Lab 6-2 – Word Manipulation

Goals

- Familiarity with string manipulation
- Familiarity with for loops and iteration
- Learn how to use the string library/member methods
- Learn how to manipulate strings
- Understanding the difference between mutable and immutable

Setup

- In PyCharm, create a new project or open an existing one (such as Labs)
- Create a new Python file using the following naming convention:
  ITP115_L6_2_*LastName_FirstName*
  (replace *LastName* with your last/family name and *FirstName* with your first name)
- Your new file must begin with comments in the following format (replace the name and email with your actual information):
  ```
  # Name, USC email
  # ITP 115, Spring 2020
  # Lab 6-2
  ```

Requirements

Your program must perform the following:

- Write a program that takes in two words or statements from the user.
- Convert the input to all lowercase or uppercase
- Strip the statement of all spaces *(hint: this can be done with strings, or with lists)*
- Check if the words are anagrams of each other (i.e. they are the same length and have all the same letters such as *life* and *file*)
- Check if each word is a palindrome (a word that is spelled the same backwards and forwards, e.g. *civic*). Ignore case so CIVic should be considered a palindrome
- Hint:
    - For the anagrams, think about how list.sort() could come in handy.
    - For the palindrome, thing about how list.reverse() or string.reverse() could come in handy.

Sample Output

Example 1:

Please enter a word or statement: file

Please enter a second word or statement: life

The two words you entered are anagrams

The first word is not a palindrome

The second word is not a palindrome

Example 2:

Please enter a word or statement: Ana

Please enter a second word or statement: aNa

The two words you entered are anagrams

The first word is a palindrome

The second word is a palindrome

Example 3:

Please enter a word or statement: A but tuba

Please enter a second word or statement: a Butt UbA

The two words you entered are anagrams

The first word is a palindrome

The second word is a palindrome

Example 4:

Please enter a word or statement: chicken

Please enter a second word or statement: tofu

The two words you entered are not anagrams

The first word is not a palindrome

The second word is not a palindrome

Deliverables and Submission Instructions

- Create a zip file containing your Python code. This cannot be done within PyCharm. Find the file or folder on your computer and compress it.
  a. Windows*:*
     1. Using File Explorer, select your lab file
     2. Right click
     3. Send to ->
     4. Compressed (zipped) folder
  b. Mac OSX:
     1. Using Finder, select your lab file
     2. Right click
     3. Compress "*FileName*"
- Upload the zip file to your Blackboard section:
  1. On Blackboard, click on the Labs item in the course menu on the left.
  2. Click on the specific item for this assignment (starts with L and a number).
  3. Click on the Browse My Computer button and select your zip file.
  4. Click the Submit button.