**CSC103 Fall 2013**

# Sara Wexler

**Assignment #3**

**Objective**: Create the sequence ADT with linked list.

**This assignment is to be done by a group of two persons**

1. **Do programming project 9 from chapter 4 on page 249**

* Your class should make use of **Node class** that I provided

The private instance variables should be ONLY:

Node **head, cursor, tail** ; //  **no precursor!**

and,

int **ManyNodes**;

* Provide the additional methods as stated in the book with the following names. Create appropriate exceptions in those methods.

1. **addFront** **( double num)**

A method to add a new element at the front of the sequence

And make it the current element

1. **removeFront()**

A method to remove the element at the front of the sequence

Throw an exception if the sequence is empty

Make the next element the current element, if there is one

1. **addEnd ( double num)**

A method to add a new element at the end of the sequence

And make that element the current element

1. **currentLast**

A method that makes the last element of the sequence the current

Element

Throw an exception if the sequence is empty

1. **retrieveElement ( int i)**

a method that returns the ith element of the sequence

make current element to the ith element

Throw an exception if the sequence is empty

1. **setCurrent ( int i)**

a method that makes the ith element become the current element

Throw an exception if the sequence is empty

Throw exceptions if necessary in those methods.

**Highlight all new code in the DoubleLinkedSeq class**

* Outline of Java Source Code for this class can be found on the web page:

<http://www.cs.colorado.edu/~main/edu/colorado/collections/DoubleLinkedSeq.java>

This file contains only blank implementations ("stubs").

1. **Test your program:**

Run the same test program you wrote in lab2, Test.java, and SequenceTest.java using the **DoubleLinkedSeq**

**Turned In :**

1. Use **closeable envelope / folder** **marked clearly outside with names, class section and assignment #**
2. All source code written for the assignment and the javadoc document;
3. **Highlight** all new code in the DoubleLinkedSeq class
4. **Write your** **names at the top of the source code** and **the date**
5. Hard copy of test cases run
6. Disk with all files relevant to the Assignment, **including executable**.

**Due Date**: at the beginning of class on  **Wednesday Oct 30. ( week 9).**

Use this guideline for checking your program over before handing it in:

**Grading criteria**

1. - if the project is working good, get correct output, and there are sufficient comments
2. - if the project is working good, but there are some problems with the

code, or some of the output is incorrect

or the comments are not sufficient

2 - if the code compile but does not run

1 - if the does not compile