In [11]:
```
print("LEFT RIGHT-ANGLE UP DOWN")
row = int(input("how many rows do you want ? = "))
for i in range(1,row+1):
    for j in range(i):
        print("*", end =" ")
    print()

for i in range(row-1,0,-1):
    for j in range(i):
        print("*", end = " ")
    print()


print("LOOP END.")
```

```
Piramid
how many rows do you want ? = 5
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
LOOP END.
```

In [20]:
```
print("RIGHT RIGHT-ANGLE UP DOWN")
row = int(input("how many rows do you want ? = "))
for i in range(1,row+1):
    for k in range(row-i,0,-1):
        print(" ", end= " ")
    for j in range(i):
        print("*", end = " ")
    print()
for i in range(1,row):
    for k in range(i):
        print(" ", end = " ")
    for j in range(row-i,0,-1):
        print("*", end= " ")
    print()

print("LOOP END.")
```

```
RIGHT RIGHT-ANGLE UP DOWN
how many rows do you want ? = 5
        *
      * *
    * * *
  * * * *
* * * * *
  * * * *
    * * *
      * *
        *
LOOP END.
```

In [25]:
```
print("pyramid 2 increase")
row = int(input("how many rows do you want ? = "))
for i in range(1,row+1):
    for k in range(row-i, 0,-1):
        print(" ", end = " ")
    for j in range(2*i -1):
        print("*", end= " ")
    print()

print("LOOP END")
```

```
pyramid
how many rows do you want ? = 5
        *
      * * *
    * * * * *
  * * * * * * *
* * * * * * * * *
LOOP END
```

In [27]:
```
print("pyramid 2 increase reverse")
row = int(input("how many rows do you want ? = "))
for i in range(row,0,-1):
    for k in range(1,row+1-i):
        print(" ", end = " ")
    for j in range(2*i -1):
        print("*", end= " ")
    print()

print("LOOP END")
```

```
pyramid 2 increase
how many rows do you want ? = 5
* * * * * * * * *
  * * * * * * *
    * * * * *
      * * *
        *
LOOP END
```

In [31]:
```
print("diamond  2 increase reverse")
row = int(input("how many rows do you want ? = "))
for i in range(1,row+1):
    for k in range(row-i, 0,-1):
        print(" " ,end =" ")
    for j in range(2*i -1):
        print("*", end=" ")
    print()

for i in range(row, 1, -1):
    for k in range(1, row+2-i):
        print(" ", end= " ")
    for j in range(2*i-3):
        print("*", end= " ")
    print()


print("LOOP END")
```

```
diamond  2 increase reverse
how many rows do you want ? = 5
        *
      * * *
    * * * * *
  * * * * * * *
* * * * * * * * *
  * * * * * * *
    * * * * *
      * * *
        *
LOOP END
```

In [58]:
```
print("pyramid 1 increase")
row = int(input("how many rows do you want ? = "))
for i in range(0, row):
    for k in range(0,row-i-1):
        print(" ", end=" ")
    for j in range(0,i+1):
        print(" * ", end=" ")
    print()
```

```
pyramid 1 increase
how many rows do you want ? = 4
       *
     *   *
   *   *   *
 *   *   *   *
```

In [20]:
```
print("pyramid 1 decrease")
row = int(input("how many rows do you want ? = "))
for i in range(1,row+1):
    for k in range(1,i):
        print(" ", end = " ")
    for j in range(row+1-i, 0, -1):
        print(" * ", end = " ")
    print()

print("LOOP END")
```

```
pyramid 1 decrease
how many rows do you want ? = 4
 *   *   *   *
   *   *   *
     *   *
       *
LOOP END
```

In [15]:
```
print("problem 3")
strg = input("enter any string =")
for i in  range(len(strg)-1,-1,-1):
    print(strg[i], end= " ")
```

```
problem 3
enter any string =sharmin
n i m r a h s
```

In [63]:
```
print("problem 5")
for i in range(1, 7):
    if (i%3==0):
        continue
    print(i)
```

```
problem 5
1
2
4
5
```

