# 1. Python Program for n-th Fibonacci number

In [3]:
```
def Fibonacci(n):
    if n<=0:
        print('Incorrect input')
    elif n==1:
        return 0
    elif n==2:
        return 1
    else:
        return Fibonacci(n-1)+Fibonacci(n-2)

print(Fibonacci(10))
```

```
34
```

# 2.Python Program for How to check if a given number is Fibonacci number?

In [4]:
```
def is_fibonacci(num):
    a=0
    b=1
    while b<num:
        c=a+b
        a=b
        b=c
    if b==num or a==num:
        return True
    if b>num:
        return False

num = 13
if is_fibonacci(num):
    print(num,'is a fibonacci number.')
else:
    print(num,'is not a fibonacci number')
```

```
13 is a fibonacci number.
```

# 3.Python Program for n\'th multiple of a number in Fibonacci Series

In [5]:
```
def findPosition(k, n):
    f1 = 0
    f2 = 1
    i =2;
    while i!=0:
        f3 = f1 + f2;
        f1 = f2;
        f2 = f3;

        if f2%k == 0:
            return n*i

        i+=1

    return

n = 5;
k = 4;

print("Position of n\'th multiple of k in"
              "Fibonacci Series is", findPosition(k,n));
```

```
Position of n'th multiple of k inFibonacci Series is 30
```

# 4.Program to print ASCII Value of a character

In [6]:
```
char = input("Enter any character: ")

print("The ASCII value of char " + char + " is: ",ord(char))
```

```
Enter any character: k
The ASCII value of char k is:  107
```

# 5.Python Program for Sum of squares of first n natural numbers

In [7]:
```
def squaresum(n) :


    sm = 0
    for i in range(1, n+1) :
        sm = sm + (i * i)

    return sm

n = 4
print(squaresum(n))
```

```
30
```

# 6.Python Program for cube sum of first n natural numbers

In [8]:
```
n=5
s=0

for i in range(1,n+1):
    s=s+pow(i,3)
print(s)
```

```
225
```

# 7.Python Program to find sum of array

In [9]:
```
import array as ar

def SumofArray(arr):
    sum=0
    n = len(arr)
    for i in range(n):
        sum = sum + arr[i]
    return sum

a = ar.array('i',[10, 21, 12, 13])

print ('Sum of the array is ', SumofArray(a) )
```

```
Sum of the array is  56
```

# 8. Python Program to find largest element in an array

In [10]:
```
def largest(arr,n):

    max = arr[0]

    for i in range(1, n):
        if arr[i] > max:
            max = arr[i]
    return max

arr = [10, 324, 45, 90, 9808]
n = len(arr)
Ans = largest(arr,n)
print ("Largest in given array is",Ans)
```

```
Largest in given array is 9808
```

# 9. Python Program for array rotation

In [11]:
```
def rotateArray(arr, n, d):
    temp = []
    i = 0
    while (i < d):
        temp.append(arr[i])
        i = i + 1
    i = 0
    while (d < n):
        arr[i] = arr[d]
        i = i + 1
        d = d + 1
    arr[:] = arr[: i] + temp
    return arr

arr = [1, 2, 3, 4, 5, 6, 7]
print("Array after left rotation is: ", end=' ')
print(rotateArray(arr, len(arr), 2))
```

```
Array after left rotation is:  [3, 4, 5, 6, 7, 1, 2]
```

# 10. Python Program for Reversal algorithm for array rotation

In [12]:
```
def rverseArray(arr, start, end):
    while (start < end):
        temp = arr[start]
        arr[start] = arr[end]
        arr[end] = temp
        start += 1
        end = end-1

def leftRotate(arr, d):
    n = len(arr)
    rverseArray(arr, 0, d-1)
    rverseArray(arr, d, n-1)
    rverseArray(arr, 0, n-1)


def printArray(arr):
    for i in range(0, len(arr)):
        print (arr[i])

arr = [1, 2, 3, 4, 5, 6, 7]
leftRotate(arr, 2) # Rotate array by 2
printArray(arr)
```

```
3
4
5
6
7
1
2
```

# 11.Python Program to Split the array and add the first part to the end

In [13]:
```
def splitArr(arr, n, k):
    for i in range(0, k):
        x = arr[0]
        for j in range(0, n-1):
            arr[j] = arr[j + 1]

        arr[n-1] = x


arr = [12, 10, 5, 6, 52, 36]
n = len(arr)
position = 2

splitArr(arr, n, position)

for i in range(0, n):
    print(arr[i], end = ' ')
```

```
5 6 52 36 12 10
```

In [ ]:
```

```