1 Python for Data Analysis 101

1.1 Homework

1.1.1 Instructor: Evelyn J. Boettcher, DiDacTex, LLC

1.1.2 Week 1: Lecture 4

HW Exercise:

- Write a function that takes a single argument, prints the value of the argument, and returns the argument as a string.
- Write a function that takes a variable number of arguments and prints them all.
- Write a function that prints the names and values of keyword arguments passed to it.
- Write a python script (file) that prints your name as all lower case, upper case and proper capitalization. (Bonus) if you can pass in your name: input()? argparse? etc

---

1.2 Solutions

HW Exercise:

- Write a function that takes a single argument, prints the value of the argument, and returns the argument as a string.

Solution:

```
def t(x):
   print( 'x: %s' % x)
   return '%s' % x

a = t(3)
if type(a) == str:
   print("Correct")
```

1.2.1 OR

```
def t(x):
    print('x: ', x)
    print('x: ' + str(x))
    return str(x)


a = t(3)
if type(a) == str:
   print("Correct")
```

HW Exercise:

- Write a function that takes a variable number of arguments and prints them all.

Solution:

```
def t(*args):
    for arg in args:
       print( 'arg: %s' % arg)

t('aa', 'bb', 'cc')
# arg: aa
# arg: bb
# arg: cc
```

or

```
def t(*args):
    for arg in args:
         print('arg: ',  arg)
         print('arg: '+  arg)

t('aa', 'bb', 'cc')
```

HW Exercise:

- Write a function that prints the names and values of keyword arguments passed to it.

Solution:

```
def t(**kwargs):
     for key in kwargs.keys():
         print( 'key: %s  value: %s' % (key, kwargs[key], ))

t(arg1=11, arg2=22)
# key: arg1  value: 11
# key: arg2  value: 22
```

1.2.2 `**kwargs` NOT a python key term

```
def t(**what_you_pass_in):
     for key in what_you_pass_in.keys():
         print( 'key: %s  value: %s' % (key, what_you_pass_in[key], ))

t(arg1=11, arg2=22)
# key: arg1  value: 11
# key: arg2  value: 22
```

HW - Write a python script (file) that prints your name as all lower case, upper case and proper capitalization. (Bonus) if you can pass in your name: input()? argparse? etc

Solution

```
def print_names(my_str):
  print("Name: ", my_str)
  print("Name Upper: ", my_str.upper())
  print("Name Lower: ", my_str.lower())
  print("Name Title: ", my_str.title())


if __name__=='__main__':
   my_new_str = input("Type your name ")
   print_names(my_new_str)
```