Task 3

Machine Learning and Deep learning Summer Internship

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Q1. Write a function to return nth term of Fibonacci sequence.

In [17]:

```
def fibonacci(n):
    if(n<0) :
        return("incorrect input")
    elif(n==0):
        return 0
    elif(n==2 or n==1):
        return 1
    else :
        return(fibonacci(n-1) + fibonacci(n-2))
n = int(input("Enter a number: "))
fibo_result = fibonacci(n)
print(fibo_result)
```

```
Enter a number: 9
34
```

Q2. Write a function to find out GCD of two numbers using EUCLID'S algorithm.

In [18]:

```
def gcd(a,b):
    if a< b:
        (a,b) = (b,a)
    while (a % b != 0):
        (a, b) = (b, a % b)
    return b
a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))
print("The GCD will be: ", gcd(a,b))
```

```
Enter the first number: 32
Enter the second number: 4
The GCD will be:  4
```

Q3. Write a function to find LCM of two number in most optimizers way.

In [19]:

```
def olcm(a, b):
    lcm = (a*b)//gcd(a,b)#Using the GCD function from the previous question
    return lcm

a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))
```

```
print("The L.C.M. is", olcm(a, b))
```

```
Enter the first number: 288
Enter the second number: 4
The L.C.M. is 288
```