CS 2413 – Fall 2018 – Project 2 Design Rubric

Project 2 states the following:

*"Note that an alternative design to keeping these lists sorted during merging and purging would be to allow the lists to become unordered during these operations, then to sort them afterward. Give an analysis comparing the run times of these alternative designs and include this document in your project submission. Please make this a PDF file and name it "**VoteR2design.pdf**" in your submission."*

This alternate approach (hereafter referred to as "Approach B") describes the input, merge, and sort algorithms used, and should contrast the approach used in your program (hereafter referred to as the "chosen approach"). The contents of VoteR2design.pdf should be a brief description of the chosen approach and <u>explanations of the Big-O time complexity</u> of the insert, merge, and sort time for both approaches.

Notes:

1. While there is no word count requirement for this document, the chosen approach description should be no more than two paragraphs, and each Big-O analysis should not require more than one paragraph (preferably only 2-3 sentences).

2. Since the project description explicitly requires that all linked lists be kept in order, no design points will be given for the chosen approach if it does not meet this requirement.

3. Points will not be given for simply stating the Big-O time complexity of an algorithm, some effort must be made to explain how such a time complexity was concluded.

   e.g. We already know that our implementation of linked list has O(1) append time, but that is only due to the fact that we have a pointer to the last element, which allows us direct access to the node that needs modification.

Rubric

1.	Brief description of chosen approach.	3 points (1a + 1b)
	a. Approach is appropriate.	1 point
	b. Description details all required aspects of approach.	2 points
2.	Insertion time of chosen approach.	2 points
3.	Merge time of chosen approach.	2 points
4.	Insertion time of Approach B.	1 point
5.	Merge time of Approach B.	1 point
6.	Sort time of Approach B.	1 point
Total:		**10 points**