

2. Develop a recursive function GCD (num1, num2) that accepts two integer arguments. Write a C program that invokes this function to find the greatest common divisor of two given integers.

```
#include <stdio.h>

int GCD (int num1, int num2) {
    if (num2 == 0)
        return num1;
    else
        return GCD (num2, num1 % num2);
}

int main () {
    int a, b;
    printf ("Enter two integers: ");
    scanf ("%d %d", &a, &b);
    int result = GCD (a, b);
    printf ("The GCD of %d and %d is : %d\n", a, b, result);
    return 0;
}
```

C exp6gcd.c > ...

```
1
2  #include <stdio.h>
3
4  // Recursive function to find GCD
5  int GCD(int num1, int num2) {
6      if (num2 == 0)
7          return num1;
8      else
9          return GCD(num2, num1 % num2);
10 }
11
12 int main() {
13     int a, b;
14
15     // Asking user to input two integers
16     printf("Enter two integers: ");
17     scanf("%d %d", &a, &b);
18
19     // Calling the GCD function and displaying the result
20     int result = GCD(a, b);
21     printf("The GCD of %d and %d is: %d\n", a, b, result);
22
23     return 0;
24 }
25
```

```
PS C:\Users\abiga\OneDrive\Desktop\Absproj> cd "c:\Users\abiga\OneDrive\Desktop\Absproj\" ; if ($?) { gcc exp6gcd.c -o exp6gcd } ; if ($?) { .\exp6gcd }
Enter two integers: 98 56
The GCD of 98 and 56 is: 14
PS C:\Users\abiga\OneDrive\Desktop\Absproj> █
```