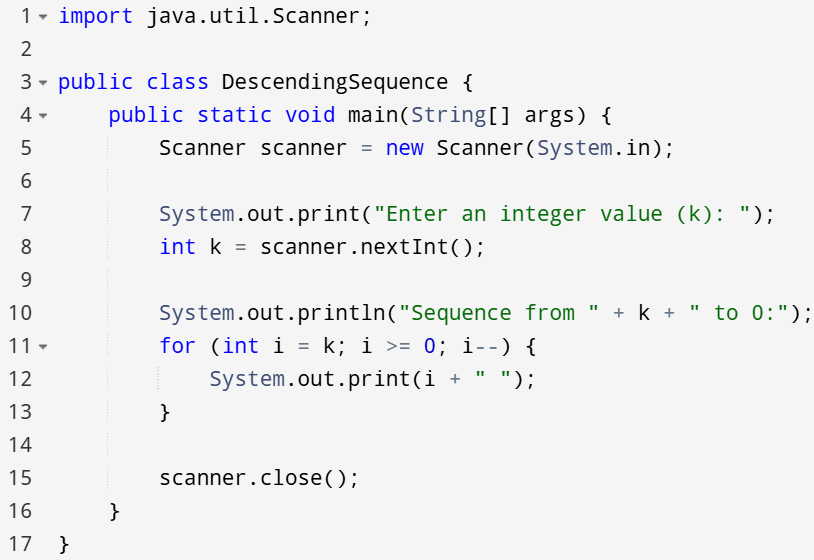
**LAB #03**

**RECURSION**

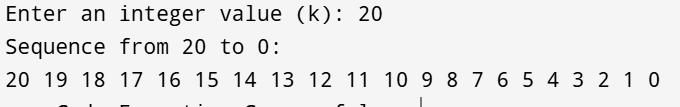
**LAB TASK:**

1. Write a program which takes an integer value (k) as input and prints the sequence of numbers from k to 0 in descending order.

**CODE:**

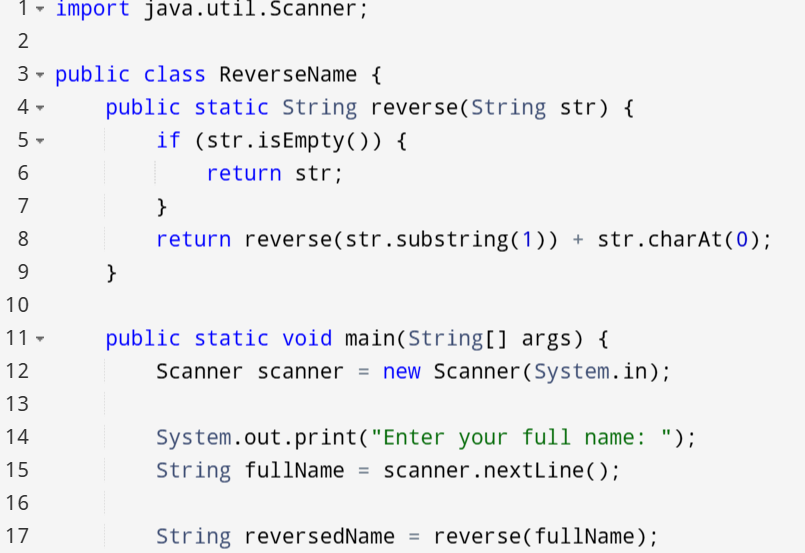


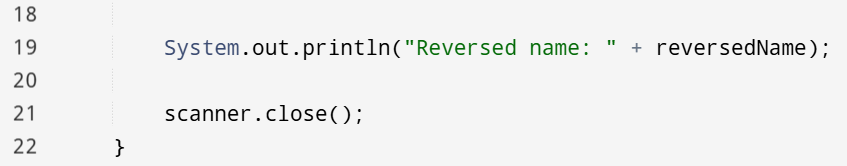
**OUTPUT:**



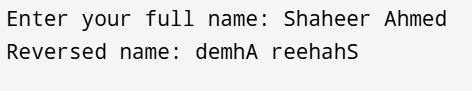
1. Write a program to reverse your full name using Recursion.

