- A class constructor that takes an array of integers as a parameter and saves it to the $\_\_elements$ instance variable.
- A computeDifference method that finds the maximum absolute difference between any 2 numbers in $\_\_elements$ and stores it in the $maximumDifference$ instance variable.

Input Format

You are not responsible for reading any input from stdin. The locked Solution class in the editor reads in 2 lines of input. The first line contains N, the size of the elements array. The second line has N space-separated integers that describe the $\_\_elements$ array.

Constraints

- $1 \leq N \leq 10$
- $1 \leq \_\_elements[i] \leq 100$, where $0 \leq i \leq N-1$

Output Format

You are not responsible for printing any output; the Solution class will print the value of the $maximumDifference$ instance variable.

Sample Input

```
STDIN   Function
-----   --------
3       __elements[] size N = 3
1 2 5   __elements = [1, 2, 5]
```

Sample Output

```
4
```

Explanation

The scope of the $\_\_elements$ array and $maximumDifference$ integer is the entire class instance. The class constructor saves the argument passed to the constructor as the $\_\_elements$ instance variable (where the computeDifference method can access it).

To find the maximum difference, computeDifference checks each element in the array and finds the maximum difference between any 2 elements: $|1-2| = 1$
$|1-5| = 4$
$|2-5| = 3$

The maximum of these differences is 4, so it saves the value 4 as the $maximumDifference$ instance variable. The locked stub code in the editor then prints the value stored as $maximumDifference$, which is 4.

Change Theme | Java 8

```
import java.io.*;
import java.util.*;
import java.text.*;
import java.math.*;
import java.util.regex.*;


class Difference {
    private int[] elements;
    public int maximumDifference;

    public Difference(int[] elements) {
        this.elements = elements;
        this.maximumDifference = 0;
    }

    public int computeDifference() {
        int minimum = Arrays.stream(elements).min().getAsInt();
        int maximum = Arrays.stream(elements).max().getAsInt();
        maximumDifference = Math.abs(maximum - minimum);
        return maximumDifference;
    }


} // End of Difference class

public class Solution {
```

Line: 18 Col: 64

Upload Code as File | Test against custom input | Run Code | Submit Code

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30 Days of Code ★★★

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
Test case 6

Compiler Message

Success

Input (stdin) Download

```
3
1 2 5
```

Expected Output Download

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