3. Write a program to find the GCD of two numbers using recursive factorization

PROGRAM:

```
def gcd(a,b):
    if b==0:
        return a
    else:
        return gcd(b,a%b)
n1=int(input("Enter the number 1:"))
n2=int(input("Enter the number 2:"))
result=gcd(n1,n2)
print("The GCD of ",n1," and ",n2," is:",result)
```

INPUT:

```
Enter the number 1:64
Enter the number 2:80
```

OUTPUT:

```
The GCD of  64  and  80  is: 16
```

TIME COMPLEXITY:

Time complexity of the above code is

f(n)=O(log(min(a,b))