Atılım University
Department of Computer Engineering

CMPE325 Study of Programming Languages
Fall, 2021-2022
Ç. TURHAN, Z. Y. OĞUZ, T. ÜSTÜNKÖK
Assignment 3
Due Date: January 11, 2022 23.59
Duration: 14 Days

WARNINGS
- Students who either cheat, attempt to cheat or provide a help to other(s) in cheating (based on JPlag), get 0 (zero) grade from assignment. Also, based on the regulations, a disciplinary action will be taken.
- For every late hour, 10 points will be cut.
- Assignments sent by e-mail will not be accepted.

Given the following quote (also given as a text file):

"My name is Yoshikage Kira. I'm 33 years old. My house is in the northeast section of Morioh, where all the villas are, and I am not married. I work as an employee for the Kame Yu department stores, and I get home every day by 8 PM at the latest. I don't smoke, but I occasionally drink. I'm in bed by 11 PM, and make sure I get eight hours of sleep, no matter what. After having a glass of warm milk and doing about twenty minutes of stretches before going to bed, I usually have no problems sleeping until morning. Just like a baby, I wake up without any fatigue or stress in the morning. I was told there were no issues at my last check-up. I'm trying to explain that I'm a person who wishes to live a very quiet life. I take care not to trouble myself with any enemies, like winning and losing, that would cause me to lose sleep at night. That is how I deal with society, and I know that is what brings me happiness. Although, if I were to fight I wouldn't lose to anyone."

Given the following functions:

```python
def stem(word: str):
    return word.lower().rstrip(",.!:;'-\"").lstrip("'\"")

def read_file():
    with open("quote.txt", "r") as quote_f:
        quote = quote_f.read()
    return quote
```

Your job is to read the file and save it to a string variable. Then, you have to apply the stem function to each of its words and get the output as a list. An example output is given below:

['my', 'name', 'is', 'yoshikage', 'kira', "i'm", '33', 'years', 'old', …,]

After that, write a function named frequencies that outputs the frequency of the given word in the list. For example:

>>> frequencies(my_list, "is")
>>> 4

Remember that you **cannot** use any sort of loop, list comprehension, or recursion. You can only use map, reduce.