Objective

Today, we're learning about Interfaces. Check out the Tutorial tab for learning materials and an instructional video!

Task

The `AdvancedArithmetic` interface and the method declaration for the abstract `divisorSum(n)` method are provided for you in the editor below.

Complete the implementation of `Calculator` class, which implements the `AdvancedArithmetic` interface. The implementation for the `divisorSum(n)` method must return the sum of all divisors of n.

Input Format

A single line containing an integer, n.

Constraints

- $1 \leq n \leq 1000$

Output Format

You are not responsible for printing anything to stdout. The locked template code in the editor below will call your code and print the necessary output.

Sample Input

```
6
```

Sample Output

```
I implemented: AdvancedArithmetic
12
```

Explanation

The integer 6 is evenly divisible by 1, 2, 3, and 6. Our divisorSum method should return the sum of these numbers, which is $1+2+3+6=12$. The Solution class then prints `I implemented: AdvancedArithmetic` on the first line, followed by the sum returned by divisorSum (which is 12) on the second line.

Change Theme | Java 8

```
import java.io.*;…
class Calculator implements AdvancedArithmetic {
    public int divisorSum(int n) {
        int divisorSum = 0;

        for (int i = 1; i <= n ; i++) {
            if (n % i == 0){
                divisorSum += i;
            }
        }

        return divisorSum;
    }
}

class Solution {

    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        int n = scan.nextInt();
        scan.close();

        AdvancedArithmetic myCalculator = new Calculato
        int sum = myCalculator.divisorSum(n);
        System.out.println("I implemented: " + myCalcul
.getName() );
        System.out.println(sum);
    }
```

Line: 22 Col: 1

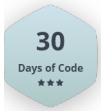
Upload Code as File
Test against custom input

Run Code | Submit Code

You have earned 30.00 points!

You are now 2 challenges away from the 4th star for your 30 days of code badge.

71% 20/22



Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

Test case 0
Test case 1
Test case 2
Test case 3
Test case 4
Test case 5

Compiler Message

Success

Input (stdin) Download

```
6
```

Expected Output Download

```
I implemented: AdvancedArithmetic
12
```