In [2]:
```
#1.convert binary number to decimal.
def binary_to_decimal(binary):
    i,integer = 0,0
    size = len(binary)
    while i < len(binary):
        integer += int(binary[size - 1 - i])*pow(2,i)
        i+=1
    print(integer)
binary_to_decimal("001")
binary_to_decimal("010")
binary_to_decimal("10010")
```

```
1
2
18
```

In [3]:
```
#2.Generate first n number of fibonacci numbers.take n value from user.
def Fibonacci(n):
    f1=0
    f2=1
    if n<1:
        print("Incorrect input")
    for x in range(0, n):
        print(f2," ")
        next = f1 + f2
        f1 = f2
        f2 = next
n=int(input("enter the number"))
Fibonacci(n)
```

```
enter the number9
1
1
2
3
5
8
13
21
34
```

In [4]:
```
#3.Display multpication table of K. Take K from the user.
k=int(input("enter the number"))
for i in range(1, 11):
   print(k, 'x', i, '=', k*i)
```

```
enter the number5
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
```

In [5]:
```
#print the following pattern using loop.

i=1
while i<=4:
    print("*"*i)
    i=i+1
```

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

In [6]:
```
#5.Write a program to find greatest common divisor (GCD) or highest comm
on factor (HCF) of given two numbers.
def gcd(a,b):
    if (b == 0):
         return a
    return gcd(b, a%b)
a = int(input("enter the first number:"))
b = int(input("enter the second number:"))
if(gcd(a, b)):
    print('GCD of', a, 'and', b, 'is', gcd(a, b))
else:
    print('not found')
```

```
enter the first number:5
enter the second number:9
GCD of 5 and 9 is 1
```

In [7]:
```
#6. write a python program to reverse a string.
def reverse(s):
    if len(s)==0:
        return s
    else:
        return reverse(s[1:])+s[0]
s=input("enter the string:")
print("the original string is:")
print(s)
print("the  reverse string is:")
print(reverse(s))
```

```
enter the string:gitam
the original string is:
gitam
the  reverse string is:
matig
```

In [8]:
```
#7.Write a Python program to count the number of even and odd numbers fr
om a series of numbers.
list1 = [21,23,24,12,13,18]
even, odd = 0, 0
for num in list1:
    if num % 2 == 0:
        even += 1
    else:
        odd += 1
    print("Even numbers in the list: ", even)
print("Odd numbers in the list: ", odd)
```

```
Even numbers in the list:  0
Even numbers in the list:  0
Even numbers in the list:  1
Even numbers in the list:  2
Even numbers in the list:  2
Even numbers in the list:  3
Odd numbers in the list:  3
```

In [9]:
```
#8.Write a Python program that prints all the numbers from 0 to 6 except
3 and 6.
for i in range(0,7):
    if(i==3 or i==6):
        continue
    print(i)
```

```
0
1
2
4
5
```