

Python Data Science Homework #2

NOTICE: PRINT OUT THE ANSWERS DIRECTLY WILL NOT BE SCORED

1. Design a function with positional arguments and keyword arguments, and print out in following format (20%)
(Hint: first two variables must be shown)

```
Points Leader: Curry
Highest Paid Player: Curry
Other Players: ('James',)
Stat Leaders: {'Blocks_Leader': 'Turner', 'Assists_Leader': 'Westbrook'}
```

```
Points Leader: Curry
Highest Paid Players: Curry
Other Players: ('James', 'Lillard', 'Harden')
Stat Leaders: {'Rebounds_Leader': 'Capela', 'Blocks_Leader': 'Turner', 'Assists_Leader': 'Westbrook'}
```

2. Design a function that can calculate the Factorial of input number and print the result (20%)

```
[3] ▶ def frac(n):...
    ×
[4] frac(6)
    ×
    720
```

3. Design a function that can show the all Prime numbers below input number and print the result (20%)

```
[13] ▶ def va(n):...
    ×
[14] va(10)
    ×
    [2, 3, 5, 7]
```

4. `a = [2, -3, 3.3, 23, 78, 111, 0]`,
Determine whether it is an odd number and a positive integer ,and print them out
(1) Using filter function(10%)
(2) Using list comprehension (10%)

5. `list1=["Asia", "Alabama", "Arizona", "Aloha", "Colorado", "Montana", "Nevada"]`

Using `map()` function and lambda function create a list consisted of the number of appearance of both letters: A and a.(10%)

6. Get multiple multiplication functions with closures. Make functions to create `multiply_n()` functions like following result.(10%)

```
multiplywith5 = multiplier_of(5)
print(multiplywith5(9))
```

✓ 0.2s

45

```
multiply_7 = multiplier_of(7)
print(multiply_7(5))
```

✓ 0.4s

35