

Augusta University

School of Computer and Cyber Sciences

Principles of Computer Programming II – 1302

Assignment 2

Due date: 03/ 05 / 2020, at 23:59

### **Topics covered**

This assignment will be covering the following topics:

- .NET List<T>
- LinkedList

### **Part 1**

In this part you are required to change the 'War Card Game' provided to you so that it is based on the List<T> class rather than array. In particular, your change starts from the Deck class by changing the \_cards attribute from Card[] to List<Card>. This change will affect your code in many place. For example, the AddCard method will use the Insert method of List<T> to add a new card at the top of the pile. You have to make all required changes so that the main method will work without making any change in that method.

### **Part 2**

The LinkedList class that we have implement work with integer values. Make all changes so that LinkedList class will work with Cards. In particular, the \_data attribute of the Node class will be of type Card rather than int. This change will require a few changes in other places in the code. The LinkedList implementation will be provided to you as well.

### **Part 3:**

In this part you have to change the 'War Card Game' to that it is based on the modified LinkedList class. That is, the Deck class \_cards attribute will be of type LinkedList from part 2. Feel free to add more methods to the LinkedList class provided to you. Please make sure that the new functionality that you will be adding to the LinkedList be general and not specific to the application it is used for. For example, getting the length of the LinkedList is acceptable.

**Submission:**

- Create a folder called Part1 with the .cs files of part1
- Create a folder called Part2 with the .cs files of parts 2 and 3
- Create a zip file HW2.zip with folders Part1 and Part2
- Submit HW2