

CMSC 170: Introduction to Artificial Intelligence

Laboratory Exercise Journal

Accomplish this journal while working on or when you are done with the laboratory exercise for the week.

1. Problems encountered. Explain the **specifics** of the problem/s. *You may include code snippets and/or screenshots.* (Minimum of 2 sentences)

In my count function, I had a hard time figuring out how I will count the frequencies of the words. I also didn't know at the time what I will put in the dictionary in the count function.

2. How the problems were resolved and what are the **specific fixes** done. *You may include code snippets and/or screenshots.* (Minimum of 3 sentences)

I decided to create another list called wordsInWordsTable, where all the encountered words are being appended to it. If the word is already encountered, we increment the frequency in the dictionary of that word. From here, I was also able to figure out what kind of data I will put when creating the dictionary.

```
def count():
    for word in wordsCleaned:
        if(word not in wordsInWordsTable): # if the word is newly encountered...
            wordsInWordsTable.append(word) # we mark this word as encountered

            # create a dictionary
            dictionary = {
                "word": word,
                "frequency": 1
            }

            # append this newly created dictionary to myWordsTable
            myWordsTable.append(dictionary)
        else: # if we already encountered this word
            # get the index of this word in encountered words since they have the same index with dict list
            wordIndex = wordsInWordsTable.index(word)
            myWordsTable[wordIndex]["frequency"] += 1
```

3. Learnings from the exercise / lesson. Explain in your own words. *Avoid merely listing laboratory topics like "I learned how to use Inheritance. I learned about Encapsulation."* Explain and analyze. (Minimum of 5 sentences)

In this exercise, I utilized the usage of functions. It makes my code a whole lot more readable and easier to understand. I also learned how to use regex expressions to modify strings in Python. In the clean function, I was able to filter out the words and remove the empty words to be added to the wordsCleaned list. I was also able to utilize the list and dictionary data structure for this exercise. Built in functions for list made the exercise more feasible.