**CS:2820 Object Oriented Design Fall 2019**

HW #2

First draft submission due date is Friday, September 20th 11:59 pm.

Final submission due date: Friday, September 27th 11:59pm.

Academic honesty is expected. If cheating is detected, the case will be reported to administration. You may discuss the solutions with your peers *verbally*, but you need to write your own code.

***This homework is worth the weight of two homeworks.***

**Task:**

Download the zip file containing the source files of a SortedList class. The zip file contains five files. The SortedList files are: SortedList.java, Node.java, and SortedListIterator.java. There are another two files provided for testing purposes: Main.java and Item.java.

The SortedList is a ***doubly linked list***, where it keeps its nodes in *increasing, sorted order*. Doubly linked list were covered in previous courses, so you may go back to study them. The SortedList files contain several unimplemented methods. The methods that need implementation are marked by “//TODO” within the method body. Also, preceding each method is a sufficient explanation of what the method does, and any constraints you need to be aware of. *Constraints must be met to get full credit for each method.*

If the method does not have “//TODO” within its body, then you should not change the method in any way. Also, you may not change the given methods’ signatures, because we will write our tests. You are free, however, to add as many methods as you like to simplify the task of implementing required methods.

As mentioned above, you are provided with two methods for testing: Main.java and Item.java. Main.java has minimal test scenario; you need to develop more tests on your own to test your implementation. It is your responsibility to develop suitable tests for your methods to ensure correctness. Item.java is a simple example of elements saved in sorted list. We will test your code with classes other than Item.

The only testing aid method we provide is printList(). Utilize it, or make your own methods for testing.

Submission:

For first draft submission, zip your work in one folder, along with a brief report on your progress. A working add() method is the minimum you need to finish for first submission. We will provide you with few questions to answer and submit as your progress report. The first submission is *graded*.

Final submission is due Sep 27th. A zipped folder containing all your work must be uploaded on time.