

Name : Akash Kumar Singh
 Registraion No: 219310279
 Batch 1
 Program 1:

```

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

```

In [39]:

```

n = int(input("Enter number of rows:"))
for i in range(0,n+1):
    print("\t\t\t",end='')
    for j in range(n,i,-1):
        print(" ",end='')
    for j in range(i):
        print("*",end='')
    for j in range(i-1):
        print("*",end='')
    print()

```

Enter number of rows:5

```

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

```

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 Program 2:

```

1
2 3
4 5 6
7 8 9 10

```

In [40]:

```

n = int(input("Enter number of rows:"))
temp = 1
for i in range(n):
    print("\t\t\t",end='')
    for j in range(i+1):
        print("%d\t"%temp,end='')
        temp+=1
    print()

```

Enter number of rows:5

```

1
2      3
4      5      6
7      8      9      10
11     12     13     14     15

```

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 Program 3:

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

In [44]:

```
n = int(input("Enter number of rows:"))
for i in range(n):
    print("\t\t\t",end='')
    for j in range(n):
        if (i==0 or j==0 or j==n-1 or i==n-1):
            print("*",end=' ')
        elif i!=0 and i!=n-1:
            print(" ",end='')
    print()
```

Enter number of rows:8

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

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 Program 4:

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
```

In [43]:

```

n = int(input("Enter number of rows:"))
arr=[]
for i in range(1,n+1):
    narr=arr
    arr=[]
    print("\t\t\t",end='')
    for j in range(0, i):
        if(j==0 or j==i-1):
            print(1,end='\t')
            arr.append(1);
        else:
            arr.append(narr[j]+narr[j-1])
            print(arr[j],end='\t')
    print()

```

Enter number of rows:5

```

      1
     1  1
    1  2  1
   1  3  3  1
  1  4  6  4  1

```

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 Batch 1
 Program 5:

```

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

```

In [37]:

```

n = int(input("Enter number of rows:"))
for i in range(n):
    print("\t\t\t",end='')
    for j in range(n,i,-1):
        print(" ",end='')
    for j in range(i):
        print("*",end='')
    print()
for i in range(n,0,-1):
    print("\t\t\t",end='')
    for j in range(i,n):
        print(" ",end='')
    for j in range(i):
        print("*",end='')
    print()

```

Enter number of rows:5

```

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

```

Name : Akash Kumar Singh
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 Batch 1
 Program 6:

```

          *
         --
        ***
       ----
      *****
     ----
    ***
   --
  *

```

In [33]:

```

n = int(input("Enter number of rows:"))
for i in range(n):
    print("\t\t\t",end='')
    str = '*' if i%2==1 else '-'
    for j in range(n,i,-1):
        print(" ",end='')
    for j in range(i):
        print(str,end='')
    print()
for i in range(n,0,-1):
    print("\t\t\t",end='')
    str = '*' if i%2==1 else '-'
    for j in range(i,n):
        print(" ",end='')
    for j in range(i):
        print(str,end='')
    print()

```

Enter number of rows:5

```

          *
        - -
      ***
    - - - -
  *****
- - - -
***
- -
*
```