

## Nested Loop

Loop inside another loop.

for i in range(5):

for j in range(5):

stmt of inner loop.

stmt of outer loop.

i=1  
while (i<=5):

j=1

while (j<=5):

print(i,j)

j=j+1

print() → it will go to next line without

printing on the same line.

for i in range(5):

for j in range(5):

print(i,j)

print(end=" ") → it will give a space

blw each printing item. stays on the same line

\t → tab space

\n → next line.

outer loop controls the no. of rows

inner loop controls no. of columns

```
for i in range(5):
    for j in range(i+1):
        print('*', end=" ")
    print()
```

→ i in range(5) → 0, 1, 2, 3, 4  
 Total 5 rows  
 → when i=0 → j runs 1 → print \*  
 when i=1 → j runs 2 → \* \*  
 ...  
 when i=4 → j runs 5 → \* \* \* \* \*

if we write range(i) in for loop,

then i=0 → range(0) → print 0 starts

so it ensures at one star on first line.

end=" " → prints star on same line

print() → move to next line

```
for i in range(5):
    print('*' * (i+1))
```

OR

```
for i in range(1, 6):
    print('*' * i)
```

OR

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