 **Practice Lab Assignments – Object Oriented Programming 1**

**Note: 1. Submission only via E-CLASS is acceptable .**

**2. Do not plagiarize on doing your work, if we catch student doing so, he/she will get ZERO for the Assignment.**

Lab Assignment -6 (Recursion)

1. Calculate the x y using a tail recursive function.

2. Find sum of natural numbers using recursion.**(Hint: Natural numbers are a part of the number system which includes all the positive integers from 1 till infinity and are also used for counting purpose. It does not include zero (0). In fact, 1,2,3,4,5,6,7,8,9…., are also called counting numbers.)**

3. Display Fibonacci Series Using Recursion.

4. Find G.C.D for two integers using recursion**(Hint: The greatest common divisor of 12 and 26 can be calculated as:**

**Divisors of 12 are 1, 2, 3, 4, 6, and 12.  
Divisors of 26 are 1, 2, 13, and 26.**

**Common divisors of 12 and 26 are 1 and 2.  
∴ The greatest common divisor of (12, 26) is 2.)**

5. Write a program to compute F(x,y) where,

**F(x,y)=F(x-y,y)+1 if y<=x**

**And F(x,y) = 0 if x<y**