In [1]:
```
#Right angle triangle pattern
for i in range (1,6):
    print('*' *i )
```

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

In [2]:
```
#inverted right angle triangle pattern
for i in range(5,0,-1):
    print('*' *i)
```

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

In [3]:
```
#Pyramid pattern
for i in range(1,6):
    print(''*(5-i)+' * '*(2*i-1))
```

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

In [4]:
```
#inverted pyramid pattern
for i in range (5,0,-1):
    print(''*(5-i)+' * '*(2*i-1))
```

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

In [5]:
```
#Dimond pattern
for i in range (1,6):
    print(''*(5-i)+' * '*(2*i-1))
for i in range (4,0,-1):
    print(''*(5-i)+' * '*(2*i-1))
```

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

In [6]:
```
# hallow square pattern
for i in range(5):
    for j in range(5):
        if i==0 or i==4 or j==0 or j==4:
            print(' * ',end='')
        else:
            print('   ',end='')
    print()
```

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

In [7]:
```
#full square pattern
for i in range(5):
    print(' * '*5)
```

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

In [8]:
```
#right angle triangle (number pattern)
for i in range(1,6):
    print(''.join(str(x)for x in range(1,i+1)))
```

```
1
12
123
1234
12345
```

In [9]:
```
#inverted right angle triangle
for i in range(5,0,-1):
    print(''.join(str(x)for x in range(1,i+1)))
```

```
12345
1234
123
12
1
```

In [10]:
```
#floyd's triangle
num=1
for i in range(1,6):
    for j in range(1,i+1):
        print(num,end='   ')
        num+=1
    print()
```

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

In [11]:
```
#hallow right angle triangle
for i in range(1,6):
    for j in range(1,i+1):
        if j==1 or j==i or i==5:
            print(' * ',end='')
        else:
            print('   ',end='')
    print()
```

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

In [5]:
```
for i in range(1,6):
    for j in range(5-i):
        print(' ',end=' ')
    for j in range(2*i-1):
        if j==0 or j==2*i-2 or i==5:
            print('*',end=' ')
        else:
            print(' ',end=' ')
    print()
```

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

In [12]:
```
#full star pyramid
n=5
for i in range (1,n+1):
    for j in range (n-i):
        print (' ',end=' ')
    for j in range(2*i-1):
        print('*',end=' ')
    print()
```

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

In [13]:
```
n=5
for i in range (n,0,-1):
    for j in range (n-i):
        print (' ',end=' ')
    for j in range(2*i-1):
```

```
        print('*',end=' ')
    print()
```

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

In [14]:
```
n=5
for i in range (1,n+1):

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

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
```

In [15]:
```
n=5
for i in range (1,n+1):

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


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

    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
```

In [16]:
```
#hallow number pyramid
n=5
for i in range (1,n+1):
    for j in range(n-i):
        print(' ',end=' ')

    for j in range(1,2*i):
        if j==1 or j==2*i-1 or i==n:
            print(i,end=' ')
        else:
            print(' ',end=' ')
    print()
```

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

In [17]:
```
#hallow dimond(number pattern)
n=5
for i in range ( 1,n+1):
    for j in range(n-i):
        print(' ',end=' ')

    for j in range(2 *i-1):
        if j==0 or j==2*i-2:
            print(i,end=' ')
        else:
            print(' ',end=' ')
    print()
for i in range (n-1,0, -1):
    for j in range(n-i):
        print(' ',end=' ')

    for j in range(2*i -1):
        if j==0 or j==2*i-2:
            print(i,end=' ')
        else:
            print(' ',end=' ')
    print()
```

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

In [20]:
```
#hallow dimond
n=5
for i in range ( 1,n+1):
    for j in range(n-i):
        print(' ',end=' ')

    for j in range(2 *i-1):
        if j==0 or j==2*i-2:
            print('*',end=' ')
        else:
            print(' ',end=' ')
    print()
for i in range (n-1,0, -1):
    for j in range(n-i):
        print(' ',end=' ')

    for j in range(2*i -1):
        if j==0 or j==2*i-2:
            print('*',end=' ')
        else:
            print(' ',end=' ')
    print()
```

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

In [3]:
```
n=5
for i in range (1,n+1):
    for j in range(1,i+1):
        print(j,end=' ')
    for j in range(2*(n-i)):
        print (' ',end=' ')
    for j in range(1,i+1):
        print (j,end=' ')
    print()
for i in range (n,0,-1):
    for j in range(1,i+1):
        print(j,end=' ')
```

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

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

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

In [ ]: