

**EX NO : 1**

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**Compute the GCD of two numbers**

**AIM** : To calculate the GCD of two numbers

**ALGORITHM** :

Step 1 : Get 2 integer inputs from the user.

Step 2 : Use decision-making statements to check if both the given numbers are divisible by any number without leaving any remainder.

Step 3 : If true, then  $GCD = I$ .

Step 4 : Print the GCD of the two numbers.

Step 5 : End of the program.

**PROGRAM** :

```
ia=int(input("Enter first number: "))
```

```
b=int(input("Enter second number: "))
```

```
if(a>b):
```

```
    n=b
```

```
else:
```

```
    n=a
```

```
for i in range(1,n+1):
```

```
    if((a%i==0) and (b%i==0)):
```

```
        g=i
```

```
print("GCD of",a,"and",b,"is",g)
```

### **EXECUTED PROGRAM SCREENSHOT :**

```
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
if(a>b):
    n=b
else:
    n=a
for i in range(1,n+1):
    if((a%i==0) and (b%i==0)):
        g=i
print("GCD of",a,"and",b,"is",g)
```

### **OUTPUT SCREENSHOT :**

```
Enter first number: 4
Enter second number: 48
GCD of 4 and 48 is 4
```

### **RESULT :**

Thus a python program for finding the GCD of two numbers without using functions is executed successfully and its output is verified.