**Custom List Class Project (out of 120 points) - Thursday**

**User Stories**

The built-in List<T> class is a generic class that acts as a wrapper over the array class. You cannot use built-in List or Array methods.

**Requirement 1.** (10 points): As a developer, I want to use a custom-built list class that stores its values in an array, so that I can store any data type in my collection.

**Requirement 2.** (10 points): As a developer, I want the ability to add an object to an instance of my custom-built list class.

**Requirement 3.** (10 points): As a developer, I want the ability to remove an object from an instance of my custom-built list class.

**Requirement 4.** (10 points): As a developer, I want the custom list class to be iterable.

<https://msdn.microsoft.com/en-us/library/aa288467(v=vs.71).aspx> for 6, 7 , and 8.

**Requirement 5.** (10 points): As a developer, I want to be able to override the ToString method that converts the contents of the custom list to a string.

**Requirement 6.** (10 points): As a developer, I want to be able to overload the + operator, so that I can add two instances of the custom list class together.

**Requirement 7.** (10 points): As a developer, I want to be able to overload the – operator, so that I can subtract one instance of a custom list class from another instance of a custom list class.

**Requirement 8.** (10 points): As a developer, I want a Count property implemented on the custom-built list class, so that I can get a count of the number of elements in my custom list class instance.

**Requirement 9.** (10 points): As a developer, I want the ability to Enumerable.Zip() two custom list class instances together.

**Requirement 10.** (10 points): As a developer, I want to use C# best practices, SOLID design principles, and good naming conventions on the project.

**Requirement 11.** (20 points (2 points each)): As a developer, I want to create 10 unit tests for my project, so that I can ensure the functionality is working properly.

**Requirement 1 2.** (Bonus 5 points): As a developer, I want the ability to sort an instance of my custom-built list class. To be eligible for the bonus points, you may not use Array.Sort() that is already built in and you must tell us what sorting algorithm you used.