Lab Report 04

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**Problem**

Count the number of times SORT (case doesn’t matter) appears in each string, then sort them from least number of SORT’s to most number of SORT’s!

**Solution**

In this lab, I use merge sort to finish. Its feature is that it can divide the target into small sections and sort each one, then conquer which means combine to result. Therefore, I made a recursive method to divide String into two until they all separate. Meanwhile, sort them at the same time. Finally, print the result.

**Implementation Problems Encountered**

I forgot to ignore case.

**Lab Report Questions**

1. What is the Big O complexity for quick sort?

Quicksort uses the partitioning method and can perform, at best and on average, at O(n log (n)). perform at O(n^2) in the worst case, making it a mediocre performing algorithm.

1. What is the Big O complexity for merge sort?

Merge Sort uses the merging method and performs at O(n log (n)) is the best, average, and worst case.