COSC2436 hw3: Doubly linked list and sorting

1. Introduction

   In this assignment, you will implement sorting methods that you have learned in class on a doubly linked list.

2. Input files

   This file will contain two lines. The first one gives you the numbers that you have to store in your doubly linked list and the second one will have the sorting method. For instance, this is a valid input:

   1 5 8 2 4 9 3

   Selection

   This is an invalid input:

   Insertion

   2 4 6 1

   Other examples of invalid input include: empty input, no numbers, no sorting specified

3. Output files

- The output file should display the whole linked list after each iteration in the format below.
- Each iteration ends when a number sits in its right place and the program starts checking the next number (insertion) or position (selection).

  [1,5,8,2,4,9,3]

  [1,2,8,5,4,9,3]

  [1,2,3,5,4,9,8]

  [1,2,3,4,5,9,8]

  [1,2,3,4,5,9,8]

  [1,2,3,4,5,8,9]

  If the input is invalid, print: “Input is invalid.” (no \n or endl)

4. Operation

   Please note that you will have to move the whole node by changing the next and prev; changing just the values will result in a %100 penalty.

5. Requirements

   Homework is individual. Your homework will automatically be screened for code plagiarism against other students and code from external sources. Code copied from

another student (for instance, renaming variables, changing for and while loops, changing indentation, etc., will be treated as copy) will be detected and result in a "0" in this homework. The limit is 50% similarity. Using other structures and functions, **including vector, array, and singly linked list,** will have a 100% penalty.

5. Turn in your homework

Homework 3 needs to be turned in to our Linux server; follow the link here https://rizk.netlify.app/courses/cosc2430/2_resources/

Make sure to create a folder under your root directory, name it "hw3" (case sensitive), and copy all your .cpp and .h file to this folder, "ArgumentManager.h" need to be included as well.

PS: This document may have typos; if you think something is illogical, please email TAs for confirmation.