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Programming Assignment 5

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Problem

In this assignment you will implement the second version of your spell checker. Using the randomized dictionary (*random_dictionary.txt*) given, read in the dictionary into an array of 26 Binary Search Trees (BST) , one for each letter of the alphabet.

Program Design

This program uses a random dictionary to read in and the oliver book to find words that are in the dictionary that are also in the oliver file. After reading in the file the oliver file reader also eliminates the special characters, numbers, and blank spaces so there are no errors in the words found or not found and the averages.

Results run:

Words Found: 914054

Words Not Found: 64537

Average Comparisons Found: 16.0

Average Comparisons Not Found: 11.0

BUILD SUCCESSFUL (total time: 2 seconds)

Observations

The average number of comparisons in this programming assignment 5 are in much smaller numbers than in programming assignment 4. This assignment solves the problem much quicker than assignment 4, this one was done in a matter of seconds where assignment 4 took about a couple minutes. BST is much more efficient because it searches an element a lot quicker because its Θ(log(n)) as it can go down three tree instead of going through a list straight through or by splitting it which is Θ(n).