Isaiah Hernandez

Aguirre

CS 2302

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Lab 4:

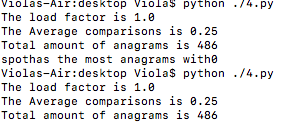
In this lab we were given a file of words and had to find how many anagrams were in the given file. We also had to see which word in the file had the most anagrams. Basically this lab was the same as lab 3 the only difference was we had to use a hash table instead.

For this lab I did the same as I did with the last lab. I put the words from the file into a list then into a hash table. For the hash function I used the odr() function for every letter in a word then added it together. I then got the total and divided it by the size of the hash table.

The problem that I had with this lab was first of all finding a hash function that would work. At first I wanted to assign every letter a number but that ended up being too many if statements. To fix this I did some research, and found the odr() function. This allowed me to get a number for every letter in the file. The thing was I it only worked if the string that you pass through is was of size 1. So in order to solve this I split the word by letter and put it into a list.

The next problem that I had was that when I tried to pass the hash table in to the count anagrams method, and then use the search function it would say that I could not use this function on a string. I kept trying to figure out why this was happening, but I could not. What I ended up doing was rewriting the code, and it ended up working the second time around.

Other than that I was able to complete the lab with ease. Considering that it was exactly the same lab as the one before, and that I am more comfortable with hash table than I am with binary trees.



The main thing that I learned with this lab was obviously how to use how to use hash tables as well as understand how they work. This is very important because they have a faster run time than binary trees.

“I certify that this project is entirely my own work. I wrote, debugged, and tested the code being presented, performed the experiments, and wrote the report. I also certify that I did not share my code or report or provided inappropriate assistance to any student in the class.” –Isaiah Hernandez