In [12]:
```
print(" problm 6")
num1 = 0
num2 = 1
count = 0
while count< 10:
    total = num1 + num2
    num1 = num2
    num2 = total

    print(total)
    count+=1
```

```
 problm 6
1
2
3
5
8
13
21
34
55
89
```

In [67]:
```
print("problem 7")
list1 = []

while True:
    l = input()
    if l:
        list1.append(l.upper())
    else:
        break

for i in list1:
    print(i)
```

```
problem 7
this is new line
this is second line

THIS IS NEW LINE
THIS IS SECOND LINE
```

In [1]:
```
print("problem 8")
strg = input("ENTER ANYTHING")
digit = letter =wrng = 0
for i in strg:
    if i.isdigit():
        digit += 1
    elif i.isalpha():
        letter +=1
    else :
        wrng += 1
print("total digit", digit)
print("total alphabet", letter)
```

```
problem 8
ENTER ANYTHINGthis is new year455
total digit 3
total alphabet 13
```

In [17]:
```
print("problem 9")
password = input("enter password")
length = len(password)

while True:
    if length <6 or length >9:
        print("password Should be 6-9 letters")
        break
    elif password >= "a" or  password <= 'z':
```

```
problem 9
enter passwordyet
password Should be 6-9 letters
```

In [4]:
```
print("problem 10")
array = []
for i in range(100,401):
    strg = str(i)
    if(int(strg[0])%2 == 0 and int(strg[1])%2 == 0 and int(strg[2])%2 == 0 ):
        array.append(strg)

for i in array:
    print(i, end = " ")
```

```
problem 10
200 202 204 206 208 220 222 224 226 228 240 242 244 246 248 260 262 264 266 2
68 280 282 284 286 288 400
```

In [5]:
```
print("problem 12")
table = int(input("enetera  number fo table ="))
for i in range(11):
    print( table, " x " , i ," = ",  table*i)
```

```
problem 12
enetera  number fo table =6
6  x  0  =  0
6  x  1  =  6
6  x  2  =  12
6  x  3  =  18
6  x  4  =  24
6  x  5  =  30
6  x  6  =  36
6  x  7  =  42
6  x  8  =  48
6  x  9  =  54
6  x  10  =  60
```

In [6]:
```
print("problem 13")
for i in range (1,10):
    for j in range(i):
        print(i, end= "")
    print()
```

```
problem 13
1
22
333
4444
55555
666666
7777777
88888888
999999999
```

In [7]:
```
print("problem 16")
num = int(input("enter any number"))
print("Binary of ", num , " = ", bin(num))
print("Octal of ", num , " = ", oct(num))
print("Hexa of ", num , " = ", hex(num))
```

```
problem 16
enter any number67
Binary of  67  =  0b1000011
Octal of  67  =  0o103
Hexa of  67  =  0x43
```

In [8]:
```
print("problem 18")
mat1 = [[1,2,3],
        [2,3,4],
        [3,4,5]]
mat2 =[[6,0,4],
       [3,7,2],
       [1,4,2]]
result= [[0,0,0],[0,0,0],[0,0,0]]

for i in range(len(mat1)):
    for j in range(len(mat1[0])):
        result[i][j] = mat1[i][j] + mat2[i][j]

for i in result:
    print(i)
```

```
problem 18
[7, 2, 7]
[5, 10, 6]
[4, 8, 7]
```

In [9]:
```
print("problem 19")
mat3 = [[1,2,3],
        [2,3,4],
        [3,4,5],
        [7,8,2]]

result= [[0,0,0,0],
         [0,0,0,0],
         [0,0,0,0]]

for i in range(len(mat3)):
    for j in range(len(mat3[0])):
        result[j][i]= mat3[i][j]

for i in result:
    print(i)
```

```
problem 19
[1, 2, 3, 7]
[2, 3, 4, 8]
[3, 4, 5, 2]
```

In [11]:
```
print("problem 20")
strg = input("enter any string")
low_strg = strg.lower()
reverse_strg = reversed(strg.lower())

if list(low_strg) == list(reverse_strg):
    print("it is ")
else:
    print("it is not")
```

```
problem 20
enter any stringjuio
it is not
```

In [ ]: