Lab Report <<01>>

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# Problem

State the given problem clearly in one’s own words. Copy and pasting from the assignment will result in an overall 0 for the entire lab report.

We are given the main method to a word sorter program and a txt file for it. We are tasked with making three methods in a WordHelper class that complete the program. One method needs to sort the words from least number of vowels to thr largest number of vowels. One needs to sort the words from least to greatest number of consonants. The last one needs to sort the words from least to greatest length.

# Solution

Explain how the program solves the problem. This description must be detailed and high-level without using the direct implementation – do not just copy and paste the programming solution’s code. You may think of this as explaining how the software works to another non-computer entity, like a human. It should cover the finer points of the lab while justifying implementation decisions. While pseudocode may be used it must be accompanied by said clear and understandable description. Flow Charts and graphics are strongly encouraged, and in some cases required.

For all three methods, I first would put the given array into a new array. Then, the program would check each word in order for the number of vowels/consonants they had and swap the words if needed. To check for vowels and consonants, I made for loops that would check each character in each word, and had counters record the number of vowels or consonants (depending on the method). Lastly, the program compared lengths of the words by just getting the number length of the word and seeing if it was bigger or not.

# Implementation Problems Encountered

Enumerate the issues that arose from creating this solution. Include major syntax, run-time, and logical errors with their respective solutions. If you did not have any problems then you may put, “No problems encountered”, but if the solution is not correct then this section will receive no points.

I struggled a lot with this assignment. Creating the bubble sort for this was difficult. I had trouble getting everything to print right since the program would just print the length sorted set of words for all four prompts. Also, there would be times where eclipse just wouldn’t print out anything.

Sidenote: I was having a lot of trouble with the code not outputting anything. I hope it works fine for you. Could you let me know how to fix something like that. My code looks fine and I did a lot of troubleshooting and asking around but couldn’t fine any help. I would like to be able to at least know how to fix something like that (or just to know what went wrong) for the future.

# Lab Report Questions

A few questions about the problem will be provided in the lab to be answered. These are generally conceptual and shows the importance of the lab.

1. What are the advantages of using an array? Arrays are a great way to store large sets of data.
2. What are the disadvantages of using an array? Arrays have a fixed size, so you can’t increase or decrease an array’s size. Can’t store different variable types. May use up more memory space than needed.