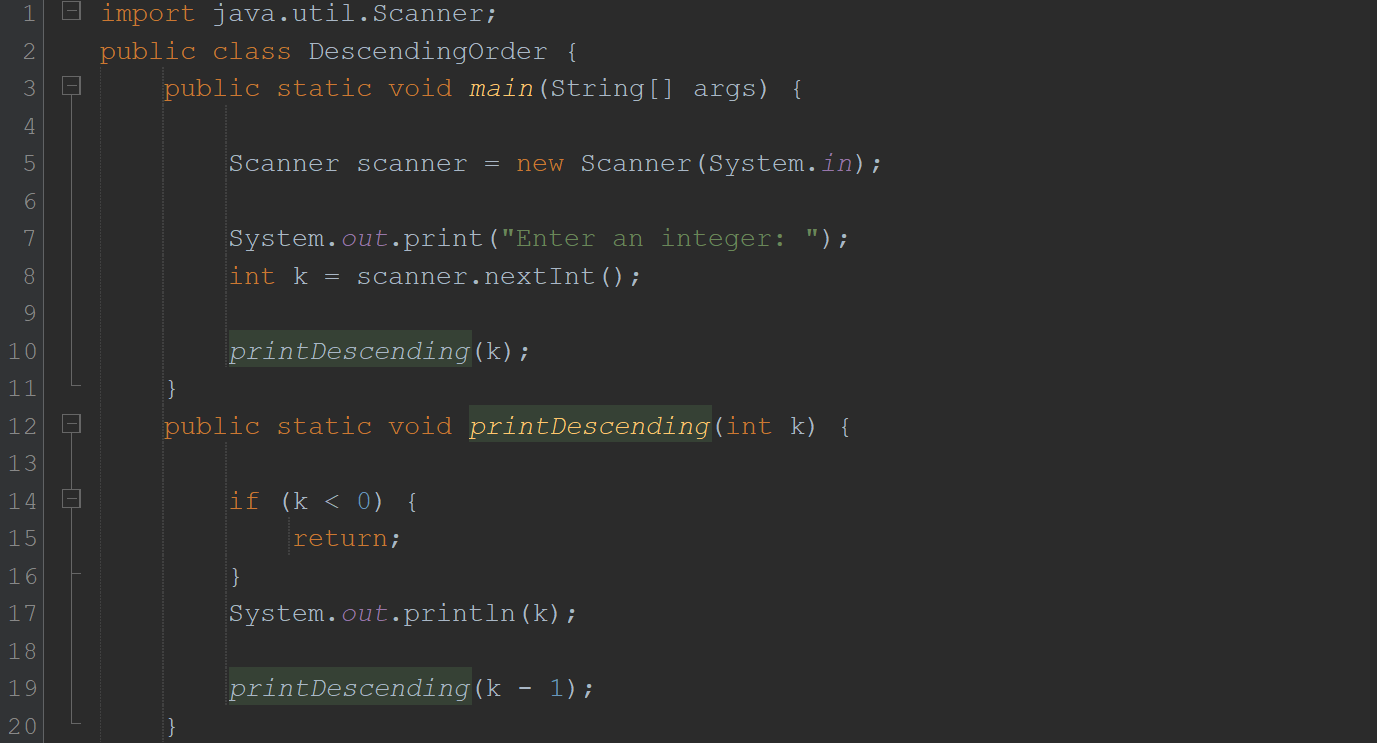
**LAB # 03**

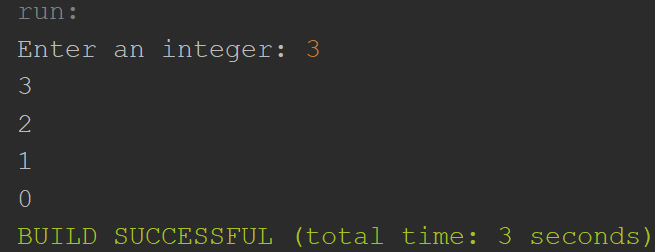
**RECURSION**

**LAB TASK**

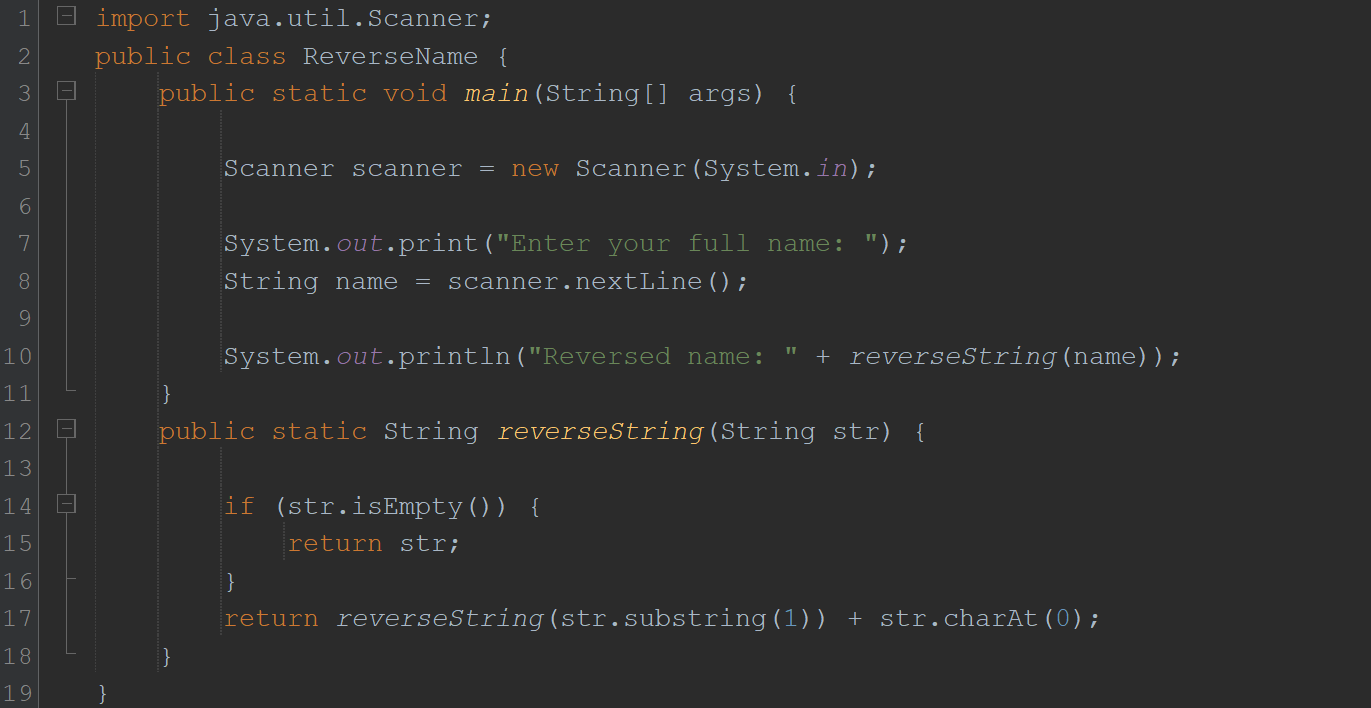
1. Write a program which takes an integer value (k) as input and prints the sequence of numbers from

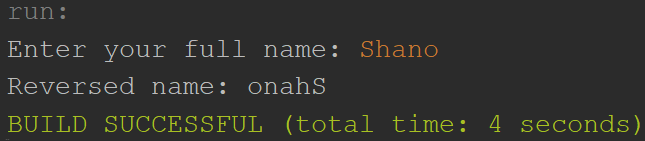
k to 0 in descending order.



