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Programming Assignment 4

Spell Checker

October 25, 2016

Problem

Implement a spell checker. Using the randomized dictionary (*random_dictionary.txt*) given in the list of files, read in the dictionary (words in the random_dictionary.txt file) into an array of 26 MyLinkedList objects, one for each letter of the alphabet. Thus the first Linked List would contain only those words starting with letter 'a', while the last would contain only those words starting with the letter 'z'. Notice that all words are in lowercase. Then, when you read in the book (*oliver.txt*), you examine the first character of each word, and traverse one of the 26 Linked Lists.

Program Design

I combined reading in the random dictionary and oliver in the main without using any methods while only making one change in the MyLinkedList class which is overloading the contains method in order the get the comparisons read accurately in the main method to compute the average.

Observations

The results were inaccurate due to the special characters in oliver to the point where the program would take in a word with a special character such as a period of a comma and assume it's a whole word on its own, causing it to show incorrect results. To correct this issue I simply replaced all of those characters with an empty space which took care of the problem.

Results

```
Words Found: 909455
Words Not Found: 69136
Average Comparisons Found: 3553.0
Average Comparisons Not Found: 3404.0
```