Python Loops

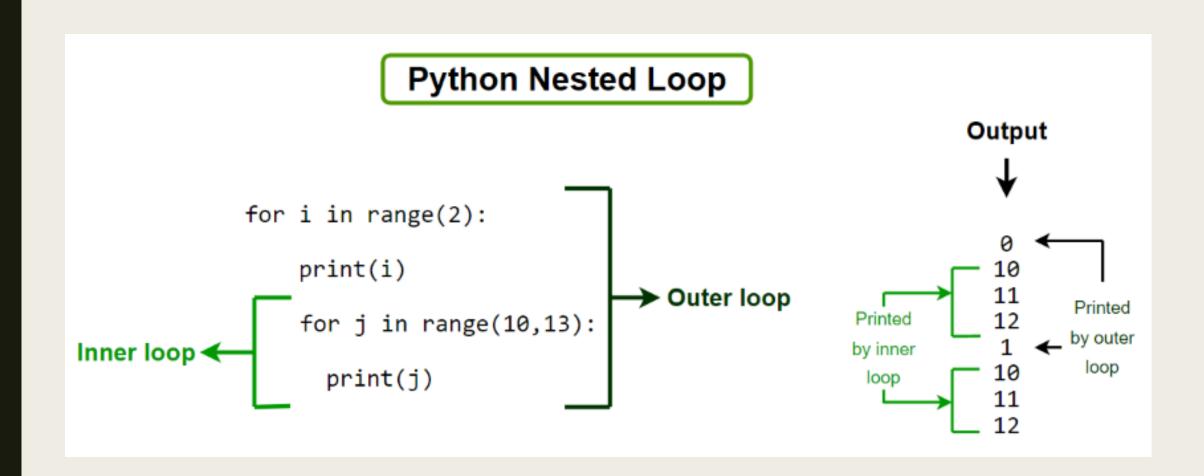
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Types of Python Loops

- While Loop in Python.
- For Loop in Python.
- Nested Loops.
- Loop Control Statements.

Python Nested Loops

For loop structure



Basic Example of Python Nested Loops

```
x = [1, 2]
y = [4, 5]
for i in x:
    for j in y:
        print(i, j)
```

output

```
C:\Users\
1 4
1 5
2 4
```

2 5

```
x = [1, 2]
y = [4, 5]
i = 0
while i < len(x) :</pre>
  j = 0
  while j < len(y) :</pre>
    print(x[i], y[j])
    j = j + 1
  i = i + 1
```

output

2 5

Printing multiplication table of 2 numbers using Python nested for loops

```
for i in range(2,3):
    for j in range(1, 11):
        print(i, "*", j, "=", i * j)
    print()
```

Output →

```
C:\Users\SuperLap\Py
2 * 1 = 2
2 * 2 = 4
2 * 3 = 6
2 * 4 = 8
2 * 5 = 10
2 * 6 = 12
2 * 7 = 14
2 * 8 = 16
2 * 9 = 18
2 * 10 = 20
```

Using break statement in nested loops

```
for i in range(2, 4):
    for j in range(1, 11):
        if i == j:
            break
        print(i, "*", j, "=", i * j)
    print()
```

C:\Users\SuperLap\P

$$2 * 1 = 2$$

Output

$$3 * 2 = 6$$

Using continue statement in nested loops

```
for i in range(2, 3):
    for j in range(1, 11):
        if i == j:
            continue
        print(i, "*", j, "=", i * j)
    print()
```

Output ->

```
C:\Users\SuperLap\P
 2 * 1 = 2
 2 * 3 = 6
 2 * 4 = 8
2 * 5 = 10
 2 * 6 = 12
 2 * 7 = 14
 2 * 8 = 16
 2 * 9 = 18
 2 * 10 = 20
```

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