

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()
```