Assignment 3

Question 1- Write a function to return nth term of Fibonacci sequence.

In [1]:

```
def fib(num) :
    if num <= 1 :
        return num
    else :
        return (fib(num-1) + fib(num-2))

n = int(input("Enter a Number : "))

if n < 0 :
    print("Please Enter Positive Number ")
else :
    for i in range(n) :
        print(fib(i), end = " ")
```

```
Enter a Number : 6
0 1 1 2 3 5
```

Question 2- Write a function to find out GCD of two numbers using EUCLID'S algorithm.

In [2]:

```
def gcd(n1, n2) :
    if n2 == 0 :
        return n1
    else :
        return gcd(n2, n1 % n2)

num1 = int(input("Enter first Number : "))
num2 = int(input("Enter second Number : "))

print(f"GCD of ({num1},{num2}) = ", gcd(num1, num2))
```

```
Enter first Number : 24
Enter second Number : 18
GCD of (24,18) =  6
```

Question 3- Write a function to find LCM of two number in most optimizers way.

In [3]:

```
def gcd(n1, n2) :
    if n2 == 0 :
        return n1
    else :
        return gcd(n2, n1 % n2)

def lcm(n1, n2) :
    return (n1 / gcd(n1,n2)) * n2

num1 = int(input("Enter first Number : "))
num2 = int(input("Enter second Number : "))

print(f"LCM of ({num1},{num2}) = ", lcm(num1, num2))
```

```
Enter first Number : 15
Enter second Number : 25
LCM of (15,25) =  75.0
```