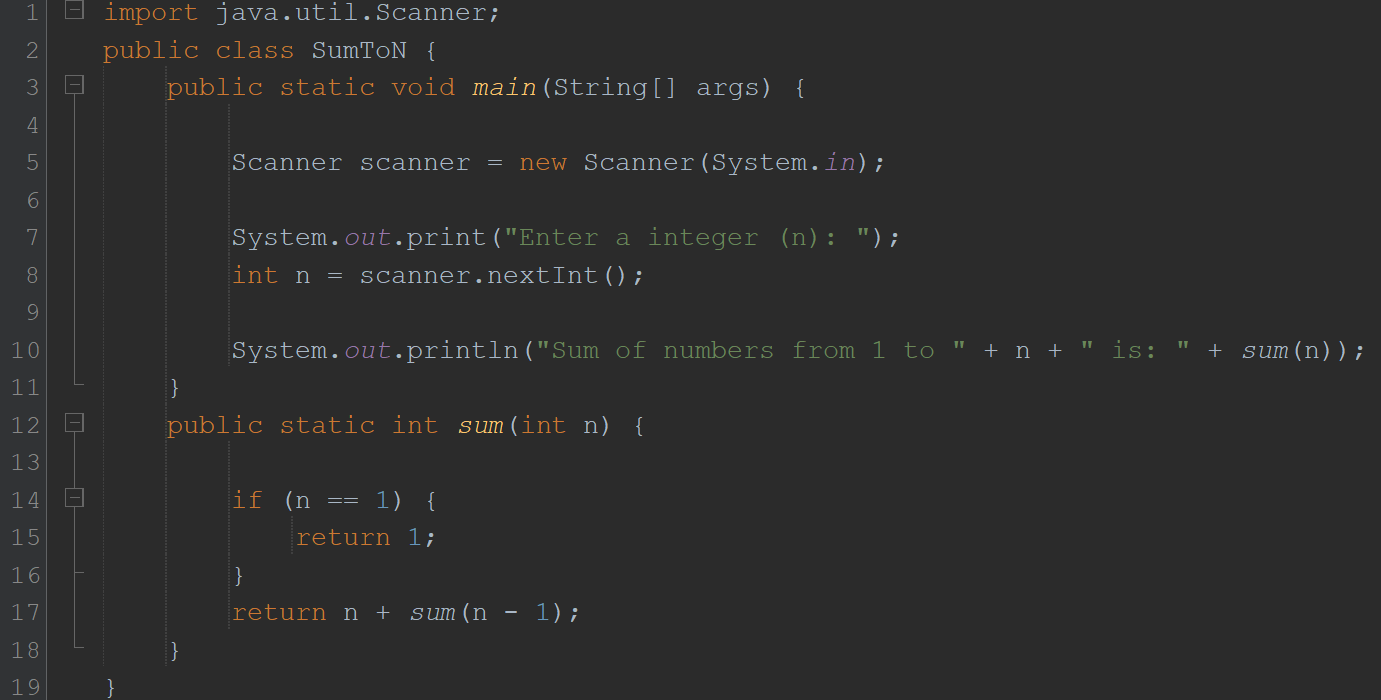


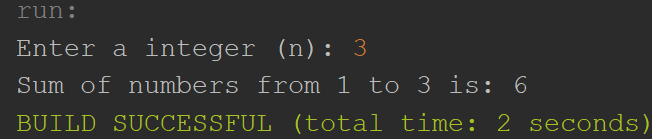
2. Write a program to reverse your full name using Recursion.



