Nested Loops
Defining a looping statement inside looping statement is called nested looping statements. These nested looping statements can be,
1. Nested for loop
2. Nested while loop

``
# Print tables from 1 to 10 	
 	
for num in range(1,11): # Outer Loop
   for i in range(1,11): # Inner Loop
      p=num*i
      print(f'{num}x{i}={p}')
   input()
``
	1x1=1
	1x2=2
	1x3=3
	1x4=4
	1x5=5
	1x6=6
	1x7=7
	1x8=8
	1x9=9
	1x10=10
	
	2x1=2
	2x2=4
	2x3=6
	2x4=8
	2x5=10
	2x6=12
	2x7=14
	2x8=16
	2x9=18
	2x10=20

``
# Write a program to display 	
factorials of numbers from 1-5
 	
for num in range(1,6):
   fact=1
   for i in range(1,num+1):
      fact=fact*i
   print(f'{num}-->{fact}')
``
	1-->1
	2-->2
	3-->6
	4-->24
	5-->120

# Write a program to generate prime numbers from 2 to 20	2 3

Code	Output
| ```python
for num in range(2,21): # 2 3 4 5 6 7 8 9 10 .... 20
    c=0
    for i in range(1,num+1):
        if num%i==0:
            c=c+1
    if c==2:
        print(num)
``` | 5<br>7<br>11<br>13<br>17<br>19 |
| ```python
for i in range(1,6):
    print(1,end=' ')
``` | 1 1 1 1 1 |
| ```python
for i in range(1,6):
    print(1)
``` | 1<br>1<br>1<br>1<br>1 |

```
   1 2 3 4 5
1  1 1 1 1 1
2  1 1 1 1 1
3  1 1 1 1 1
4  1 1 1 1 1
5  1 1 1 1 1
```

```python
for i in range(1,6):
    for j in range(1,6):
        print(1,end=' ')
    print()
```

```
   1 2 3 4 5
1  1 1 1 1 1
2  2 2 2 2 2
3  3 3 3 3 3
4  4 4 4 4 4
5  5 5 5 5 5
```

```python
for i in range(1,6):   # 1 2 3 4 5
    for j in range(1,6):   # 1 2 3 4 5
        print(i,end=' ')
    print()
```

```
   1 2 3 4 5
5  5 5 5 5 5
4  4 4 4 4 4
3  3 3 3 3 3
2  2 2 2 2 2
1  1 1 1 1 1
```

```python
for i in range(5,0,-1):
    for j in range(1,6):
        print(i,end=' ')
    print()
```

Table 1:

	1	2	3	4	5
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5

```python
for i in range(1,6):
    for j in range(1,6):
        print(j,end=' ')
    print()
```

Table 2:

	5	4	3	2	1
1	5	4	3	2	1
2	5	4	3	2	1
3	5	4	3	2	1
4	5	4	3	2	1
5	5	4	3	2	1

```python
for i in range(1,6):
    for j in range(5,0,-1):
        print(j,end=' ')
    print()
```

Table 3:

	1	2	3	4	5
1	1	1	1	1	1
2	0	0	0	0	0
3	3	3	3	3	3
4	0	0	0	0	0
5	5	5	5	5	5

```python
for i in range(1,6):
    for j in range(1,6):
        if i%2==0:
            print(0,end=' ')
        else:
            print(i,end=' ')
    print()
```

Table 4:

	1	2	3	4	5
1	1				
2	2	2			
3	3	3	3		
4	4	4	4	4	
5	5	5	5	5	5

```python
for i in range(1,6):
    for j in range(1,6):
        if j<=i:
            print(i,end=' ')
    print()
```

Table 5:

	1	2	3	4	5
5	5	5	5	5	5
4	4	4	4	4	
3	3	3	3		
2	2	2			
1	1				

```python
for i in range(5,0,-1):
    for j in range(1,6):
        if j<=i:
            print(i,end=' ')
    print()
```

	1	2	3	4	5
1	1	0	0	0	0
2	2	2	0	0	0
3	3	3	3	0	0
4	4	4	4	4	0
5	5	5	5	5	5

```python
for i in range(1,6):
    for j in range(1,6):
        if j<=i:
            print(i,end=' ')
        else:
            print(0,end=' ')
    print()
```

	1	2	3	4	5
1	1				
2	1	2			
3	1	2	3		
4	1	2	3	4	
5	1	2	3	4	5

```python
for i in range(1,6):
    for j in range(1,6):
        if j<=i:
            print(j,end=' ')
```

	1	2	3	4	5
5	1	2	3	4	5
4	1	2	3	4	
3	1	2	3		
2	1	2			
1	1				

```python
for i in range(5,0,-1):
    for j in range(1,6):
        if j<=i:
            print(j,end=' ')
    print()
```