

Nested For Loop

```
1 Syntax :
2     Normal for loop
3
4 for var in sequence :
5     st1
6     st2
7     .
8     .
9     .stN
10
11
12 

---


13
14 Nested for loop
15
16 for var1 in sequence1:
17     st1
18     st2
19
20     for var2 in sequence2:
21         st3
22         st4
23
24         for var3 in sequence3:
25             st5
26             st6
27             .
28             .
29             .
30 

---


31
32
33 Nested for loop
34
35 for var1 in sequence1:
36     st1
37     st2
38
39     for var2 in sequence2:
40         st3
41         st4
42
43         for var3 in sequence3:
44             st5
45             st6
46             .
47             .
48             .
49 

---


50
51 Nested for loop
52
53 for var1 in sequence1:
54     st1
55     st2
```

```
56
57 for var2 in sequence2:
58     st3
59     st4
60
61     for var3 in sequence3:
62         st5
63         st6
64         .
65         .
66         .
```

In [2]:

```
1 for i in range(5): # 0 to 4
2     print("Python")
```

Python
Python
Python
Python
Python

In [7]:

```
1 for i in range(5): # 0 to 4
2     print(f"Python ( i = {i} )" )
3
4     for j in range(5): # j : 0 to 4
5         print(f"Machine Learning ( j = {j} )")
```

```
Python ( i = 0 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
Python ( i = 1 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
Python ( i = 2 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
Python ( i = 3 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
Python ( i = 4 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
```

In [8]:

```
1 for i in range(5): # 0 to 4
2     print(f"Python ( i = {i} )" )
3
4     for j in range(5): # j : 0 to 4
5         print(f"Machine Learning ( j = {j} )" )
6
7     print(".....End of Inner Loop..... ")
8
9 print(".....End of Outer Loop..... ")
```

```
Python ( i = 0 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
.....End of Inner Loop.....
Python ( i = 1 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
.....End of Inner Loop.....
Python ( i = 2 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
.....End of Inner Loop.....
Python ( i = 3 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
.....End of Inner Loop.....
Python ( i = 4 )
Machine Learning ( j = 0 )
Machine Learning ( j = 1 )
Machine Learning ( j = 2 )
Machine Learning ( j = 3 )
Machine Learning ( j = 4 )
.....End of Inner Loop.....
.....End of Outer Loop.....
```

In [13]:

```
1 for i in range(5):
2     print('\n*')
3
4     for j in range(5):
5         print('#' , end=" ")
```

```
*
# # # # #
*
# # # # #
*
# # # # #
*
# # # # #
*
# # # # #
```

In []:

```
1
```

In [23]:

```
1 # * * * * *
2 # * * * * *
3 # * * * * *
4 # * * * * *
5 # * * * * *
6 for i in range(5):
7     print()
8
9     for j in range(5):
10         print('*', end=" ")
11
```

```
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```

In [28]:

```
1 # *
2 # * *
3 # * * *
4 # * * * *
5 # * * * * *
6
7 n=5
8 for i in range(1,n+1):
9
10
11     for j in range(i): #No of Iterations = value of i
12         print('*', end=" ")
13
14     print()
```

```
*
* *
* * *
* * * *
* * * * *
```

In [29]:

```
1 # *
2 # * *
3 # * * *
4 # * * * *
5 # * * * * *
6
7 import time
8 n=5
9 for i in range(1,n+1):
10
11
12     for j in range(i):
13         print('*', end=" ")
14
15
16     print()
17     time.sleep(2)
```

```
*
* *
* * *
* * * *
* * * * *
```

In [31]:

```
1 # A
2 # A A
3 # A A A
4 # A A A A
5 # A A A A A
6
7 n=5
8 for i in range(1,n+1):
9
10
11     for j in range(i):
12         print('A', end=" ")
13
14
15     print()
```

```
A
A A
A A A
A A A A
A A A A A
```

In []:

```
1 # 1
2 # 2 2
3 # 3 3 3
4 # 4 4 4 4
5 # 5 5 5 5 5
6
7
8 #Assignment for STudent
9
10
```

In []:

```
1 # 1
2 # 1 2
3 # 1 2 3
4 # 1 2 3 4
5 # 1 2 3 4 5
6
7
8 #Assignment for STudent
9
```

In []:

```
1
```

