

1

```
In [1]: n=int(input("enter the no.of rows:"))
        for row in range(n,0,-1):
            for col in range(0,row):
                print(n,end=" ")
            print()
```

```
enter the no.of rows:5
5 5 5 5 5
5 5 5 5
5 5 5
5 5
5
```

2

```
In [2]: n=int(input("enter the no.of rows:"))
        for row in range(n,0,-1):
            for col in range(0,row+1):
                print(col,end=" ")
            print()
```

```
enter the no.of rows:5
0 1 2 3 4 5
0 1 2 3 4
0 1 2 3
0 1 2
0 1
```

3

```
In [3]: for i in range(1,10,2):
        for j in range(0,i,2):
            print(i,end=" ")
        print()
```

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

4

```
In [4]: for i in range(1,6):
        for j in range(i,0,-1):
```

```

        print(j,end=" ")
    print()

```

```

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

```

5

In [5]:

```

start=1
stop=2
current_num=stop
for row in range(2,6):
    for col in range(start,stop):
        current_num -=1
        print(current_num,end=' ')
    print("")
    start=stop
    stop+=row
    current_num=stop

```

```

1
3 2
6 5 4
10 9 8 7

```

6

In [6]:

```

def print_pascal_triangle(size):
    for i in range(0,size):
        for j in range(0,i+1):
            print(decide_num(i,j),end=" ")
        print()
def decide_num(n,k):
    num=1
    if k>n-k:
        k=n-k
    for i in range(0,k):
        num=num*(n-i)
        num=num
    return num
rows =7
print_pascal_triangle(rows)

```

```

1
1 1
1 2 1
1 3 3 1
1 4 12 4 1

```

```
1 5 20 20 5 1
1 6 30 120 30 6 1
```

7

In [7]:

```
rows=5
for i in range(1,rows+1):
    for j in range(1,rows+1):
        if j<= i:
            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
```

8

In [8]:

```
rows=8
for i in range(1,rows+1):
    for j in range(1,i+1):
        square=i*j
        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
8 16 24 32 40 48 56 64
```

9

In [27]:

```
rows = 5
k = 2 * rows - 2
for i in range(rows,-1,-1):
    for j in range(k,0,-1):
        print(end=" ")
    k = k + 1
    for j in range(0, i + 1):
        print("*",end=" ")
    print("")
```

```

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

```

10

In [29]:

```

size=7
m=(2*size)-2
for i in range(0,size):
    for j in range(0,m):
        print(end=" ")
    m=m-1
    for j in range(0,i+1):
        print("*",end=' ')
    print(" ")

```

```

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

```

11

In [30]:

```

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

```

```

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

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

```

*

12

In [31]:

```
rows=5
for i in range(0,rows):
    for j in range(0,i+1):
        print("*",end=' ')
    print("\r")
for i in range(rows,0,-1):
    for j in range(0,i-1):
        print("*",end=' ')
    print("\r")
```

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

13

In [12]:

```
rows = 5
i = 1
while i <= rows:
    j = i
    while j < rows:
        print(' ', end=' ')
        j += 1
    k = 1
    while k <= i:
        print('*', end=' ')
        k += 1
    print()
    i += 1
i = rows
while i >= 1:
    j = i
    while j <= rows:
        print(' ', end=' ')
        j += 1
    k = 1
    while k < i:
        print('*', end=' ')
        k += 1
    print('')
    i -= 1
```

```

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

```

14

In [10]:

```

rows = 5
i = 0
while i <= rows - 1:
    j = 0
    while j < i:
        print(' ', end=' ')
        j += 1
    k = i
    while k <= rows - 1:
        print('*', end=' ')
        k += 1
    print()
    i += 1
i = rows - 1
while i >= 0:
    j = 0
    while j < i:
        print(' ', end=' ')
        j += 1
    k = i
    while k <= rows - 1:
        print('*', end=' ')
        k += 1
    print(' ')
    i -= 1

```

```

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

```

15

```
In [14]: rows = 14
print("*" * rows, end="\n")
i = (rows // 2) - 1
j = 2
while i != 0:
    while j <= (rows - 2):
        print("*" * i, end="")
        print("_" * j, end="")
        print("*" * i, end="\n")
        i = i - 1
        j = j + 2
```

```
*****
*****  *****
*****  _  *****
****   _ _  ****
***   _ _ _  ***
**   _ _ _ _  **
*   _ _ _ _ _  *
```