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////////////////////////////////////////////////////////////////////
//www.karamian.com
//Program TestRecursion
//////////////////////////////////////////////////////////////////

import java.io.*;
import java.util.*;

//*****
// Class TestRecursion
//*****

public class TestRecursion
{
    static int callIt=1;
    static int completedIt=1;
    static Stack call=new Stack();
    static Stack completed=new Stack();
    //=====
    // The f method which shows the steps recursion performs on fibonacci by
    printing out steps.
    //=====

    public static int f(int n)
    {
        call.push(new Integer(callIt++));
        System.out.println("The call number = "+ call.peek()+ " for n = "+ n+ " has
been issued");
        System.out.println();
        if((n==0) || (n==1))
        {
            completed.push(new Integer(completedIt++));

            System.out.println("The call number = "+call.peek()+ " for n = "+n+
" and its completion # "+
completed. peek());

            System.out.println("The returned value of this call = 1");
            System.out.println();
            return 1;
        }
        int result1=f(n-1);
        call.pop();
        int result2=f(n-2);
        call.pop();
        completed.push(new Integer(completedIt++));

        System.out.println("The call number = "+ call.peek()+ " for n = "+ n+
" and its completion # "+
completed. peek());
        System.out.println("The returned value "+ (result1+result2));
        System.out.println();
        return (result1+result2);

    } //end f method
} //end of class TestRecursion

```