Week 4: Assignment

Submit Assignment

Due Sunday by 11:59pm **Points** 100 **Submitting** a file upload

Instructions

Please make a python module called week_4_homework.py and put the answers to the problems below in it. All the problems below ask you to write functions. Put ***only*** the functions in the file "week_4_homework.py" do not put any testing code in that file. To test your functions, create another python file week_4_homework_test.py. In this file you can import that functions from your homework file as follows:

```
import week_4_homework as w4h

# then we can test the functions like so:

result = w4h.my_function()
print(result)
```

Please write the following functions. ***Make sure you name the functions exactly as typed below.***

Problem 1

Write a function called raise_to_power. This function will take one argument, n, and it will return a function that will raise any number to the nth power. Be sure to add docstrings to both function.

You can test the code with the following

```
raise_to_5 = raise_to_power(5)
result = raise_to_5(5)
print(result) #  this should be 3125
```

Problem 2

Using a closure, write a function called file_writer. This function will take one argument, filepath. It will return a function that will accept a string argument. This function will write that string to what file was specified in the file path that was passed to file_writer. This function will also open that file the pythonic way (using a with statement) in append mode.

To open a file in append mode you would do the following (note the 'a' argument passed to the open function):

with open(filepath, 'a') as my_file:

You can test your file_writer function with the following code (you will need to change the file paths to valid paths on your computer):

```
filepath_a = 'path/to/file_a'
write_to_file_a = file_writer(filepath_a)
write_to_file_a('hey, this is text that will be written in file a')

filepath_b = 'path/to/file_b'
write_to_file_b = file_writer(filepath_b)
write_to_file_b('hey, this is text that will be written in file b')
```

Problem 3

In last weeks problem 3, you coded a function called **first_word_of_each_line.** Now, code a function called **word_n_of_each_line.** This function accepts one argument**, n,** and it return a generator function very similar to **first_word_of_each_line** from week 3 (the function it returns will accept the filepath argument). But this function will be a generator that return the **n**th word in the line. If the line is too short (does not have an **n**th word, it will return None.

To test this function, create a plain text file and write several lines in it then create several versions of the generator function that will return the **n**th word from each line.

Submission

Submit the file with the functions, week_4_homework.py, to the homework page on the course website. Each problem is worth 30 points, and you get 10 points for turning something in (that is completely blank). Click on the blue button in the top right corner to submit your assignment.

Click Next (below) to progress through the course.