**CODE:**

****

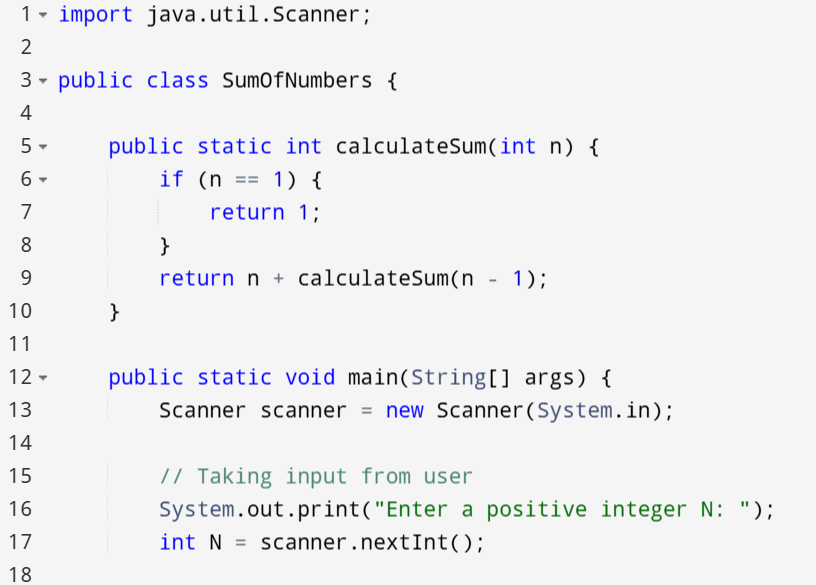
****

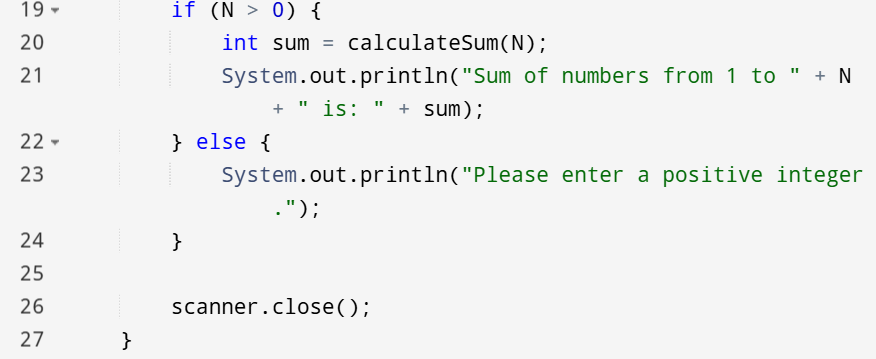
**Output:**



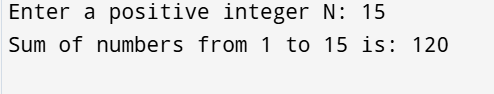
1. Write a program to calculate the sum of numbers from 1 to N using recursion. N should be user input.

**CODE:**

****

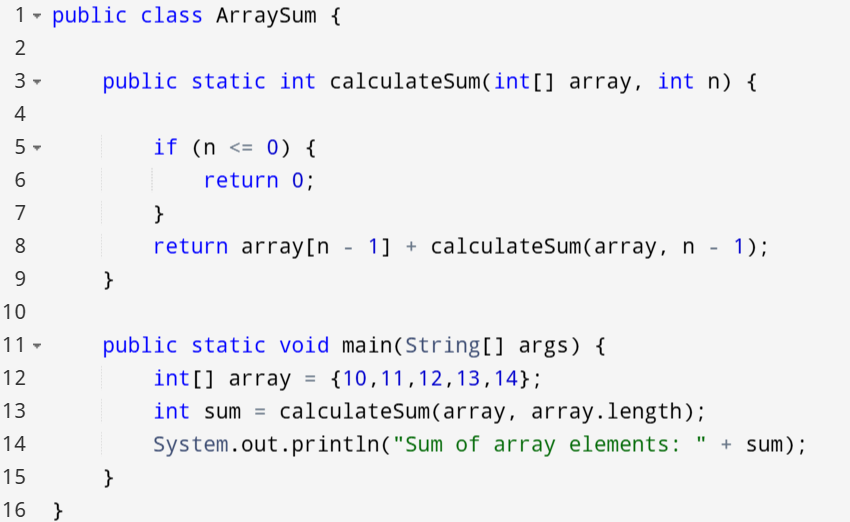
****

**OUTPUT:**



1. Write a recursive program to calculate the sum of elements in an array.

**CODE:**

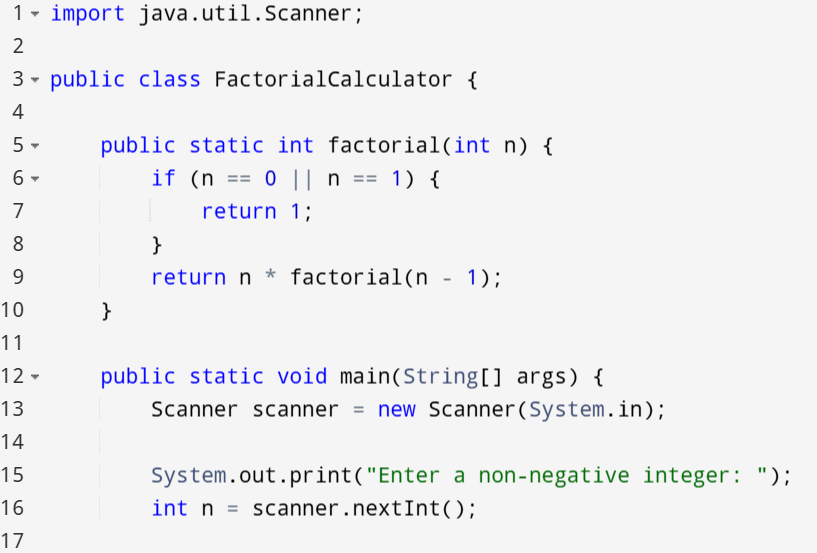
****

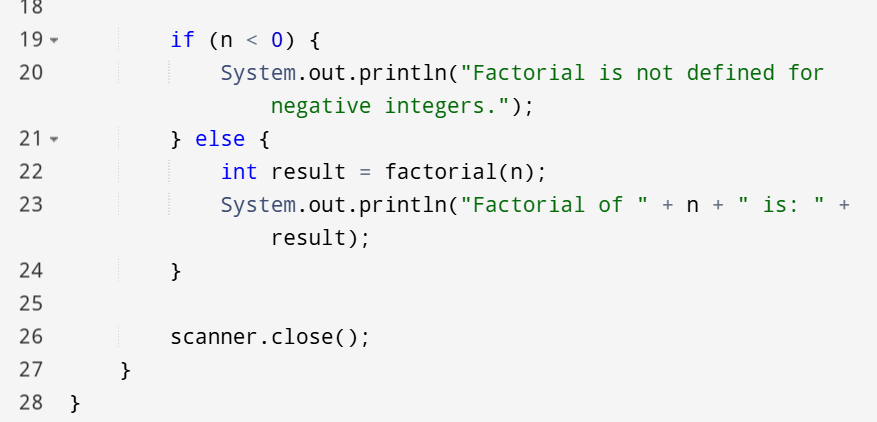
**OUTPUT:**



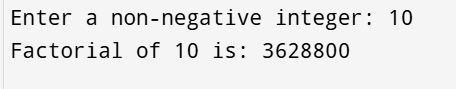
1. Write a recursive program to calculate the factorial of a given integer n

