

# Day 19: Interfaces



## 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 *int divisorSum(int n)* method are provided for you in the editor below. Write the *Calculator* class, which implements the *AdvancedArithmetic* interface. The implementation for the *divisorSum* method must be *public* and take an integer parameter, *n*, and return the sum of all its divisors.

**Note:** Because we are writing multiple classes in the same file, do not use an access modifier (e.g.: *public*) in your *class declaration* (or your code will not compile); however, you must use the *public* access modifier before your *method declaration* for it to be accessible by the other classes in the file.

## 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 *Solution* class 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.