Practical 5 :-

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Pattern 1 :-

In [6]:
```python
size = int(input("Enter size: "))
i = 0
while i < size:
    # 65 is the ASCII value of 'A'
    ch = 65 + i
    j = 0
    while j < (size - i):
        print(chr(ch), end = " ")
        j += 1
    i += 1
    print()
```

```
A A A A A A A A A A
B B B B B B B B B
C C C C C C C C
D D D D D D D
E E E E E E
F F F F F
G G G G
H H H
I I
J
```

Pattern 2 :-

In [9]:
```python
size = int(input("Enter size: "))
count, i = 1, 0
while i < size:
    j = 0
    while j < (i + 1):
        print(count, end = " ")
        count += 1
        j += 1
    i += 1
    print()
```

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45
46 47 48 49 50 51 52 53 54 55
```

Pattern 3 :-

In [11]:
```python
size = int(input("Enter size: "))
i = 0
while i < size:
    j = 0
    while j < size:
        if i%2 == 0 and j%2 != 0:
            print(" ", end = " ")
        elif i%2 != 0 and j%2 == 0:
            print(" ", end = " ")
        else:
            print("*", end = " ")
        j += 1
    i += 1
    print()
```

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

Pattern 4 :-

In [12]:
```python
size = int(input("Enter size: "))
i = 0
while i < size:
    # logic to print blank spaces
    print(" " * (size - (i+1)), end = "")
    # logic to print stars along with spaces
    print("* " * (i+1))
    i += 1
```

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

Pattern 5 :-

In [13]:
```python
size = int(input("Enter size: "))
i = 0
while i < size:
    j = 0
    while j < (i + 1):
        if j == 0 or j == i or i == 0 or i == size-1:
            print("*", end = " ")
```

```
        else:
            print(" ", end = " ")
            j += 1
        i += 1
    print()
```

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

Pattern 6 :-

In [2]:
```python
size = int(input("Enter size: "))

i = 0
while i < size:
    if i%2 == 0:
        print("*" * size)
    else:
        print(" " * (size-1) + "*")
    i += 1
```

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

Pattern 7 :-

In [3]:
```python
size = int(input("Enter size: "))
i = 0
while i < size:
    count = 1
    j = 0
    while j < (i + 1):
        print(count, end = " ")
        count += 1
        j += 1
    i += 1
    print()
```

```
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
```