Lab 11 – Dictionaries

Goals

- Work with dictionaries
- File processing

Setup

- Create a new .py file in your desired directory
- Use the following naming convention
    ITP115_l#_lastname_firstname
    (replace # with this lab number)
- Your new file must begin with comments in the following format *(replace the name and email with your actual information):*
    ```
    # Name
    # ITP 115, Fall 2016
    # Lab L^ (replace ^ with this lab number)
    # USC email
    ```

Background

- A concordance is an alphabetical listing of words in text string that also indicates the line numbers on which the words occur

Requirements

- Use a dictionary to represent a concordance
    - Words in the text will be the keys
    - The line numbers on which the words appear will be the value
    - Since it is likely that a word will appear on more than one line, the value will be a **list** of integers, not just a single integer
    - Your program should ignore *capitalization* and *punctuation*. For example, "Tree", "tree", and "tree?" should all be considered the same word.
- Use text file "**story.txt**" to test your program
    - You must open and read the file within your program
- Your program must use a main function with no global variables

- Hint:
    - Recall that strings have **strip** method which will remove any character from *both* the beginning and the string
    - For example:

```
word = "fight on"          # word is "fight on"
word = word.strip("nf")    # remove either "n" or "f" from
                           # the beginning or the end

print(word)                # word is "ight o"
```

Sample Output

```
Here is the concordance for the file 'story.txt'

a:  [1, 1, 5, 9]

am:  [5, 9]

know:  [5, 9]

...

who:  [5, 9]

without:  [6, 10]

you:  [5, 6, 9]

zen:  [1, 8]
```

Deliverables and Submission Instructions

- A compressed folder (zip file) containing you Python code. This can be done by:
    a. Windows *(you must find the folder on your computer—this can't be done within PyCharm)*:
        i. Select your lab file
        ii. Right click
        iii. Send to ->
        iv. Compressed (zipped) folder
        v. Rename this folder with the following name:

        ITP115_l#_lastname_firstname
        (replace # with this assignment number)

        vi. Submit this zipped folder through Blackboard

      b. OSX *(you must find the folder on your computer—this can't be done within PyCharm)*:
   - i. Select your lab file
   - ii. Right click
   - iii. Compress 1 item
   - iv. Rename this folder with the following name:
       ITP115_l#_lastname_firstname
       (replace # with this assignment number)
   - v. Submit this zipped folder through Blackboard