Pascal triangle:

```python
from math import factorial
n=int(input())
for i in range(n):
    for j in range(n-i+1):
        print(" ",end="")
    for j in range(i+1):
        print(factorial(i)//(factorial(j)*factorial(i-j)),end=" ")
    print()
```

output:

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

Program:

Input

```python
def cross_pattern(input_val):
    input_val=str(input_val)
    length=len(input_val)
    for i in range(length):
        for j in range(length):
            if i==j or j==length-i-1:
                print(input_val[j],end=" ")
            else:
                print(" ",end=" ")
        print()
```

a=input()

cross_pattern(a)

output:

```
m                       a
   e               n
       g       a
           h
       g       a
   e               n
m                       a
```

program:

```python
def cross_pattern(n):
    for i in range(n):
        for j in range(n):
            value=min(i,j,n-i-1,n-j-1)
            print(value,end=" ")
        print()
a=int(input())
cross_pattern(a)
```

output:

5

0 0 0 0 0

0 1 1 1 0

0 1 2 1 0

0 1 1 1 0

0 0 0 0 0

Program:

```
n=int(input())
for i in range(n):
    for j in range(n-i):
        print(" ",end="")
    for j in range(2*i+1):
        if j==0 or j==2*i or i==n-1:
            print("*",end="")
        else:
            print(" ",end="")
    print()
```

output:

```
5
     *
    * *
   *   *
  *     *
 *********
```

Program:

```
n=int(input())
for i in range(n):
    for j in range(n-i):
        print(" ",end="")
    for j in range(i+1):
        if j==0 or j==i or i==n-1:
            print("*",end=" ")
        else:
            print("  ",end="")
    print()
```

output:

5

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