

```

1  #include<stdio.h>
2  int GCD(int num1,int num2);
3  int main()
4  {
5      int num1,num2,gcd;
6      printf("\nGCD of two numbers :");
7
8      printf(" Enter 1st number: ");
9      scanf("%d",&num1);
10     printf(" Enter 2nd number: ");
11     scanf("%d",&num2);
12
13     gcd = GCD(num1,num2);
14     printf("\n The GCD of %d and %d is: %d\n",num1,num2,gcd);
15     return 0;
16 }
17
18 int GCD(int a,int b)
19 {
20     while(a!=b)
21     {
22         if(a>b)
23             return GCD(a-b,b);
24         else
25             return GCD(a,b-a);
26     }
27     return a;
28 }
29

```

```
10 scanf("%d",&num1);  
11 printf(" Enter 2nd number: ");
```

GCD of two numbers : Enter 1st number: 1
Enter 2nd number: 3

The GCD of 1 and 3 is: 1

...Program finished with exit code 0
< Press ENTER to exit console.

* Write a recursive program to find GCD of two numbers

```
#include <stdio.h>
int GCD (int num1, int num2);
int main()
{
    int num1, num2, gcd;
    printf("In GCD of two numbers : ");
    printf("Enter 1st number: ");
    scanf("%d", &num1);
    printf("Enter 2nd number: ");
    scanf("%d", &num2);
    gcd = GCD(num1, num2);
    printf("The GCD is %d: ", gcd);
    return 0;
}

int GCD (int a, int b)
{
    while(a != b)
    {
        if(a > b)
            return GCD(a-b, b);
        else
            return GCD(a, b-a);
    }
    return a;
}
```