Nested For Loop

```
Syntax  :
    Normal for loop

for  var in sequence :
    st1
    st2
    .
    .
    .stN


_____

Nested for loop

for var1 in sequence1:
    st1
    st2

    for var2 in sequence2:
        st3
        st4

        for var3 in sequence3:
            st5
            st6
            .
            .
            .
_____

Nested for loop

for var1 in sequence1:
    st1
    st2

    for var2 in sequence2:
        st3
        st4

    for var3 in sequence3:
        st5
        st6
        .
        .
        .
_____

Nested for loop

for var1 in sequence1:
    st1
    st2
```

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

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

```
Python
Python
Python
Python
Python
```

```python
for i in range(5):  #  0 to 4
    print(f"Python ( i = {i} )" )

    for j in range(5):  # j : 0 to 4
        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 )
```

```python
for i in range(5):   #  0 to 4
    print(f"Python ( i = {i} )" )

    for j in range(5):  # j : 0 to 4
        print(f"Machine Learning ( j = {j} )")

    print(".........End of Inner Loop......... ")

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]:

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

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

In [ ]:

```python

```

In [23]:

```python
# * * * * * *
# * * * * * *
# * * * * * *
# * * * * * *
# * * * * * *
for i in range(5):
    print()
    
    for j in range(5):
        print('*', end=" ")
```

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

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]:

```python
# A
# A A
# A A A
# A A A A
# A A A A A

n=5
for i in range(1,n+1):


    for j in range(i):
        print('A', end=" ")


    print()
```

A
A A
A A A
A A A A
A A A A A

In [ ]:

```python
# 1
# 2 2
# 3 3 3
# 4 4 4 4
# 5 5 5 5 5


#Assignment for STudent

```

In [ ]:

```python
# 1
# 1 2
# 1 2 3
# 1 2 3 4
# 1 2 3 4 5


#Assignment for STudent
```

In [ ]: