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Date: September 21, 2019

Data Structures – Lab Assignment #3

```
Main(){  
    System.out.println("Enter first number");           1  
    int x = input.nextInt();                             1  
    System.out.println("Enter second number");          1  
    int y = input.nextInt();                             1  
    int a=GCD(x,y);                                     1  
    System.out.println("The ans:"+a);                   1  
}  
  
GCD (x ,y)                                             log(n)  
    {if y= 0                                           1  
        return x;                                     1  
    If x >= y && x!= 0                                 1  
        {GCD y, x mod y}                              1  
    }  
  
Code snippet  
BigO(log(n))  
  
Main(){  
    System.out.println("Enter number");               1  
    int x = input.nextInt();                           1  
    int a= Hanoi(x);                                   1  
    System.out.println("The ans:"+a);                 1  
}  
  
Hanoi(n)                                              2^n
```

```
{  
If n=1                                1  
return 1;                             1  
if n>1                                1  
2*hanoi(n-1)+1                         1  
}  
BigO(2^n)
```