

```

1.
'''*
  * *
 * * *
* * * *
* * * * * '''

```

n=5

```

for i in range(1,n+1):
    print(i*'*')

```

```

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

```

#1. Using while loop

```

i = 1
n = 5
while i<=n:
    print(i*'*')
    i+=1

```

```

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

```

#2

```

"""
      *
    * *
  * * *
* * * *
* * * * * """

```

n = 5

```

for i in range(1,n+1):
    print(" "*(n-i) +' '*i)

```

```

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

```

#2 using while loop

```
1 = 1
n = 5
```

```
while i<=n:
    print(" "*(n-i) +' '*i)
    i+=1
```

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

#3

```
n = 5
```

```
for i in range(1,n+1):
    print(" "*(n-i) + " "*i)
```

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

#3 using while loop

```
i = 1
n = 5
```

```
while i<=n:
    print(" "*(n-i) +' ' *i)
    i+=1
```

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

#4

```
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

```

```
#4
```

```
n=5
```

```
i=0
```

```

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

```

```

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

```

```
n= 5
```

```
count = 1
```

```

for i in range(1,n+1):
    for j in range(1,i+1):
        print(count,end=' ')
        count = count +1

```

```
print()
```

```

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

```

```
#using while loop
```

```
num=5
```

```
row=0
```

```
count=1
```

```
# column = 0
```

```

while row<num:
    column=0
    while column<=row:
        print(count,end=" ")
        count+=1
        column+=1
    row+=1

```

```
column+=1
```

```
print()
```

```
row+=1
```

```
1
```

```
2 3
```

```
4 5 6
```

```
7 8 9 10
```

```
11 12 13 14 15
```

```
chr(65)
```

```
'A'
```

```
n = 65
```

```
for i in range(5):
```

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

```
        print(chr(n),end=' ')
```

```
    n = n+1
```

```
print()
```

```
A
```

```
B B
```

```
C C C
```

```
D D D D
```

```
E E E E E
```

```
n = 65
```

```
i = 0
```

```
while i<= 5:
```

```
    j = 1
```

```
    while j<=i+1:
```

```
        print(chr(n),end=' ')
```

```
        j +=1
```

```
    i +=1
```

```
    n = n +1
```

```
print()
```

```
A
```

```
B B
```

```
C C C
```

```
D D D D
```

```
E E E E E
```

```
F F F F F F
```

```
#7
```

```
n = 65
```

```
for i in range(5):
```

```

    for j in range(i+1):
        print(chr(n),end=' ')
        n = n+1

    print()

```

```

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

```

```

n = 65
i = 0

```

```

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

    print()
    i+=1

```

```

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

```

```

n = 75

```

```

for i in range(5):
    for j in range(i+1):
        print(chr(n),end=" ")

    print()

```

```

K
K K
K K K
K K K K
K K K K K

```

```

#using while loop
n = 75
i = 0

```

```

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

```

```
j+=1
```

```
print()
```

```
i+=1
```

```
K
```

```
K K
```

```
K K K
```

```
K K K K
```

```
K K K K K
```

```
#8
```

```
n = 65
```

```
for i in range(5):
```

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

```
        print(chr(n),end=" ")
```

```
        n +=1
```

```
n = 65
```

```
print()
```

```
A
```

```
A B
```

```
A B C
```

```
A B C D
```

```
A B C D E
```

```
#using while loop
```

```
n = 65
```

```
i = 0
```

```
while i<5:
```

```
    j = 1
```

```
    while j<=i+1:
```

```
        print(chr(n),end=" ")
```

```
        n+=1
```

```
        j+=1
```

```
print()
```

```
i+=1
```

```
n = 65
```

```
A
```

```
A B
```

```
A B C
```

```
A B C D
```

```
A B C D E
```

```
#9
```

```
n = 'python'
```

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

```
p
p y
p y t
p y t h
p y t h o
p y t h o n
```

```
#using while loop
```

```
n = 'python'
l = len(n)
i = 0
```

```
while i<l:
    j =0
    while j<i+1:
        print(n[j],end=' ')
        j+=1
    print()
    i+=1
```

```
p
p y
p y t
p y t h
p y t h o
p y t h o n
```

```
num = 1
for i in range(5,0,-1):
    for j in range(i):
        print(num,end=' ')
```

```
num+=1
```

```
print()
```

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

Double-click (or enter) to edit

```

for i in range(6,0,-1):
    for j in range(i):
        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

```

```

n = 5
for i in range(6,0,-1):
    for j in range(i):
        print(j,end=' ')

```

```

print()

```

```

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

```

```

num = 3
count=1
for i in range(0,num*2,2):
    for j in range(i+1):
        print(count,end=" ")
        count+=1
    print()

```

```

1
2 3 4
5 6 7 8 9

```

```

n = 6

```

```

for i in range(6,0,-1):
    for j in range(i):
        print(i,end=' ')
    i-=1
    print()

```

```

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

```



```

k =1
for i in range(1,10,2):
    for j in range(k):
        print(i,end=' ')
    k +=1
    print()

```

```

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

```

#17

```

for i in range(1,6):
    print(' '*(5-i),end='')
    for j in range(i):
        print(j+1,end='')
    print()

```

```

1
12
123
1234
12345

```

#18

```

n = 5
for i in range(1,n+1):
    for j in range(1,n+1):
        if j<= i:
            print(i,end='')
        else:
            print(j,end='')

    print()

```

```

12345
22345
33345
44445
55555

```

```

for i in range(1,8):
    for j in range(1,i+1):

        print(i*j,end='')

    print()

```

1  
24  
369  
481216  
510152025  
61218243036  
7142128354249

n=8

```
for i in range(1,n+1):
    k = 2**(i-1)
    # print('k is',k)
    for j in range(i):
        print(k,end=" ")
    k//=2
```

```
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

```
for i in range(28,1,-2):
    for j in range(i):
        print('*',end=' ')
    print()
```

```
print()
```

[illegible]

```
for i in range(1,8):
    for j in range(i):
        print('*',end=' ')
```

```
print()
print('\n')
for i in range(7,0,-1):
```

```
for j in range(i):
    print('*',end=' ')
```

```
print()
```

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

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

---

#23

---

```
n = 7
```

```
for i in range(n):
    print(" "*(n-i),end="")
    print(" "(((n-(n-i))*4)+1),end="")
    print("* "*(n-i))
```



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

---

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