Day 14: All about Scope!

Welcome to Day 14, and congratulations on getting halfway through the series! Review *scope* and *importing* here, or just jump right into the problem.

The *absolute difference* between two integers, a and b, is $|a - b|$. The *maximum absolute difference* of two integers in a set of positive integers, $elements$, is the largest *absolute difference* of any two integers in $elements$.

The class *Difference* is started for you in the editor. It has a private instance array (`elements`) for storing N non-negative integers, and a public integer (`maxDifference`) for storing the *maximum absolute difference*.

Code for handling Input/Output is provided for you in the editor. Your task is to write the *class constructor* for `Difference` and the `computeDifference` method so that it finds the *maximum absolute difference* between any two numbers in N and stores it in `maxDifference`.

Good Luck!

Input Format

The first line contains a positive integer, N, denoting the size of array $elements$. The second line contains N space-separated positive integers describing $elements$.

Constraints
$1 \le N \le 10$
$1 \le elements[i]\le 100$, where $ 0\le i \le N - 1 $

Output Format

Print the *maximum absolute difference* between any two integers in $elements$.

Sample Input

```
3
1 2 5
```

Sample Output

```
4
```

Explanation

```
|1-2|=1
|1-5|=4
|2-5|=3
```

We print the *maximum* of these *absolute differences*, which is 4.