Loops in Python

range(start, stop, step)

start = the first number in the list

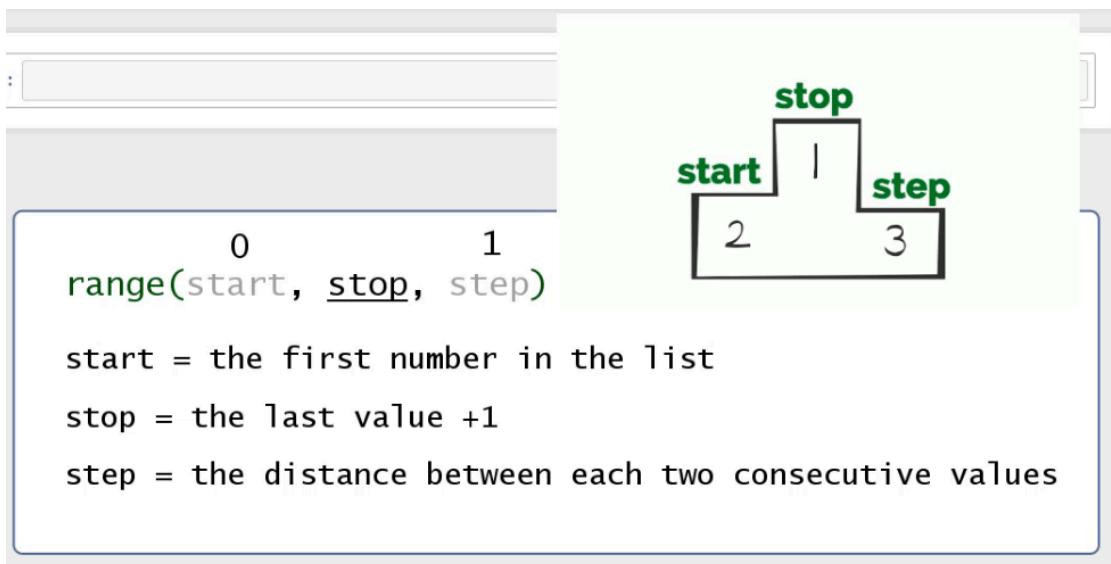stop = the last value +1

step = the distance between each two consecutive values

Loops

What is `for` loop?

The `for` loop enables you to execute a code block multiple times.

In this example we can print out a sequence of numbers from 0 to 7:

```python
# range(3)
for i in range(0,3,1):
    print(i)
```

```
0
1
2
```

```python
for i in range(0,3,1):
    print(i*2)
```

```
0
2
4
```

```python
for i in range(0,3,1):
    print(2, i, 2*i)
```

```
2 0 0
2 1 2
2 2 4
```

```python
for i in range(1,4):
    print(2, i, 2*i)
```

```
2 1 2
2 2 4
2 3 6
```

```python
for i in range(1,4):
```

```python
    print(2, "x", i, "=", 2*i)
```

```
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
```

```python
T = 2
for i in range(1,4):
    print(T, "x", i, "=", T*i)
```

```
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
```

```python
T = 2
for i in range(1,4):
    print("T x i = T*i")
```

```
T x i = T*i
T x i = T*i
T x i = T*i
```

```python
T = 2
for i in range(1,11):
    print(f"{T} x {i} = {T*i}")
```

```
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
```

```python
T = int(input("Enter Table Number: "))
for i in range(10, 0, -1):
    print(f"{T} x {i} = {T*i}")
```

```
3 x 10 = 30
3 x 9 = 27
3 x 8 = 24
3 x 7 = 21
3 x 6 = 18
3 x 5 = 15
3 x 4 = 12
3 x 3 = 9
3 x 2 = 6
3 x 1 = 3
```

```python
for i in range(1,11):
    print(i)
```

```
1
2
3
4
5
6
7
8
9
10
```

```python
for i in range(1,11):
    if i % 2 == 0:
        print(i)
```

```
2
4
6
8
10
```

```python
for i in range(1,11):
    if i % 2 == 0:
        print(i, "Even")
    else:
        print(i, "Odd")
```

```
1 Odd
2 Even
3 Odd
4 Even
5 Odd
6 Even
7 Odd
8 Even
9 Odd
10 Even
```

```python
Lst = [5,3,6,8,9,2,7]
```

```python
for i in Lst:
    print(i)
```

```
5
3
6
8
9
2
7
```

```python
Lst
```

```
[5, 3, 6, 8, 9, 2, 7]
```

```python
Sm = 0
for i in Lst:
    Sm = Sm + i

print(Sm)
```

```
40
```

```python
Sm = 0
for i in Lst:
    if i % 2 == 0:
        print(i)
        Sm = Sm + i

print("==")
print(Sm)
```

```
6
8
2
==
16
```

Lst

```
[5, 3, 6, 8, 9, 2, 7]
```

```python
Min = Lst[0]
for i in Lst:
    if i < Min:
        Min = i

print(Min)
```

```
2
```

```python
Max = Lst[0]
for i in Lst:
    if i > Max:
        Max = i

print(Max)
```

```
9
```

Lst

```
[5, 3, 6, 8, 9, 2, 7]
```

```python
for i in Lst:
    if i % 2 == 0:
        print(i)
```

```
6
8
2
```

Lst

```
[5, 3, 6, 8, 9, 2, 7]
```

```python
LstE = []
```

```python
for i in Lst:
    if i % 2 == 0:
        LstE.append(i)

print(LstE)
```

```
[6, 8, 2]
```

```python
LstE = []
LstO = []
```

```
[]
```

```python
for i in Lst:
    if i % 2 == 0:
        LstE.append(i)

print(LstE)
```