

Day 14: Scope



Problem Submissions Leaderboard Discussions Editorial Tutorial

Objective

Today we're discussing scope. Check out the Tutorial tab for learning materials and an instructional video!

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

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

Task

Complete the Difference class by writing the following:

- · 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 N 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 your editor reads in **2** lines of input; the first line contains **N**, and the second line describes the **elements** array.

Constraints

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

Output Format

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

Sample Input

3 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

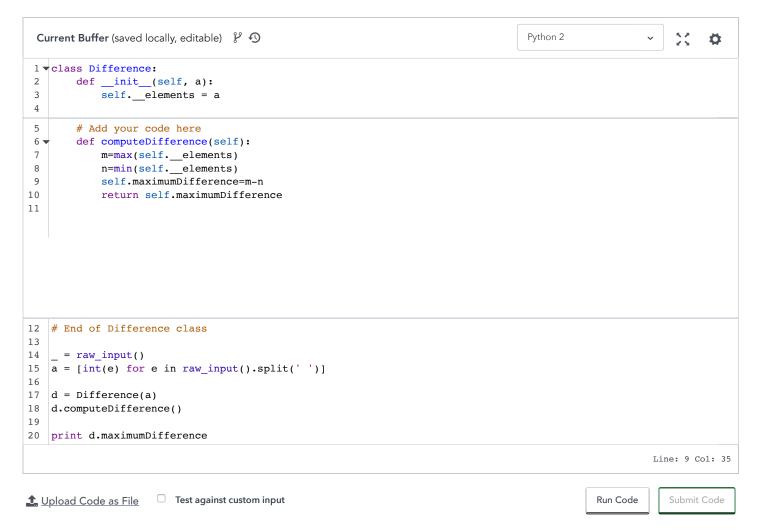
The maximum of these differences is **4**, so it saves the value **4** as the **maximumDifference** instance variable. The locked stub code in the editor then prints the value stored as **maximumDifference**, which is **4**.

Submissions: 7035

Max Score: 30

Difficulty: Easy

More



Congrats, you solved this challenge!

✓ Test Case #0
✓ Test Case #1
✓ Test Case #2
✓ Test Case #3
✓ Test Case #4
✓ Test Case #5
✓ Next Challenge

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