Python Loops

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Main points of loop

- Initialize value .

- End value .

- Condition .

- Increment / Decrement .

Types of Python Loops

- While Loop in Python.

- For Loop in Python.

- Nested Loops.
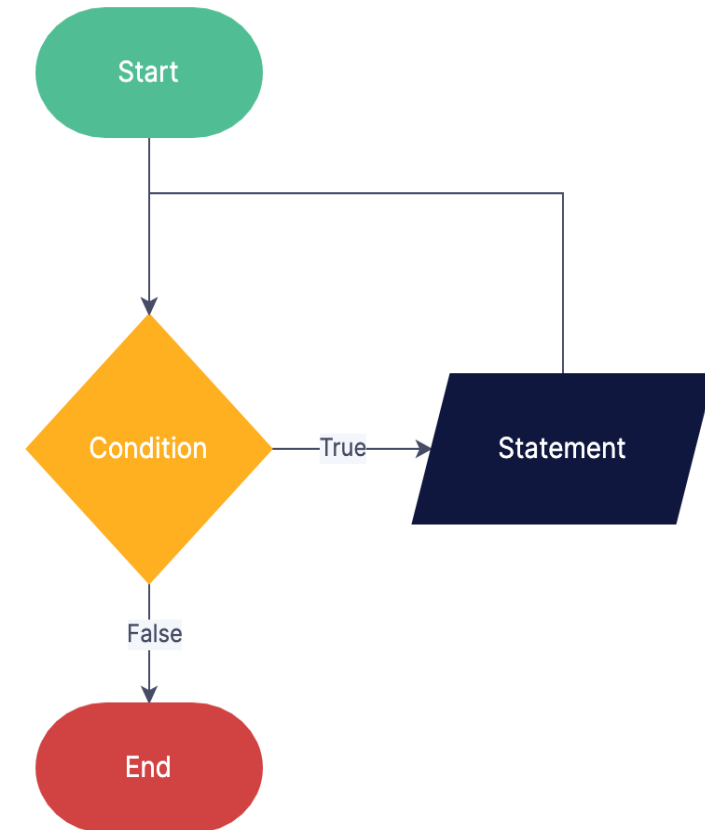
- Loop Control Statements.

For Loop

For loop structure

■ The syntax of for loop in Python is:

for init value in sequence:

    statements(s)

Flow for loop diagram

- **The for evaluates condition.**

- **If condition is evaluated to True,**

  the code inside the body of while is executed.

- **If condition is evaluated to False,**

  go out of for loop .

While Loop Flowchart

Example 1

- Write python program to print numbers from (0 – 5)

```python
i = 0
for i in range(5):
    print(i,end="\t")
```

- **Output**

```
C:\Users\SuperLap\PycharmPr
0   1   2   3   4
Process finished with exit
```

Example 2

- Write python program to print each letter of string.

```python
for x in "banana":
    print(x)
```

- **Output**

```
C:\Users\SuperL:
b
a
n
a
n
a
```

Example 3

- Write python program to print each letter of string if letter equal

  i stop .

```python
for x in "hussien":
    if x == "i":
        break
    print(x,end="\t")
```

- **Output**

```
C:\Users\SuperLap\Pyc
h    u    s    s
Process finished with
```

Example 4

- Write python program to print each letter of string if letter equal

  i continue.

```python
for x in "hussien":
    if x == "i":
        continue
    print(x,end="\t")
```

- **Output**

```
C:\Users\SuperLap\Pycharm
h    u    s    s    e    n
Process finished with exi
```

Example 6

- Write python program to print numbers from 3 – 6.

```python
for x in range(3, 7):
    print(x,end="\t")
```

- **Output**

```
C:\Users\SuperLap\Pycha
3    4    5    6
Process finished with e
```

Example 7

- Write python program to print numbers from **2 – 30** increment by **3** .

```python
for x in range(2, 30, 3):
    print(x,end="\t")
```

- **Output**

```
C:\Users\SuperLap\PycharmProjects\pythonProje
2    5    8    11   14   17   20   23   26   29
Process finished with exit code 0
```

Example 8

- Print all numbers from 0 to 5, and print a message when the loop has ended.

Output

```python
for x in range(6):
    print(x)
else:
    print("Finally finished!")
```

```
C:\Users\SuperLap\PycharmPro
0
1
2
3
4
5
Finally finished!
```