CSC 2431 Assignment 1
Due: Wed. 4/13/16 by the start of class

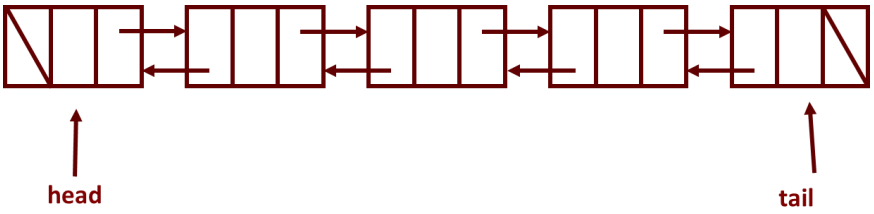
Part 1 – Textbook Exercises

The following textbook exercises are assigned to reinforce the linked list concepts.

Ch. 16 #6, 8, 10, 12, 14

Part 1 – Programming Assignment

Create a class that implements a **sorted**, doubly-linked list:



Start with a copy of the `sortedList` class linked on Blackboard. Call your new class `doublyLinkedList`. Convert the baseline code into a doubly linked list, and *thoroughly* test all existing operations (make sure to check all edge conditions), and *then* implement the new operations below.

The class should have the following *additional* functionality:

- A **reverse** method: this method will reverse the order of the doubly linked list. This method takes no parameters, and returns nothing.
- A **printFront** method**:** this method prints the list from *front to back*, one element per line. Note this is a *class method* (vs. the client print we've used so far). The method is void, takes no parameters, and should not be able to modify private class members.
- A **printBack** method**:** this method prints the list from *back to front,* one element per line. Note this is a *class method* (vs. the client print we've used so far). The method is void, takes no parameters, and should not be able to modify private class members.

A *client file* is provided on Blackboard for you to test the program. **Use this client, unmodified, to generate the final test results to turn in with your program.**

Note: no analysis/design submission is required, but it is highly recommended to make a plan for your modifications and additions to the baseline code.

What to turn in:

1. Your handwritten or typed answers to the textbook exercises.
2. Your header (.h) and source (.cpp) for the doubly-linked list.
3. A copy of the client (**it should be unmodified,** but this makes it easier to test your code).
4. Your output after running the test code in the client.
5. All documents should be uploaded to Blackboard following the assignment submission instructions (linked on Blackboard). The textbook exercises may be handwritten and turned in at the start of class on the due date.