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

Program:

```
def gcd_recursive(a,b):
    if b==0:
        return a
    else:
        return gcd_recursive(b,a%b)
num1=10
num2=20
if num1<num2:
    num1,num2=num2,num1
gcd=gcd_recursive(num1,num2)
print("the gcd of",num1,"and",num2,"is",gcd)
```

Output:

```
C:\Users\srika\Desktop\CSA0863\pythonProject\.venv\Scripts\python.exe "C:\Users\srika\Desktop\CSA0863\pythonProject\problems\CSV files.py"
the gcd of 20 and 10 is 10

Process finished with exit code 0
```

Time complexity:

O(log n^2)