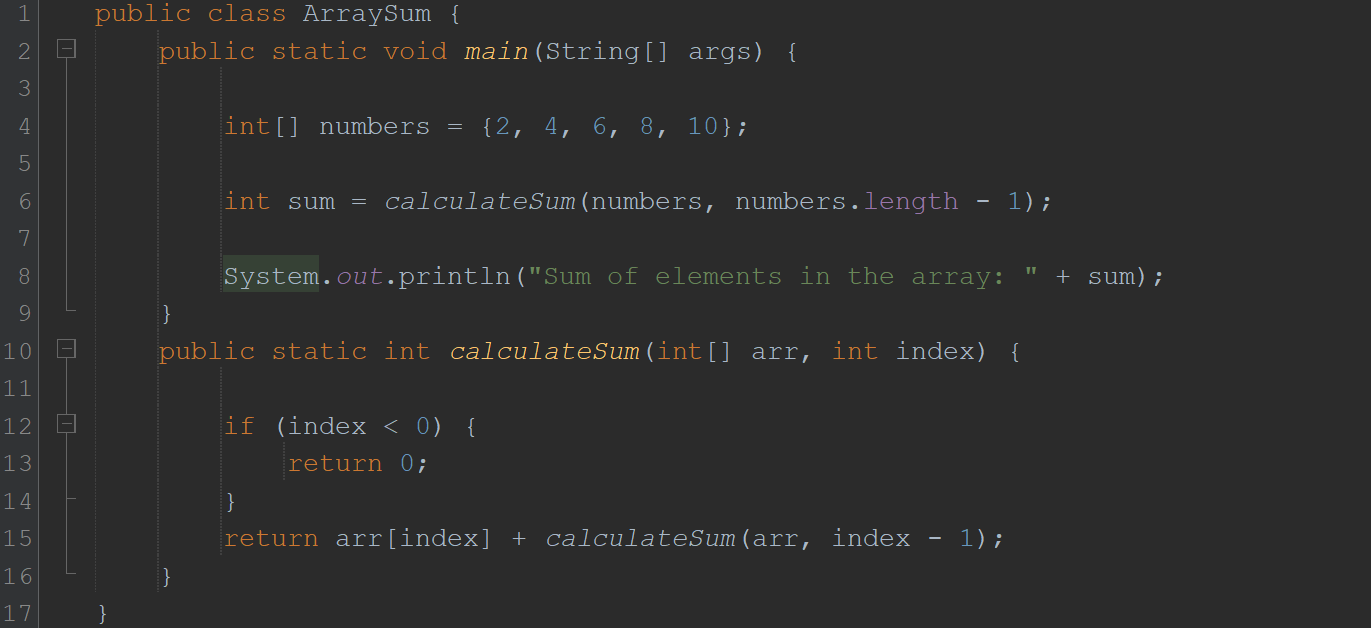


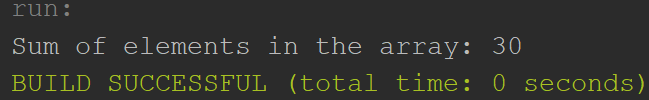
3. Write a program to calculate the sum of numbers from 1 to N using recursion. N should be user input.



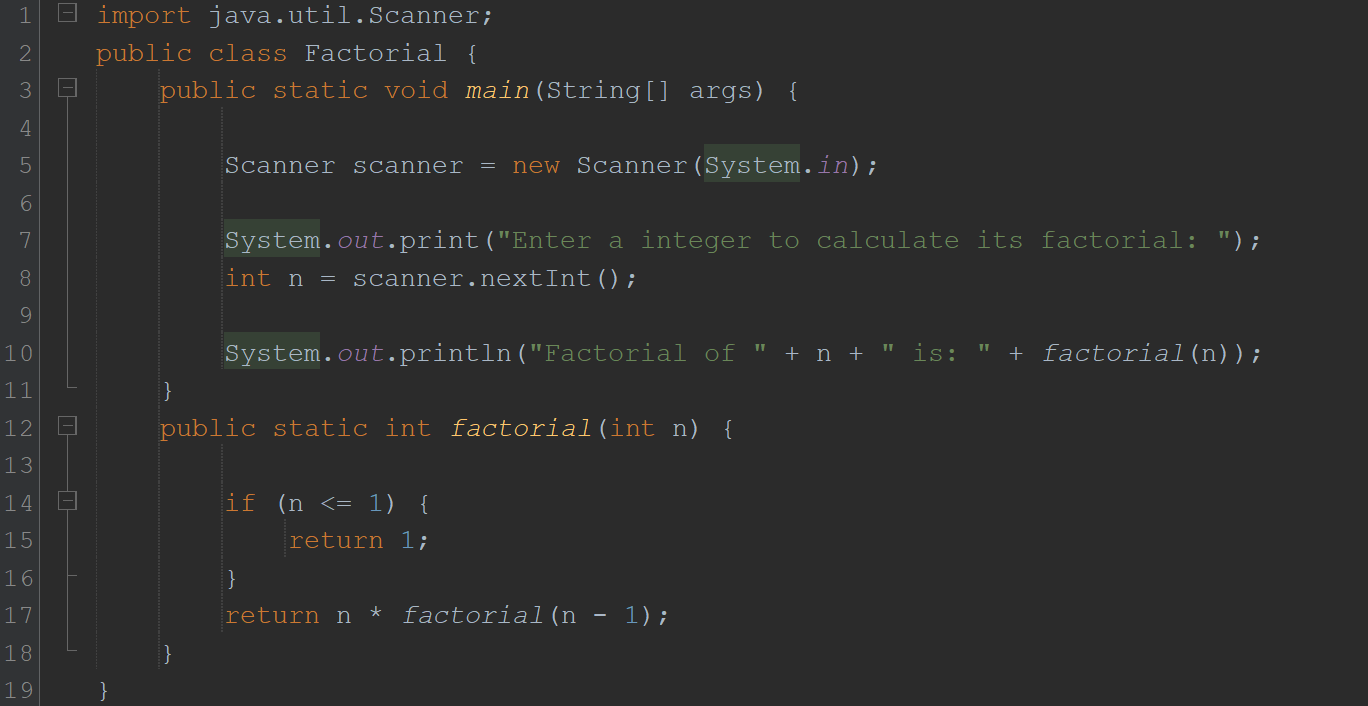


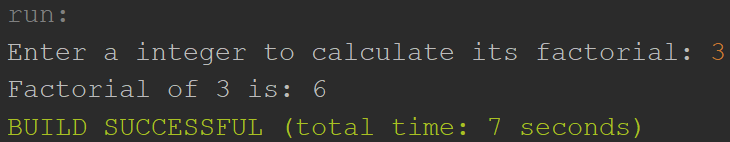
4. Write a recursive program to calculate the sum of elements in an array.



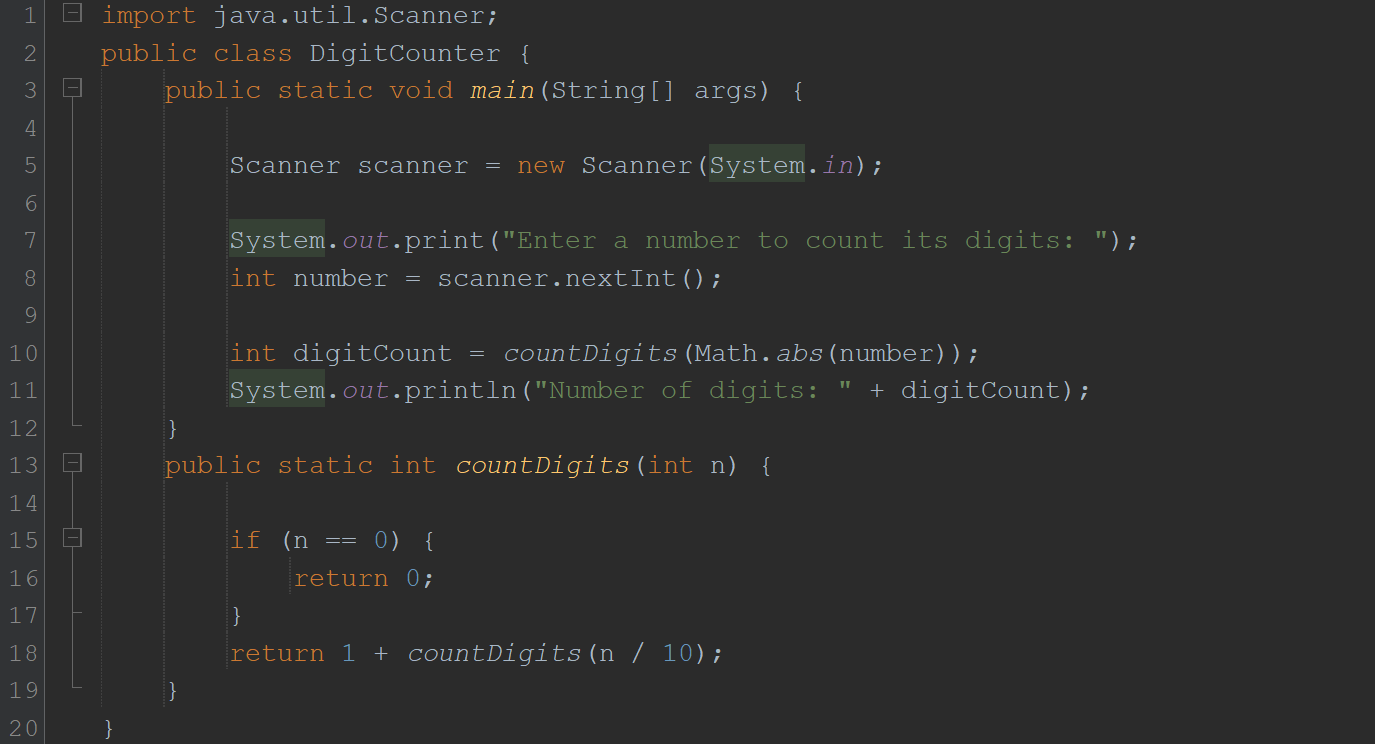


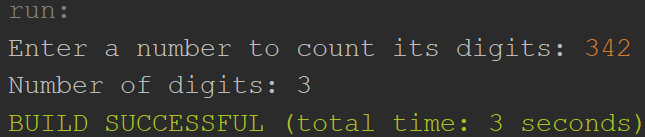
5. Write a recursive program to calculate the factorial