**CODE:**



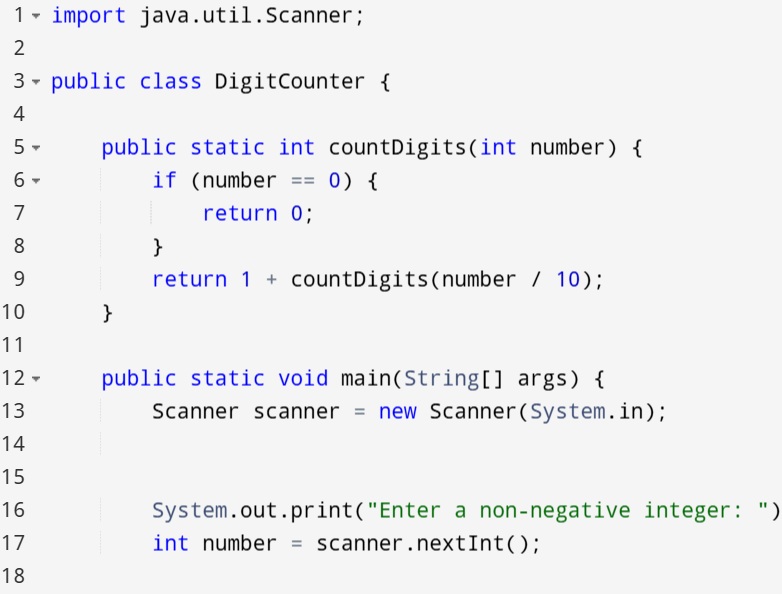


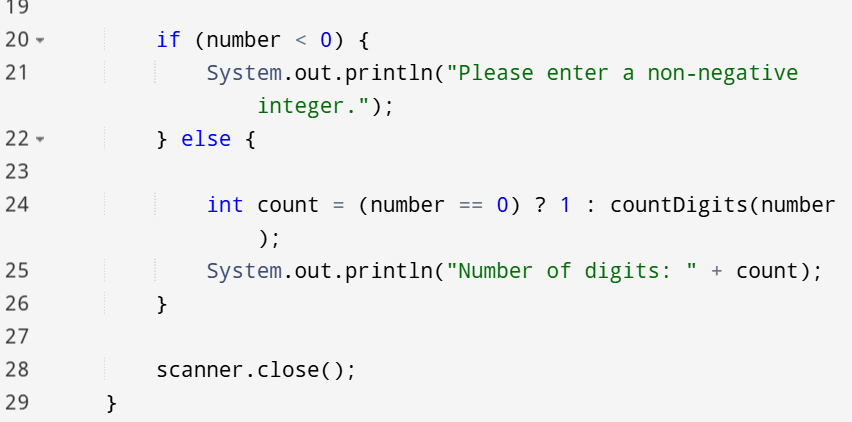
**OUTPUT:**



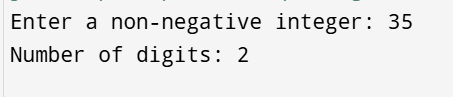
1. Write a program to count the digits of a given number using recursion.

