Pattern Programs

1.Right Angle Traingle Pattern

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

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

2.Inverted Right Angle Triangle Pattern

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

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

3.Pyramid Pattern

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

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

4.Inverted Pyramid Pattern

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

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

5.Diamond Pattern

In [5]:
```
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))
```

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

6.Hallow Square Pattern

In [8]:
```
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()
```

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

7.Full Square Pattern

In [9]:
```
for i in range(5):
    print(' * '*5)
```

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

8.Right Angle Triangle(Number Pattern)

In [10]:
```
for i in range(1,6):
    print(' '.join(str(x) for x in range(1, i+1)))
```

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

9.Inverted Right Angle Triangle(Number Pattern)

In [11]:
```
for i in range(5,0,-1):
    print(' '.join(str(x) for x in range(1, i+1)))
```

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

10.Floyd's Triangle

In [12]:
```
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
```

11.Hallow Right Angle Triangle

In [13]:
```
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()
```

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

12.Hallow Pyramid Pattern

In [14]:
```
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()
```

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

13.Hallow Diamond Pattern

In [16]:
```
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()
```

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

14.Hallow Diamond(Number Pattern)

In [19]:
```
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
```

15.Butterfly Pattern

In [21]:
```
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
*                 *
* *             * *
* * *         * * *
* * * *     * * * *
* * * * * * * * * *
* * * * * * * * * *
* * * *     * * * *
* * *         * * *
* *             * *
*                 *
```

16.Hallow Number Pyramid

In [3]:
```
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
```

17.Full Star Pyramid

In [4]:
```
n=6
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()
```

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

18.Inverted Full Star Pyramid

In [5]:
```
n=6
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()
```

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

19.Left Aligned Pyramid Pattern

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

n=6
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
1 2 3 4 5 6
```

20.Right Aligned Pyramid Pattern

In [2]:
```
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()

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()
```

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

In [ ]: