Write a program to calculate the factorial of number using recursive function.

CODE:

import java.util.Scanner;

public class FactorialCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

// Input number

System.out.print("Enter a non-negative integer to calculate its factorial: ");

int num = scanner.nextInt();

// Check if the number is non-negative

if (num < 0) {

System.out.println("Error: Please enter a non-negative integer.");

} else {

// Calculate and print factorial

long factorial = calculateFactorial(num);

System.out.println("Factorial of " + num + " is: " + factorial);

}

scanner.close(); // Closing the scanner object

}

// Recursive function to calculate factorial

public static long calculateFactorial(int n) {

if (n == 0 || n == 1) {

return 1;

} else {

return n \* calculateFactorial(n - 1);

}

}

}

OUTPUT:

C:\javap>javac FactorialCalculator.java

C:\javap>java FactorialCalculator

Enter a non-negative integer to calculate its factorial: 5

Factorial of 5 is: 120

