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CSC 401: Introduction to Programming
Section: 910 (Online) - Spring 2015
Due: Friday, May 1st at 11:59PM
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Homework 4

Problem 1
Code:

```
''' write a function that excepts a parameter as a
string and compute the average length of all the words in the string'''

def average(string):
    table = str.maketrans(',.?!@#$%^&*', '**********') # replace all punctuation with one value
    string = string.translate(table) # applies the translate based on the table
    string1 = string.replace('*', '') # replaces * with a NULL string and removes all puntuation
    list1 = string1.split() # split string into a list by space
    aveList = [] # initiates a NULL list


    for word in list1: # for loop for checking each word in the list
        aveList.append(len(word)) # add the length of each word in the list

    return [sum(aveList)/len(aveList)] # add all the list contents and divide by how many there is


print(average('This is the test data to be used for the forth assignment.')) # test sentence
print(average('Does... this? work&&')) # example 1
print(average('a sample sentence')) # example 2
print(average('@@@@I ^LOVE..**# PYTHON,,,')) # example 3
```

Output (with additional tests included both in the code and the output printout):

```
>>>
[3.8333333333333335]
[4.0]
[5.0]
[3.6666666666666665]
>>>
```

Problem 2
Code:

```
''' write a function that accepts a parameter as a file name and
returns the number of occurances of certain words'''

def words(filename):
    infile = open(filename, 'r') # open the file
    content = infile.read() # read the file
    infile.close() # closes file

    one = 'laboratory'
    two = 'Frankenstein'
    three = 'monster'

    return [content.count(one), content.count(two), content.count(three)]


print(words('frankenstein.txt'))
```

Output:

```
>>>
[7, 28, 33]
>>>
```

Attachments:
CSC401_H4_P1.py
CSC401_H4_P2.py