

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)
```

```
a=int(input("enter the first number: "))
```

```
b=int(input("enter the second number"))
```

```
result=GCD(a,b)
```

```
print(f"gcd of {a} and {b} is : ",result)
```

INPUT: `enter the first number: 2`
`enter the second number: 5`

OUTPUT: `gcd of 2 and 5 is : 1`

TIME COMPLEXITY: $O(n)$