**CODE:**





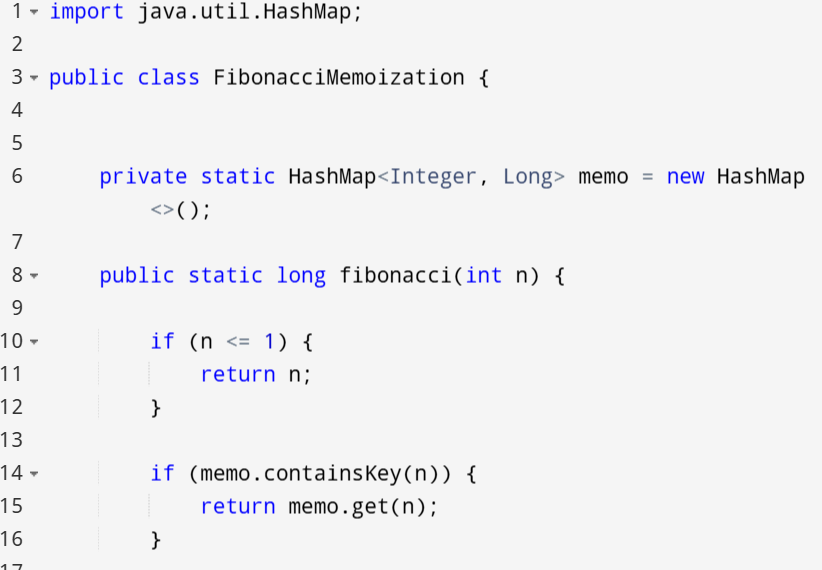
**OUTPUT:**

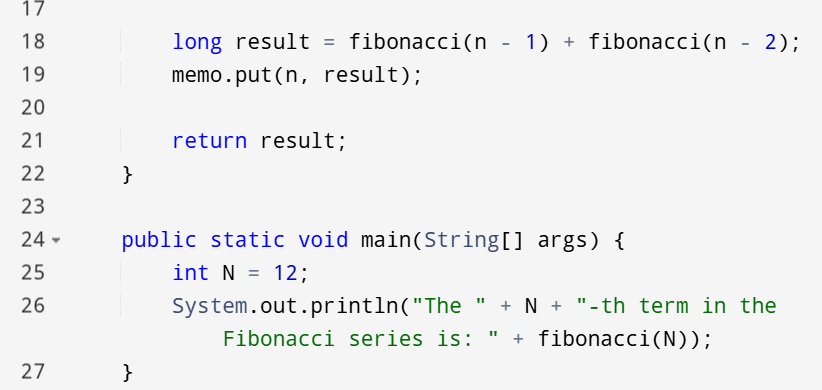


**HOME TASK:**

1. Write a java program to find the N-th term in the Fibonacci series using Memoization.

**CODE:**



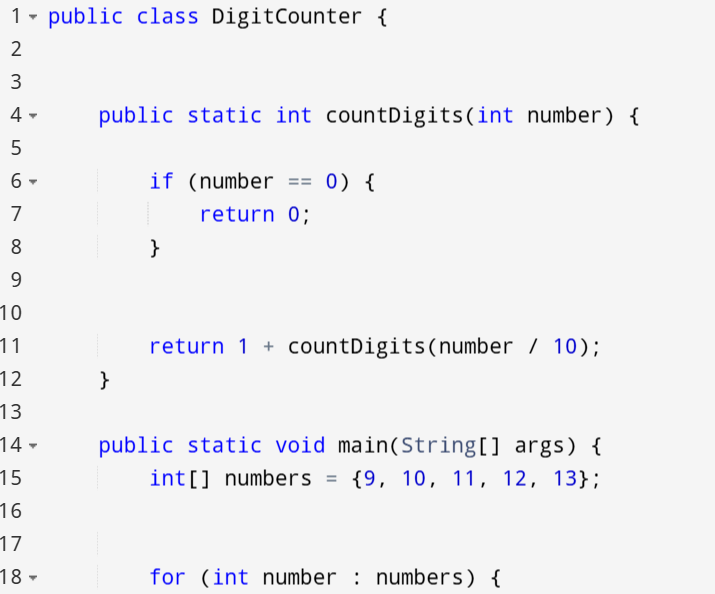


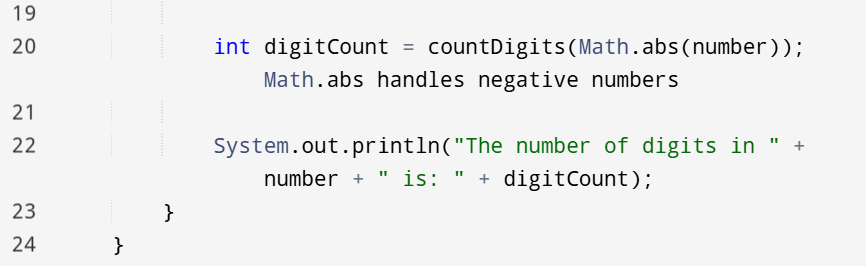
**OUTPUT:**



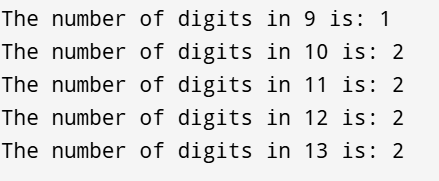
1. Write a program to count the digits of a given number using recursion

