Pattern 1

In [8]:
```python
n = int(input("Enter the number: "))
print()
for col in range(n,0,-1):             # loop for number of columns
    for space in range(col-1):        # Loop to print extra spaces on right side of tringale
        print(end=" ")
    for row in range(n-col+1):        # Loop to print stars followed by extra space created by above loop
        print("*",end=" ")            # n-col+1 keep the increasing order from 1 to onwords
    print()                           # to eneter new Line at end of each row
```

```
Enter the number: 5

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

Pattern 2

In [10]:
```python
n = int(input("Enter the number: "))
print()

for col in range(1, n+1):          # loop for number of columns
    for row in range(1, col+1):    # loop for number of rows
        print(row , end=" ")
    print()
```

```
Enter the number: 5

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

Pattern 3

In [17]:
```python
n = int(input("Enter the number: "))
print()
pattern = [0,n-1]
for col in range(n):
    for row in range(n):
        if row in pattern or col in pattern:
            print("*",end=" ")
        else:
            print(end="  ")
    print()
```

```
Enter the number: 5

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

In [18]:
```python
# without space

n = int(input("Enter the number: "))
print()
pattern = [0,n-1]
for col in range(n):
    for row in range(n):
        if row in pattern or col in pattern:
            print("*",end="")
        else:
            print(end=" ")
    print()
```

```
Enter the number: 5

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

In [ ]: