Indiana University Southeast

Assignment 4

Linked Lists

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In this assignment, we implement a spell checker and test out what we have learned about linked lists. We are given two text files: one called "oliver.txt'' that contains an entire novel with hundreds of thousands of words and another one called "random_dictionary.txt" that is a list of words in random order. We were instructed to create separate linked lists for each letter of the alphabet and sort the dictionary. Then we had to compare each and every word in the novel to see if they were in one of the sub dictionaries which we do by comparing the first character of the word to see which dictionary it matches. Then after comparing each word, we had to output how many comparisons there were for each word found or not found in the dictionaries, how many words were found or not found, and what the average number of comparisons for found or not found words was. After completing the code and running the program, I noticed how long it took to do all the comparisons. I've been struggling with a second attempt at the assignment, but with more organized lists that can be sorted quicker. So far, I haven't been able to get the second version of my code up and running correctly so I'm stuck with the slower, more time consuming, version 1.

Outputs:

CompsFound: 3202511790
CompsNotFound: 464785072
WordsFound: 915964
WordsNotFound: 62422
AvgCompsFound: 3496
AvgCompsNotFound: 7445