Reference/Referral/Registration I'd: SIRSS1218

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Subject: assignment-3

Explanation: Solve the given questions using Function Concepts in python

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

In [11]:

```
def fibo(n):
   if n <= 1:
       return n
   else:
       return(fibo(n-1) + fibo(n-2))

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

if n <= 0:
   print("Plese enter a positive integer")
else:
   print("Fibonacci sequence:")
   for i in range(n):
       print(fibo(i),end = " ")
```

```
Enter a Number : 5
Fibonacci sequence:
0 1 1 2 3
```

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

In [16]:

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


n1=int(input("Enter first Number : "))
n2 = int(input("Enter second Number : "))

print('GCD of', n1, 'and', n2, 'is', gcd(n1, n2))
```

```
Enter first Number : 60
Enter second Number : 48
GCD of 60 and 48 is 12
```

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

In [18]:

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

a = int(input("Enter first Number : "))
b = int(input("Enter second Number : "))
print("LCM of", a, "and" , b , "is" , lcm(a, b))
```

```
Enter first Number : 15
Enter second Number : 20
LCM of 15 and 20 is 60.0
```