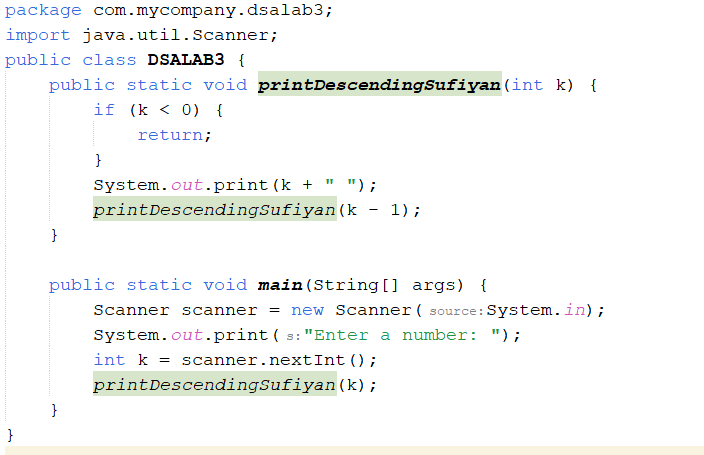
LAB# 03

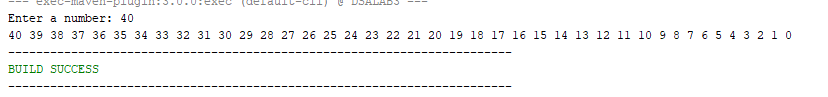
**OBJECTIVE**: To understand the complexities of the recursive functions and a way to reduce these complexities

**LAB TASK**

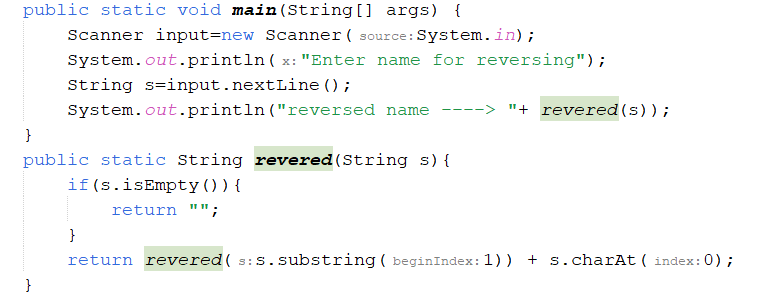
1. Write a program which takes an integer value (k) as input and prints the sequence of numbers from k to 0 in descending order.

**Code:**

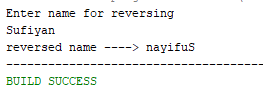
**  
Output:**

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

**Code:**

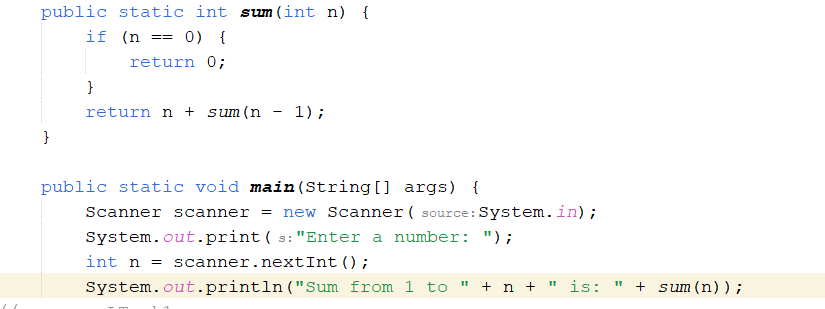
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**Output:**

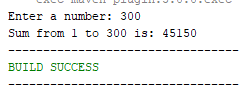
****

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

**Code:**

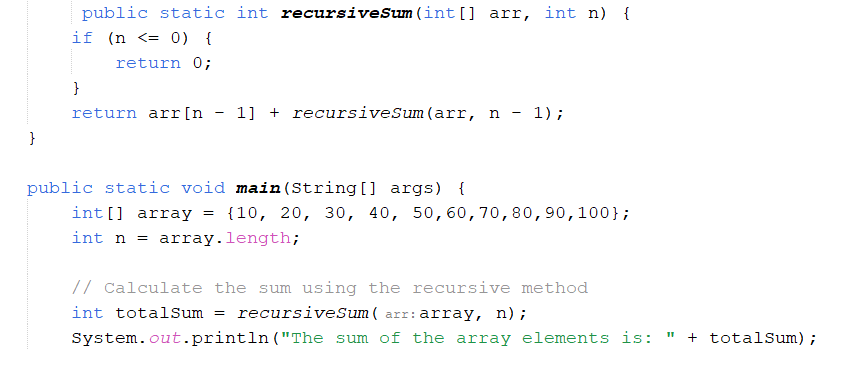
****

**Output:**

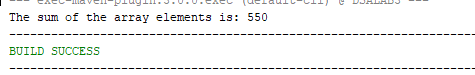
****

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

**Code:**

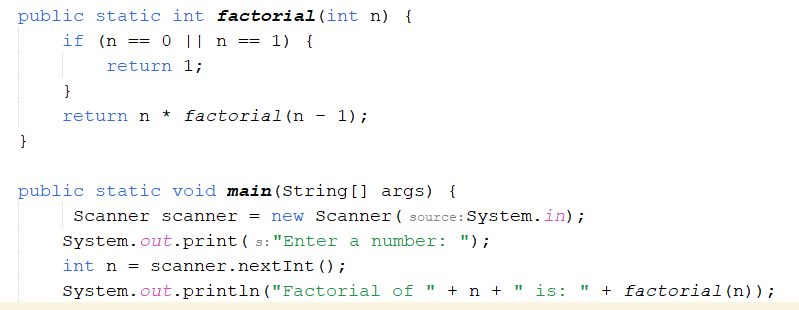
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**Output:**

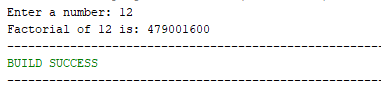
****

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

**Code:**

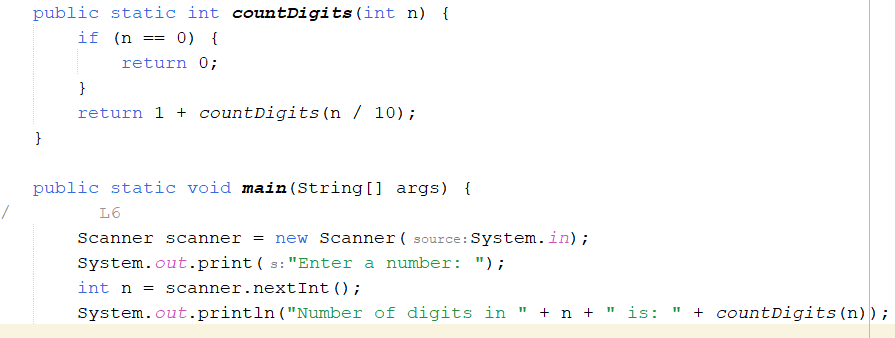


**Output:**

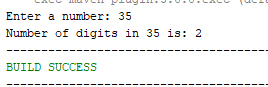


6.Write a program to count the digits of a given number using recursion.

**Code:**



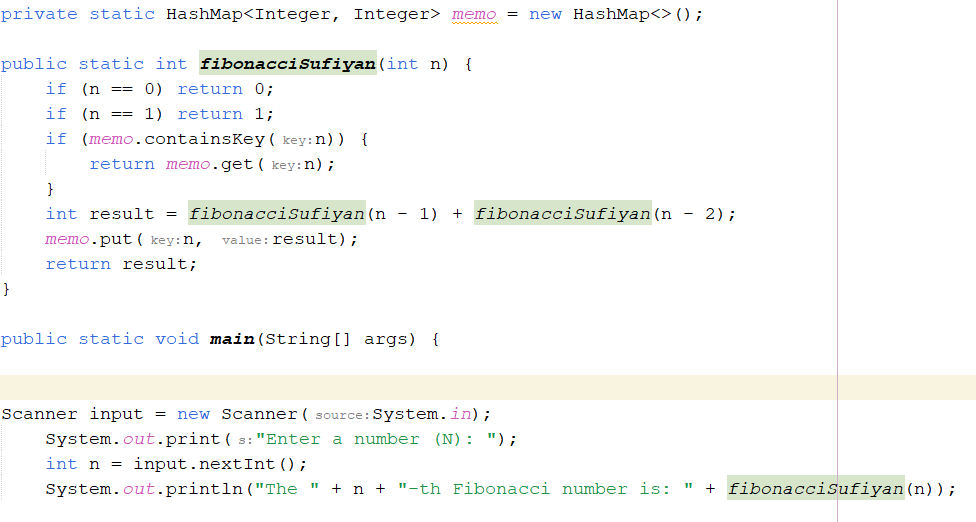
**Output:**



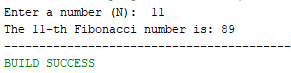
**HOME TASK**

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

**Code:**

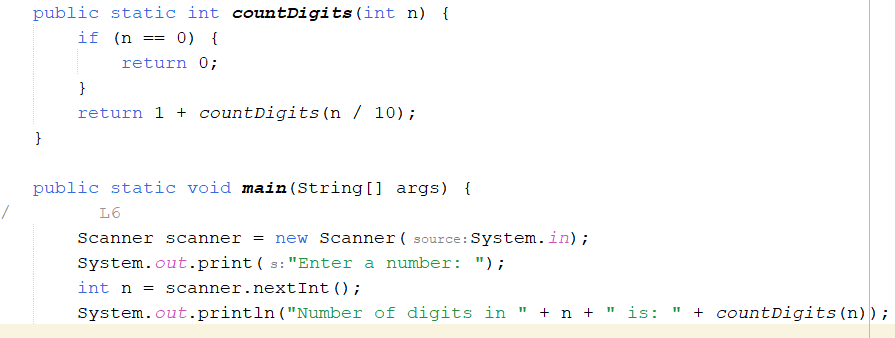


**Output:**

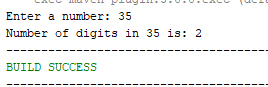


2.Write a program to count the digits of a given number using recursion.

**Code:**

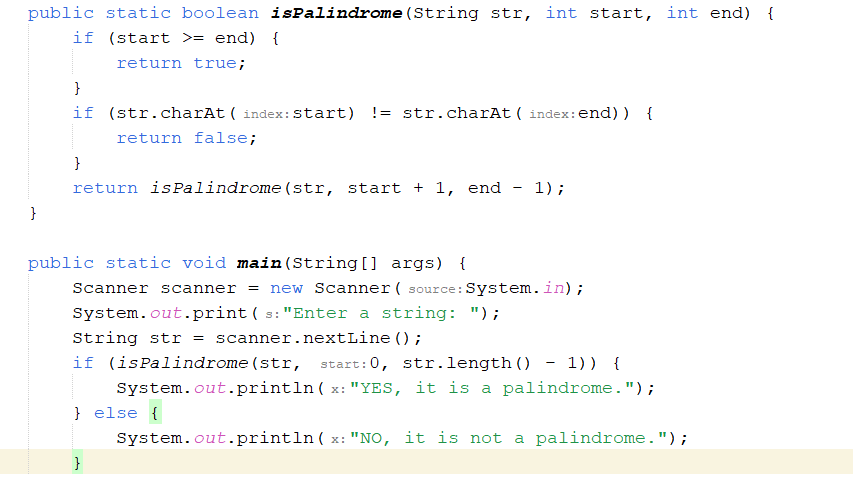


**Output:**

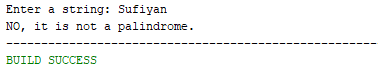


3.Write a java program to check whether a given string is a palindrome or not. A palindrome is a string that reads the same forwards and backwards.Print "YES" if the string is a palindrome, otherwise print "NO".

**Code:**

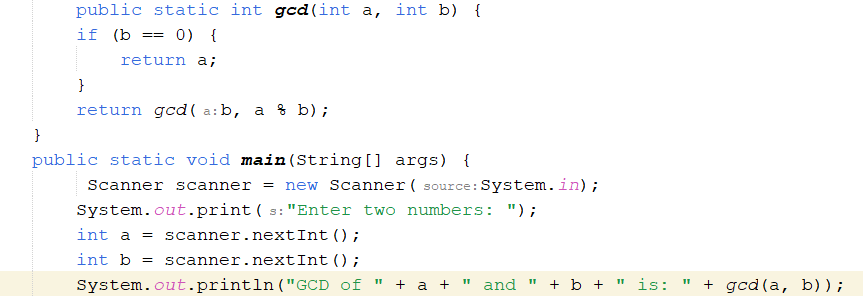


**Output:**



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

**Code:**



**Output:**

