

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

Aim: 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 = 48
```

```
num2 = 18
```

```
result = gcd_recursive(num1, num2)
```

```
print(f"The GCD of {num1} and {num2} is: {result}")
```

Output:

```
The GCD of 48 and 18 is: 6
```

```
=== Code Execution Successful ===
```

Time complexity:- $O(\log(\min(a,b)))$