

**Aim:**

Write a C program to find **GCD** of two integer numbers using functions.

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

Enter two integer numbers :

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

Enter two integer numbers : 144 428

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

GCD of 144 and 428 : 4

**Note:** Write the function **gcdResult()** in **FunctionsExample3a.c**.

**Source Code:**

**FunctionsExample3.c**

```
#include <stdio.h>
#include "FunctionsExample3a.c"
void main() {
    int num1, num2;
    printf("Enter two integer numbers : ");
    scanf("%d%d", &num1, &num2);
    printf("GCD of %d and %d : %d\n", num1, num2, gcdResult(num1, num2));
}
```

**FunctionsExample3a.c**

```
int gcdReslt(int n1,int n2);
int gcdResult(int n1,int n2)
{
    int i,gcd;
    for(i=1;i<=n1&&i<=n2;i++)
    {
        // Checks if i is factor of both integers
        if(n1%i==0&& n2%i==0)
            gcd=i;
    }
    return gcd;
}
```

**Execution Results** - All test cases have succeeded!

| Test Case - 1                       |
|-------------------------------------|
| User Output                         |
| Enter two integer numbers : 144 428 |

|                        |
|------------------------|
| GCD of 144 and 428 : 4 |
|------------------------|

|                                    |
|------------------------------------|
| Test Case - 2                      |
| User Output                        |
| Enter two integer numbers : 27 113 |
| GCD of 27 and 113 : 1              |

|                                    |
|------------------------------------|
| Test Case - 3                      |
| User Output                        |
| Enter two integer numbers : 55 100 |
| GCD of 55 and 100 : 5              |

|                                     |
|-------------------------------------|
| Test Case - 4                       |
| User Output                         |
| Enter two integer numbers : 125 175 |
| GCD of 125 and 175 : 25             |

|                                     |
|-------------------------------------|
| Test Case - 5                       |
| User Output                         |
| Enter two integer numbers : 124 156 |
| GCD of 124 and 156 : 4              |