of a given integer n.





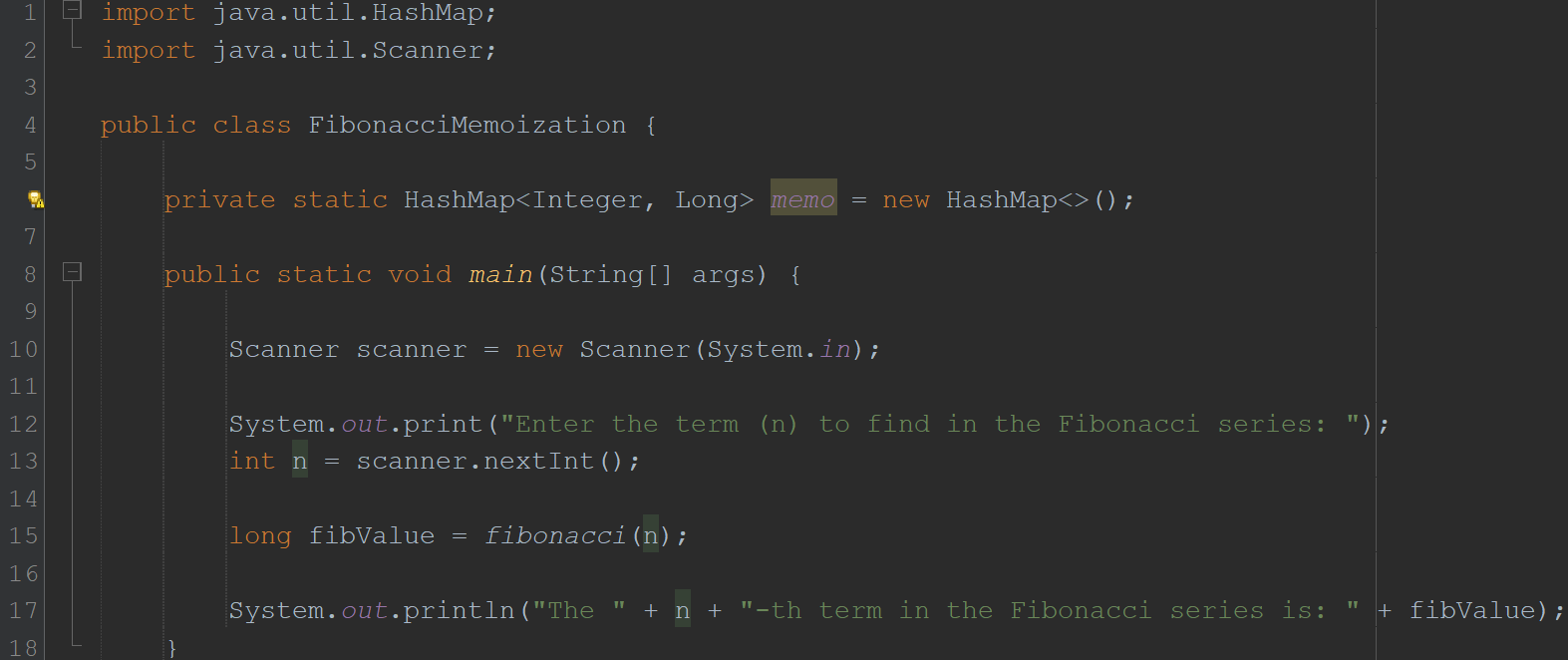
6. Write a program to count the digits of a given number using recursion.

