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Programming Assignment 4

Spellchecker with My Linked List

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Spellchecking with My Linked List

Spellchecking in programming can be done in multiple ways. You can do it recursively, or use an array. Another way of doing it is by creating an array of objects called My Linked List. My Linked List is a generalized method to create a list of any type. It uses reference types and not primitive. This allows for objects to be created and the object oriented principles able to be used.

This program entails the use of reading a file and a parser. It also creates a stream of information to be used. In the My Linked List it uses the current that is created by the nodes to search via the first letter in the alphabet. The dictionary is created based on the first letter of the alphabet and put into an object of linked lists. This dictionary is then used by another write parser method.

The point of the program was figure out how many comparisons are used on words that are found and words not found to see if there is a correlation between how many words it has to go through or if it has to go through the entire list. The results of this program show that there are 54648 misspelled words, and 937492 correct words spelled. The average number of comparisons for correct words is around 3252 comparisons per word and the average number of comparisons for incorrect words is around 7381 comparisons per word. This shows that it takes about half the number of comparisons for correct words than it does for incorrect words.

Output:

```
run:
Number of misspelled words: 54648
Number of correct spelled words: 937492
Number of misspelled words comparisons: 403377564
Number of correct spelled words comparisons: 3049431067
The average number of comparisons for words found: 3252.7542283027483
The average number of comparisons for words not found: 7381.378348704436
BUILD SUCCESSFUL (total time: 1 minute 16 seconds)
```