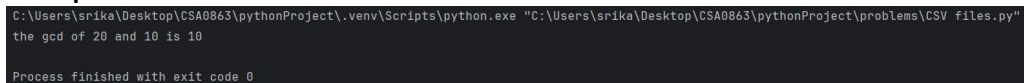


3. Write a program to find the GCD of two numbers using recursive factorization.

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:

$O(\log n^2)$