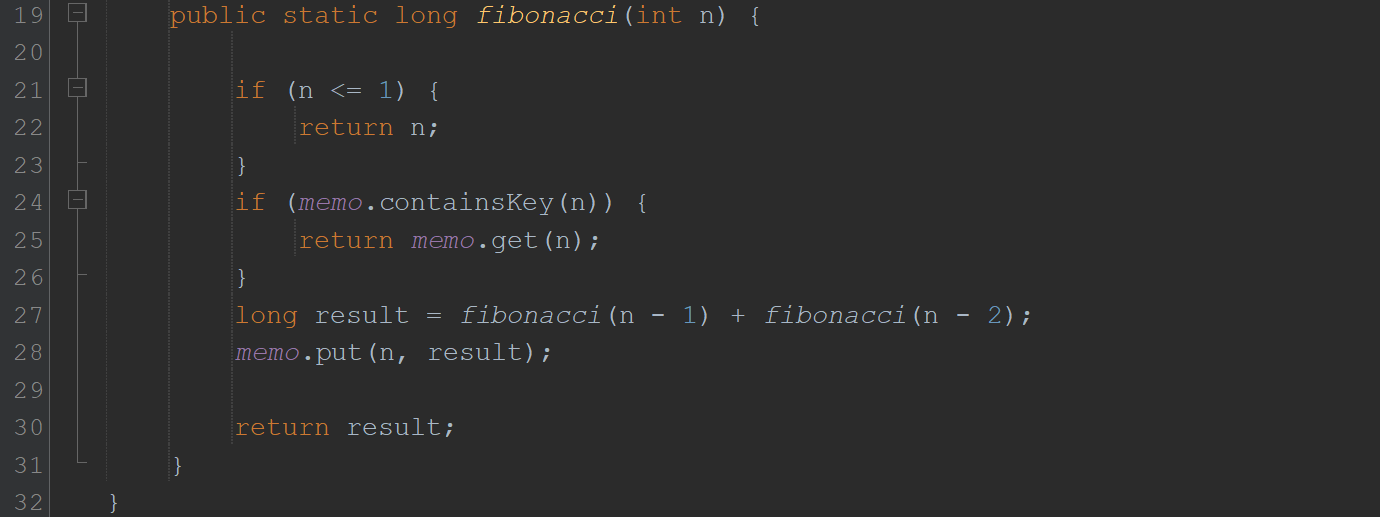


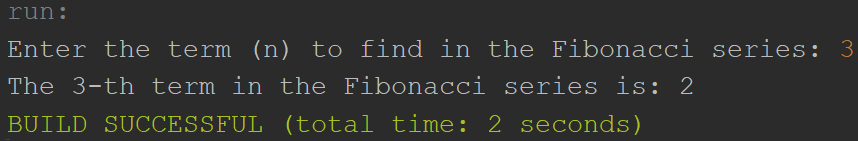


**HOME TASK**

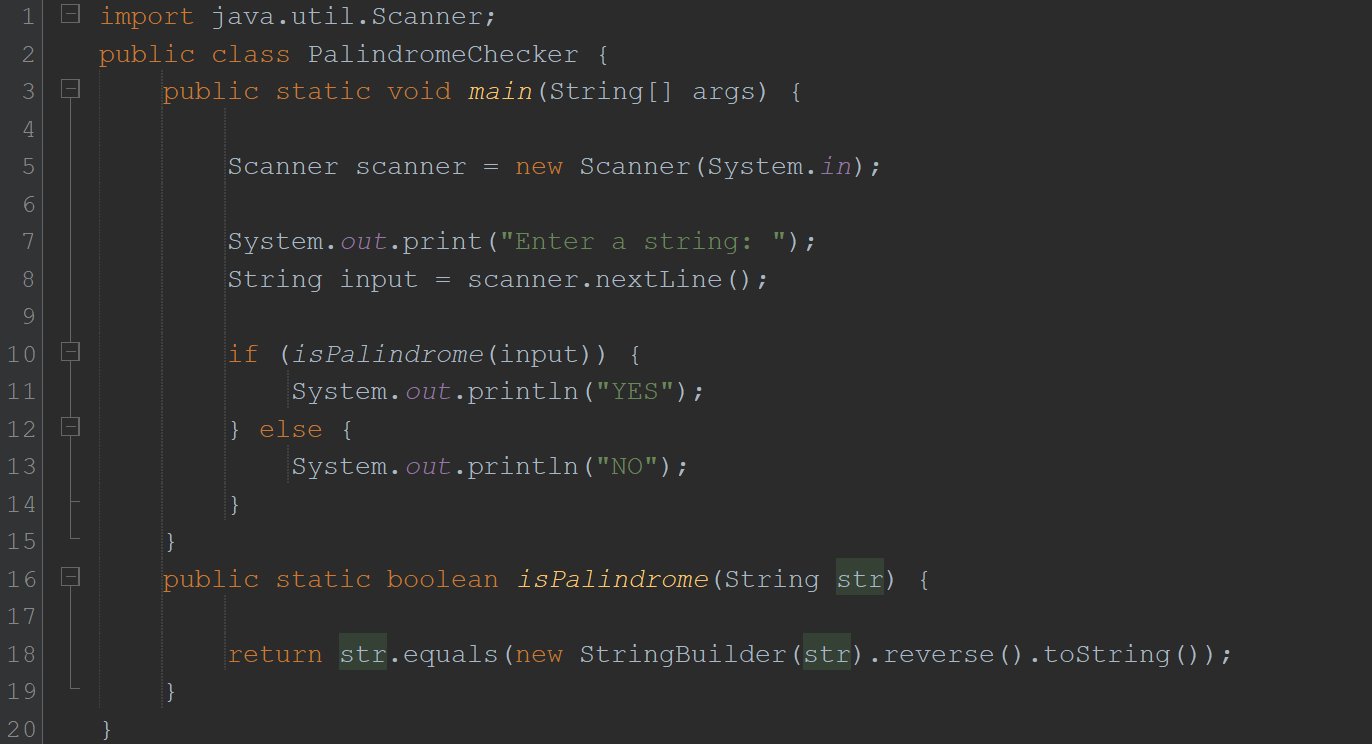
1. Write a java program to find the N-th term in the Fibonacci series using Memoization.

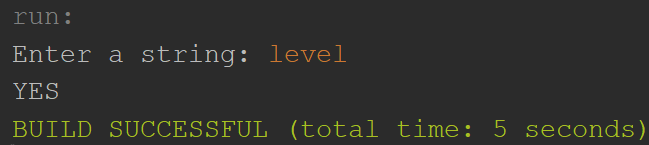






3. Write a java program to check whether a given string is a palindrome or not. A palindrome is a string that reads the same forwards and backwards.Print "YES" if the string is a palindrome, otherwise print "NO".





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