**CODE:**



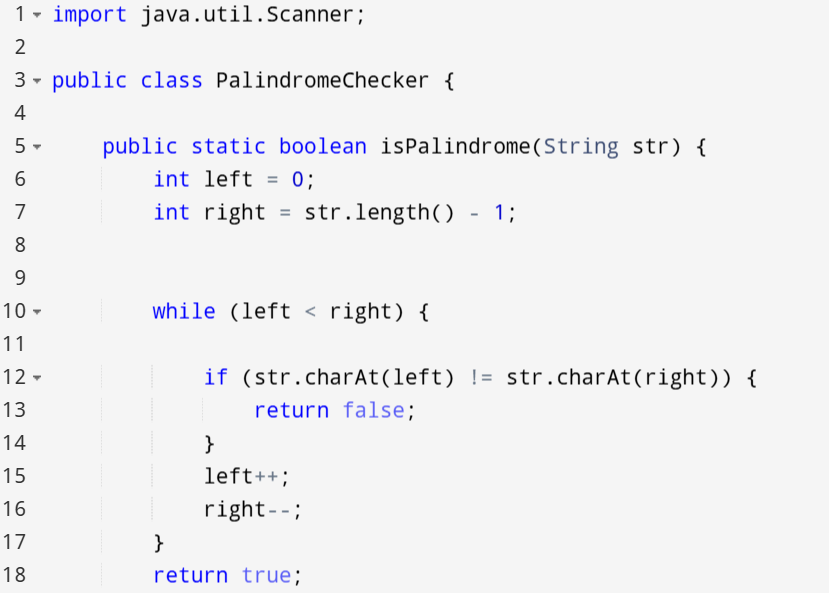


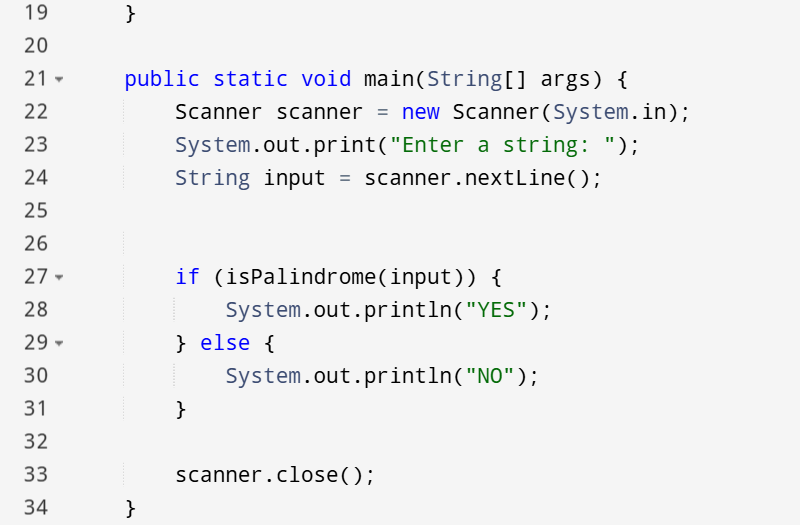
**OUTPUT:**



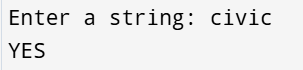
1. Write a java program to check whether a given string is a palindrome or not. A palindrome is a string that reads the same forwards and backwards.Print "YES" if the string is a palindrome, otherwise print "NO"

**CODE:**



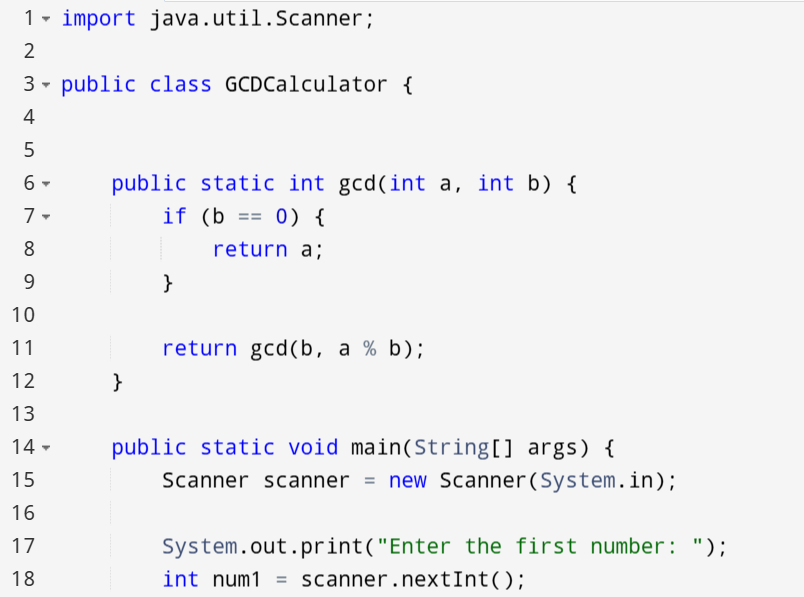


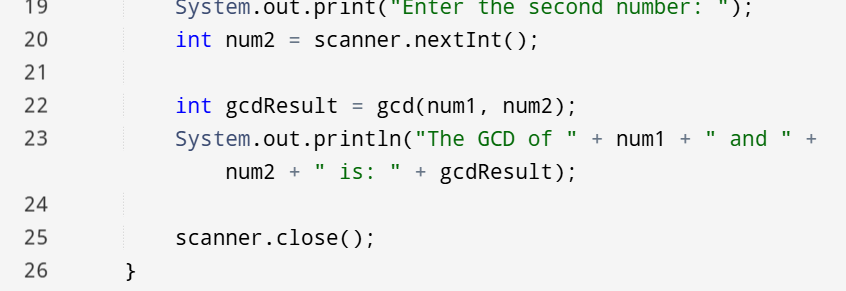
**OUTPUT:**



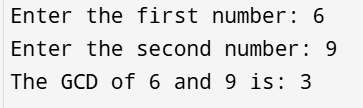
1. Write a recursive program to find the greatest common divisor (GCD) of two numbers using Euclid's algorithm

**CODE:**





**OUTPUT:**

****