**Practice Quiz 2: For Loops**

**1.How are while loops and for loops different in Python?**

While loops iterate while a condition is true, for loops iterate through a sequence of elements.

**2.Fill in the blanks to make the factorial function return the factorial of n. Then, print the first 10 factorials (from 0 to 9) with the corresponding number. Remember that the factorial of a number is defined as the product of an integer and all integers before it. For example, the factorial of five (5!) is equal to 1 \* 2 \* 3 \* 4 \* 5=120. Also recall that the factorial of zero (0!) is equal to 1.**

def factorial(n):

if n == 0: return 1

result = 1

for x in range(1,n+1):

result = result \* x

return result

for n in range(10):

print(n, factorial(n))

**3.Write a script that prints the first 10 cube numbers (x\*\*3), starting with x=1 and ending with x=10.**

for x in range(1,11):

print(x\*\*3)

**4.Write a script that prints the multiples of 7 between 0 and 100. Print one multiple per line and avoid printing any numbers that aren't multiples of 7. Remember that 0 is also a multiple of 7.**

for n in range(0,101):

if n == 0 or n % 7 == 0:

print(n)

**5.The retry function tries to execute an operation that might fail, it retries the operation for a number of attempts. Currently the code will keep executing the function even if it succeeds. Fill in the blank so the code stops trying after the operation succeeded.**

def retry(operation, attempts):

for n in range(attempts):

if operation():

print("Attempt " + str(n) + " succeeded")

break;

else:

print("Attempt " + str(n) + " failed")

retry(create\_user, 3)

retry(stop\_service, 5)