Raul Rodriguez
Python programming for data science

Exercise 1

```python
 7          print("factorial of input number using for loop is ",factorial)
 8     def myFactorialWIthWhileLoop(a):
 9          factorial=1
10          while True:
11              if(a==0):
12                  break
13              factorial*=(a)
14              a=a-1
15              print(factorial)
16          print("factorial of input number using while loop is ",factorial)
17     a=int(input("Enter a number"))
18     myFactorialWIthForLoop(a)
19     myFactorialWIthWhileLoop(a)
20
```

```
/usr/local/bin/python3 /Users/raulrodriguez/Documents/WorkSpaceVSPython/
raulrodriguez@Rauls-MacBook-Air WorkSpaceVSPython % /usr/local/bin/pytho
Enter a number5
5
20
60
120
factorial of input number using for loop is  120
5
20
60
120
120
factorial of input number using while loop is  120
```

Exercise 2

```python
sum = 4
numerator = 4
denominator = 3
for i in range(5200):
    if i%2:
        sum = sum+(numerator/denominator)
    else:
        sum = sum-(numerator/denominator)
    denominator=denominator+2
    print(sum)
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    JUPYTER

```
3.1417853689474184
3.1413999753642217
3.1417852946976192
3.1414000495854166
3.141785220505012
3.1414001237494524
3.141785146369531
3.14140197856395
3.1417850722911105
3.14140027190631
3.1417849982696837
3.1414003458992634
3.141784924305186
raulrodriguez@Rauls-MacBook-Air WorkSpaceVSPython %
```