

I. while condition using programs:-
 ① print table from 1 to 10 by nested while:-

table = 10

$i^{\circ} = 1$

while $i^{\circ} <= 10$:

$j^{\circ} = 1$

while $j^{\circ} <= 10$:

print($i^{\circ} * j^{\circ}$, end = " ")

$j^{\circ} = j^{\circ} + 1$

print()

$i^{\circ} = i^{\circ} + 1$

o/p:-

1 2 3 4 5 6 7 8 9 10

2 4 6 8 10 12 14 16 18 20

3 6 9 12 15 18 21 24 27 30

4 8 12 16 20 24 28 32 36 40

5 10 15 20 25 30 35 40 45 50

6 12 18 24 30 36 42 48 54 60

7 14 21 28 35 42 49 56 63 70

8 16 24 32 40 48 56 64 72 80

9 18 27 36 45 54 63 72 81 90

10 20 30 40 50 60 70 80 90 20.

③ Reverse aligned triangle while loop.

$i^{\circ} = 1$

while ($i^{\circ} \geq 5$):

$j^{\circ} = 5$

while ($j^{\circ} \geq i^{\circ}$):

print("*", end = " ")

$j^{\circ} \leftarrow j^{\circ} - 1$ decreasing inner loop.

print()

$i^{\circ} = i^{\circ} + 1$

o/p:-

* * * *

* * *

* *

*

6. while loop hill pattern.

④ Right aligned triangles \rightarrow using nested while.

$i^{\circ} = 1$

while ($i^{\circ} \leq 5$):

$j^{\circ} = 1$

while ($j^{\circ} \leq i^{\circ}$):

print("*", end = "")

$i^{\circ} = i^{\circ} + 1$

(A) For loop inside while loop:-

Syntax :-

Initialization of while loop. # outer loop.

while (Condition):

for variable in range (): # inner loop.

statements of for loop

statements of while loop.

inc/dec of while loop.

① Program:-

i=1

num=2

while (i<=5):

for j in range (1, i+1, 1):

print (num, end="")

num=num+2

print()

i=i+1

O/P:-

2

4 6

8 10 12

14 16 18 20

22 24 26 28 30

②