

# Dfferent Patterns In Python

```
In [1]: print('*')
```

\*

```
In [2]: n = 5
print('*'*n)
```

\*\*\*\*\*

```
In [3]: n = 5
for i in range(n):
    print('*')
```

\*  
\*  
\*  
\*  
\*

```
In [4]: # Square
```

```
n = int(input('Number of Rows: '))
for i in range(n):
    for j in range(n):
        print('*', end = ' ')
    print()
```

Number of Rows: 10

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

```
In [5]: # Increasing Triangle
```

```
n = int(input('Number of Rows: '))
for i in range(n):
    for j in range(i+1):
        print('*', end = ' ')
    print()
```

Number of Rows: 10

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

```
In [6]: # Decreasing Triangle
```

```
n = int(input("Number of Rows: "))
for i in range(n):
    for j in range(n-i):
        print('*', end=' ')
    print()
```

Number of Rows: 10

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

```
In [7]: # Right sided triangle
```

```
n = int(input('Number of rows: '))
for i in range(n):
    for j in range(n-i):
```

```

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

```

Number of rows: 10

```

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

```

```

In [8]: n = int(input('Number of rows: '))
        for i in range(n):
            for j in range(n-i):
                print(' ', end=' ')
            for j in range(i+1):
                print('#', end=' ')
            print()

```

Number of rows: 10

```

                                     #
                                   # #
                                # # #
                             # # # #
                          # # # # #
                       # # # # #
                    # # # # #
                 # # # # #
              # # # # #
            # # # # #
          # # # # #
        # # # # #
      # # # # #
    # # # # #
  # # # # #
# # # # #

```

```

In [9]: n = int(input('Number of rows: '))
        for i in range(n):
            for j in range(i+1):
                print(' ', end=' ')
            for j in range(n-i):
                print('*', end=' ')
            print()

```

Number of rows: 10

```

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

```

In [10]: *# Hill Pattern*

```

n = int(input('Number of rows: '))
for i in range(n):
    for j in range(n-i):
        print(' ', end=' ')
    for j in range(i):
        print('*', end=' ')
    for j in range(i+1):
        print('*', end=' ')
    print()

```

Number of rows: 10

```

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

```

In [11]: *# Reverse Hill Pattern*

```

n = int(input("Number of rows: "))
for i in range(n):
    for j in range(i+1):
        print(' ', end=' ')
    for j in range(i, n-1):
        print('*', end=' ')
    for j in range(n-i):

```

```

        print('*', end=' ')

    print()

Number of rows: 10
* * * * *
  * * * * 
    * * * * 
      * * * * 
        * * * * 
          * * * 
            * * 
              * 
                * 
                  * 
                    * 

```

```

In [12]: # Diamond Pattern

n = int(input('Number of Rows: '))
for i in range(n-1):
    for j in range(i,n):
        print(' ', end=' ')
    for j in range(i):
        print('*', end=' ')
    for j in range(i+1):
        print('*', end=' ')
    print()

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

```

```

Number of Rows: 10
          *
        * * *
      * * * * *
    * * * * * *
  * * * * * * *
* * * * * * * *
 * * * * * * *
  * * * * * *
    * * * * *
      * * * *
        * * *
          * *
            *

```

```

In [14]: n = int(input('Number of rows: '))

# Upper part of the butterfly
for i in range(n):
    for j in range(2 * n - 2, 2 * i, -1):
        print(' ', end=' ')
    for j in range(i + 1):
        print('*', end=' ')
    for j in range(i):
        print(' ', end=' ')
    for j in range(i):
        print(' ', end=' ')
    for j in range(i + 1):
        print('*', end=' ')
    print()

```

```

Number of rows: 10
          * *
        * * *
      * * * *
    * * * * *
  * * * * *
* * * * *
 * * * * *
  * * * *
    * * *
      * *
        *
          *
            *
              *
                *
                  *
                    *

```

```

In [22]: # Sandglass

n = int(input('Number of rows: '))

```

```

Number of rows: 10
* * * * *
  * * * * *
    * * * * *
      * * * * *
        * * * * *
          * * * * *
            * * * *
              * * * *
                * * *
                  * *
                    *
                  * * *
                * * * *
              * * * * *
            * * * * *
          * * * * *
        * * * * *
      * * * * *
    * * * * *
  * * * * *
* * * * *

```

```
n = int(input('Number of rows: '))
for i in range(n):
    if i == 0 or i == n - 1:
        print('*' * n)
    else:
        print('*' + ' ' * (n - 2) + '*')
```

[illegible]

```
n = int(input('Number of rows: '))
for i in range(1, n + 1):
    for j in range(1, n + 1):
        if i == j or j == n - i + 1:
            print('*', end=' ')
        else:
            print(' ', end=' ')
    print()
```

Number of rows: 10

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

```
In [28]: n = int(input('Number of rows: '))
         for i in range(n):
             for j in range(n):
```

```

        if (i + j) % 2 == 0:
            print('*', end=' ')
        else:
            print(' ', end=' ')
    print()

```

Number of rows: 10

```

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

```

In [29]: *# Plus sign*

```

n = int(input('Size of the cross: '))
for i in range(n):
    for j in range(n):
        if i == n // 2 or j == n // 2:
            print('*', end=' ')
        else:
            print(' ', end=' ')
    print()

```

Size of the cross: 10

```

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

```

In [30]: *n = int(input('Number of rows (should be odd): '))*

```

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

```

Number of rows (should be odd): 10

```

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

```

In [32]: *# Half Pyramid with numbers*

```

n = int(input('Number of rows: '))
for i in range(1, n + 1):
    for j in range(1, i + 1):
        print(j, end=' ')
    print()

```

Number of rows: 10

```

1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
1 2 3 4 5 6 7
1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9
1 2 3 4 5 6 7 8 9 10

```

In [33]: *n = int(input('Number of rows: '))*

```

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

```

Number of rows: 10

```
1
1 2
1 3
1 4
1 5
1 6
1 7
1 8
1 9
1 2 3 4 5 6 7 8 9 10
```

In [ ]:

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