search the seating chart for the customer's name or seat number and delete it
8. Your system should show validation whenever appropriate, and function in a logical manner. For example, the system should not shut down after each operation, if a user has to fix an entry the system should not start over, etc.

Note: 20% lost if there is no demo, still needs to be handed in and uploaded to eConestoga. Adhere to coding and assignment submission standards/guidelines. Marks will be taken off, if these standards/guidelines are not followed. This assignment will ***not*** be handed back, but marks will be made available on eConestoga prior to the exam. The format for submitting the assignment is as follows:

1. **Printouts handed in class**: Assignment Cover sheet properly filled, the assignment 5 marking schema, and the printout of C# code. Also a printscreen of adding a customer and deleting a customer. Also your created testPlan and the student signed off of the test plan.
2. **eConestoga submission**: A single compressed (.zip format) archive file containing the folder of your program submitted to eConestoga;
3. **Demonstration of program in class**: Please have your program running on your desktop when you are ready to demonstrate your work and all hard copies of program ready to be signed.

**Sample Test Plan:**

**Note:**

Tester and Coder are responsible for all testing, not just the given test plan. You as the programmer’s will create a test plan specific for your implementation of this assignment.

**Test Plan for Assignment #4**

**Coders: \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Testers: \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Data entered Verified – Error, All Fields not entered correctly (numeric or Alpha): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name > then 2 characters:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Book a reservation:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cannot book a reservation on a seat already taken: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Delete a reservation:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_