

18/9/25

Nested while loop:

- A nested while loop means having one while loop inside another while loop.
- Outer loop controls how many time the inner loops runs.
- inner loop runs completely for each iteration of outer loop.

Syntax:

Initialization of outer loop

while condition:

Initialization of inner loop

while condition 2:

statements of inner loop

inc/dec

statements of outer loop

e.g; Square of star (3×3)

i = 1

while $i^2 \leq 3$

j = 1

while $j^2 \leq 3$

print ("*", end = "")

j += 1

print ()

i += 1

O/P

* * *

* * *

* * *

* * *

* * *

* * *

Number Triangle

```

i=1
while i<=5:
    j=1
    while j<=i
        print(j, end="")
        j+=1
    print()
    i+=1

```

OR

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



Note:

- * outer loop runs first
- * inner loop runs fully
- * After inner loop ends, outer loop updates and run again
- * Always update variable

Reverse triangle pattern

```

i=5
while i>0:
    print("*" * i)
    i-=1

```

Output:

*	*	*	*	*
*	*	*		
*	*	*		
*	*			
*				

Above an in nested while loop :-

row = 5

while (row >= 5):

col = 1

while (col <= row):

print ("*", end = "")

col = col + 1

print()

row = row - 1

Output:-

* * * * *

* * * *

* * *

good value

above good runi value *

*

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