

**Lab No: 6 Date: 2081/**

**Title: Write a recursive program to find the GCD of user input integer.**

The greatest common divisor (GCD) of two or more numbers is the greatest common factor number that divides them, exactly. It is also called the highest common factor (HCF). There also exists a smallest positive integer that is a multiple of each of the numbers, called their least common multiple (LCM).

[**Euclidean algorithm**](https://www.britannica.com/science/Euclidean-algorithm#ref790555)

Euclidean algorithm, procedure for finding the greatest common divisor (GCD) of two numbers, described by the Greek mathematician Euclid in his Elements (c. 300 bc). The method is computationally efficient and, with minor modifications, is still used by computers.

**IDE: Visual studio Code**

**Language: C**

**Source code:**

#include <stdio.h>

int GCD(int a, int b)

{

   if (b == 0)

   {

      return a;

   }

   else

      return (GCD(b, a % b));

}

void main()

{

   int num1, num2, result;

   printf("Enter two number:\n");

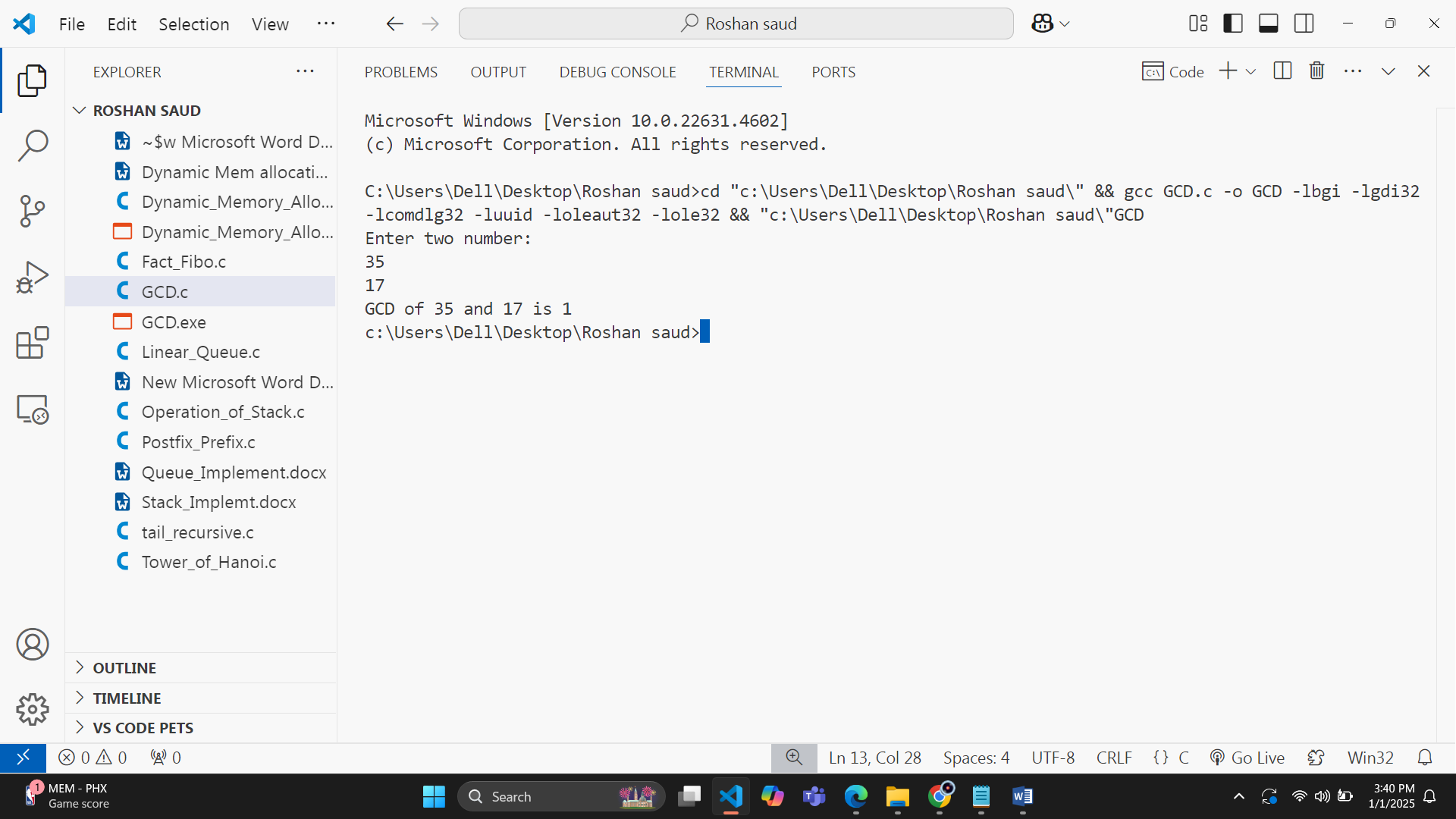
   scanf("%d%d", &num1, &num2);

   result = GCD(num1, num2);

   printf("GCD of %d and %d is %d", num1, num2, result);

}

**Output:**

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