S.No: 39	Exp. Name: ***Write a C program to find the GCD of two numbers using Recursion***	Date:2023-01-17

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Aim:

Write a program to find the `gcd` (Greatest Common Divisor) of a given two numbers using recursion process.

The greatest common divisor (`gcd`) of two or more integers, when at least one of them is not zero, is the largest positive integer that is a divisor of both numbers.

At the time of execution, the program should print the message on the console as:

```
Enter two integer values :
```

For example, if the user gives the **input** as:

```
Enter two integer values : 12 18
```

then the program should **print** the result as:

```
The gcd of two numbers 12 and 18 = 6
```

Note: Write the recursive function **gcd()** in `Program906a.c` .

Source Code:

Program906.c

```
#include <stdio.h>
#include "Program906a.c"
void main() {
   int a, b;
   printf("Enter two integer values : ");
   scanf("%d %d", &a, &b);
   printf("The gcd of two numbers %d and %d = %d\n", a, b, gcd(a, b));
}
```

Program906a.c

```
int gcd (int n1,int n2);
int gcd(int n1,int n2){
   if(n2!=0)
   return gcd(n2,n1%n2);
   else
   return n1;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
`Enter two integer values :  12 15`
`The gcd of two numbers 12 and 15 = 3`

Test Case - 2
User Output
Enter two integer values : 36 124
The gcd of two numbers 36 and 124 = 4