

write a python program to get folling patterns

1.

```
In [2]: n=5
for i in range(1,n+1): ##i=1,2,3,4,5
    for j in range(i):#j=i::j=1,2,3,4,5
        print("*",end=' ')

    print()
```

```
*
**
***
****
*****
```

```
In [35]: n=5
for i in range(1,n+1):
    for j in range(i):
        print("*",end=' ')
    print()
```

```
*
* *
* * *
* * * *
* * * * *
```

```
In [39]: n=5
for i in range(1,n+1):
    print("*"*i)
```

```
*
**
***
****
*****
```

```
In [38]: for i in range(1,6):
    print("* " * i)
```

```
*
* *
* * *
* * * *
* * * * *
```

2.

```
In [24]: n=5
for i in range(1,n+1):

    print(" "*(n-i) + "*" * i)
```

```
*
**
***
****
*****
```

3.

```
In [5]: for i in range(1,6):
    print(" "*(6-i)+(" *" * i)
```

```
*
* *
* * *
* * * *
* * * * *
```

```
In [7]: n=5
for i in range(1,n+1):
    print(" "*(n-i)+"* "*i)
```

```
    *
  * *
* * *
* * * *
* * * * *
```

4.

```
In [40]: n=8
for i in range(n+1,0,-2): #i=9,7,5,3,1

    print(" "*(n-i)+ " "*i)
```

```
* * * * *
 * * * * *
  * * * *
   * * *
    * *
     *
```

```
In [38]: n=5
for i in range(n,0,-1):

    print(" "*(n-i)+ "*"*(2*i-1))
```

```
*****
*****
*****
***
*
```

5.

```
In [56]: n=5
for i in range(1,n+1):
    for j in range(1,i+1):
        print(j,end=' ')
    print()
```

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

6.

```
In [3]: n=5
x=1
for i in range(1,n+1):
    for j in range(i):
        print(x,end=' ')
        x+=1
    print()
```

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

7.pascal's triangle

```
In [2]: n=5
for i in range(n+1):
    for j in range(n-i):
        print(' ',end='')

    c=1
    for j in range(1,i+1):
        print(c, ' ',sep=' ',end='')
        c=c*(i-j)//j
    print()
```

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

```
In [3]: n=5
for i in range(n):
    print(' '*i,end='')
    print(' '.join(map(str,str(11**i))))
```

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

8.

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

```
In [21]: n=5
x=1
for i in range(1,n+1):
    for j in range(1,i+1):

        print(x,end=' ')
        x+=1
    print()
```

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

9.use ASCII value

```
In [47]: for i in range(65,70):
    for j in range(65,i+1):
        print(chr(i),end=' ')

    print()
```

```
A
B B
C C C
D D D D
E E E E E
```

10.

```
In [53]: n=5
x=65
for i in range(1,n+1):
    for j in range(1,i+1):
        print(chr(x),end=' ')
        x+=1
    print()
```

A
B C
D E F
G H I J
K L M N O

11.

```
In [60]: n=5
for i in range(1,n+1):
    for j in range(1,i+1):
        print("k",end=' ')
    print()
```

k
k k
k k k
k k k k
k k k k k

12.

```
In [66]: for i in range(65,70):
    for j in range(65,i+1):
        print(chr(j),end=' ')

    print()
```

A
A B
A B C
A B C D
A B C D E

13.

```
In [70]: string='python'
n=5
for i in range(0,n+1):
    for j in range(0,i+1):
        print(string[j],end='')
    print()
```

p
py
pyt
pyth
pytho
python

14.

```
In [98]: n=5
for i in range(1,n+1):
    for j in range(1,n+2-i):
        print(i,end=' ')
    print()
```

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

15.

```
In [104]: n=6
for i in range(n,0,-1):
    for j in range(1,i+1):
        print(i,end=' ')
    print()
```

6 6 6 6 6 6
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1

16.

0 1 2 3 4 5
0 1 2 3 4
0 1 2 3
0 1 2
0 1

```
In [5]: n=5
for i in range(n,0,-1):
    for j in range (i+1):
        print(j,end=" ")
    print()
```

0 1 2 3 4 5
0 1 2 3 4
0 1 2 3
0 1 2
0 1

17.

1
2 3 4
5 6 7 8 9

```
In [7]: n=5
x=1
for i in range(1,n+1,2):
    for j in range(1,i+1):
        print(x,end=' ')
        x+=1
    print()
```

1
2 3 4
5 6 7 8 9

18.

```
In [8]: n=6
for i in range(n,0,-1):
    for j in range(i,0,-1):
        print(j,end=' ')
    print()
```

6 5 4 3 2 1
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1

19.

```
In [15]: n=5
x=1
for i in range(1,n+1):
    for j in range(i):
        print(x,end=" ")
    x+=2
    print()
```

1
3 3
5 5 5
7 7 7 7
9 9 9 9 9

20.

```
In [25]: n=5
for i in range(1,n+1):
    print(" "*(n-i),end="")
    for j in range(1,i+1):
        print(j,end="")

    print()
```

```
1
12
123
1234
12345
```

21.

```
In [26]: n=5
for i in range(1,n+1):
    for j in range(1,n+1):
        if i>=j:
            print(i,end=" ")
        else:
            print(j,end=" ")
    print()
```

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

22.

```
In [27]: for i in range(1,8):
    for j in range(1,i+1):
        print(i*j,end=" ")
    print()
```

```
1
2 4
3 6 9
4 8 12 16
5 10 15 20 25
6 12 18 24 30 36
7 14 21 28 35 42 49
```

23

```
In [3]: for i in range(1,9):
    for j in range(i-1,-1,-1):
        print(2**j,end=' ')
    print()
```

```
1
2 1
4 2 1
8 4 2 1
16 8 4 2 1
32 16 8 4 2 1
64 32 16 8 4 2 1
128 64 32 16 8 4 2 1
```

24.

```
In [32]: n=7
for i in range(1,n+1):
    print("* "*i)

for i in range(n,0,-1):
    for j in range(i):
        print("*",end=" ")
    print()
```

```
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * * * *
* * * * * * *
* * * * * * *
* * * * * *
* * * * *
* * * *
* * *
* *
*
```

```
In [39]: n=7
for i in range(1,n+1):
    for j in range(i):

        print("*",end=" ")
    print()

for i in range(n,0,-1):
    for j in range(i):
        print("*",end=" ")
    print()
```

```
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * * * *
* * * * * * *
* * * * * * *
* * * * * *
* * * * *
* * * *
* * *
* *
*
```

25.

```
In [42]: n=7
for i in range(1,n+1):
    for j in range(i):
        print("*",end=" ")
    print()
print()

for i in range(n,0,-1):
    for j in range(i):
        print("*",end=" ")
    print()
```

```
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * * * *

* * * * * * *
* * * * * *
* * * * *
* * * *
* * *
* *
*
```

```
In [ ]:
```

