Printing Patterns

```python
def pattern(n):
    k = n - 2
    for i in range(n, -1 , -1):
        for j in range(k , 0 , -1):
            print(end=" ")
        k = k + 1
        for j in range(0, i+1):
            print("* ", end="")
        print("\r")
    k = 2 * n - 2
    for i in range(0 , n+1):
        for j in range(0 , k):
            print(end="")
        k = k - 1
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")

pattern(5)
```

Printing Patterns

```python
def pattern(n):
    k = 2 * n - 2
    for i in range(0, n):
        for j in range(0 , k):
            print(end=" ")
        k = k - 1
        for j in range(0 , i + 1 ):
            print("* ", end="")
        print("\r")
    k = n - 2
    for i in range(n , -1, -1):
        for j in range(k , 0 , -1):
            print(end=" ")
        k = k + 1
        for j in range(0 , i + 1):
            print("* ", end="")
        print("\r")

pattern(5)
```

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

Printing Patterns

```python
def pattern(n):
    for i in range(n, -1, -1):
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")

pattern(5)
```

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

Printing Patterns

```python
def pattern(n):
    k = 2 * n - 2
    for i in range(0, n):
        for j in range(0, k):
            print(end=" ")
        k = k - 2
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")

pattern(5)
```

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

Printing Patterns

```python
for i in range(5):
    for j in range(5):
        if i + j == 2 or i - j == 2 or i + j == 6 or j - i == 2:
            print("*", end="")
        else:
            print(end=" ")
    print()
```

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

Printing Patterns

```python
def pattern(n):
    for i in range(0,n):
        for j in range(0, i+1):
            print("* ", end="")
        print("\r")

pattern(5)
```

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

Printing Patterns

```python
def pattern(n):
    k = 2 * n - 2
    for i in range(0, n-1):
        for j in range(0, k):
            print(end=" ")
        k = k - 2
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")
    k = -1
    for i in range(n-1,-1,-1):
        for j in range(k,-1,-1):
            print(end=" ")
        k = k + 2
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")

pattern(5)
```

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

Printing Patterns

```python
def pattern(n):
    for i in range(0, n):
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")
    for i in range(n, 0 , -1):
        for j in range(0, i + 1):
            print("* ", end="")
        print("\r")

pattern(5)
```

Printing Patterns

```python
def pattern(n):
    k = 2*n -2
    for i in range(n,-1,-1):
        for j in range(k,0,-1):
            print(end=" ")
        k = k +1
        for j in range(0, i+1):
            print("*", end=" ")
        print("\r")

pattern(5)
```

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

Printing Patterns

```python
def pattern(n):
    k = 2 * n - 2
    for i in range(0,n):
        for j in range(0,k):
            print(end=" ")
        k = k - 1
        for j in range(0, i+1):
            print("*", end=" ")
        print("\r")

pattern(5)
```

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