

DAY-12

SEPTEMBER 18,2025

Nested While loop:

Syntax:

Initialization of outer loop while
condition(Outer while): initialisation
of inner loop while condition(inner
while): statements of inner loop
increment/decrement of inner loop
statements of outer loop
increment/decrement of outer loop

1. Write a program to print multiplication table

```
Code: row = 1 while(row <= 10):   col = 1  
     while(col <= 10):       #row = 1       #col =  
1,2,...10       print(row*col,end="\t")       col  
= col+1  
     print()  
     row = row+1
```

2. Pattern printing:

Write a program to print

*

* *

* * *

* * * *

* * * * *

```
* Code: row = 1 while(row <= 5):    col
    = 1    while(col <= row):
        print("*",end=" ")    col = col+1
    print()
    row = row+1
```

If the row input has to be taken from the user

```
num = int(input("Enter a row number: "))
row = 1 while(row <= num):
    col = 1
    while(col <= row):
        print("*",end=" ")
    col = col+1    print()
    row = row+1
```

3. program to print the pattern

* * * * *

* * * *

* * *

* *

*

```
Code: num = int(input("Enter a row
number: "))
row = 1
for row in
range(1,num+1,1):
    col = 1
    for col
in range(row,num+1,col):
        print("*",end=" ")
    print()
using
while loop: num = int(input("Enter a row
number: "))
row = num
while row > 0:

    col = 1

    while col <= row:
        print("*", end=" ")
        col = col + 1
    print()
    row = row - 1
```

4. write a program to print

1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

Explanation:

i=1, j=1,2 i=2,

j=1,2,3 i=3,

j=1,2,3 i=4,

j=1,2,3,4 i=5,

j=1,2,3,4,5

code:

```
for i in range(1,6,1):
```

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

```
        print(i,end="\t")
```

```
    print()
```

5. Write a program to print

output

1 2 3 4 5

1 2 3 4 5 1

2 3 4 5

1 2 3 4 5

1 2 3 4 5 Code: for i in

```
range(1,6,1):    for i in
```

```
range(1,6,1):
```

```
    print(i,end=" ")
```

```
print()
```