4/4/2018 HackerRank



PRACTICE

COMPETE

JOBS

LEADERBOARD

Q Search



Sashu1231 V

Practice > Tutorials > 30 Days of Code > Day 14: Scope

7 more challenges to get your next star!



0% 15/22

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.
- ullet A *computeDifference* method that finds the maximum absolute difference between any $oldsymbol{2}$ numbers in $oldsymbol{N}$ and stores it in the $oldsymbol{maximumDifference}$ instance variable.

Input Format

You are not responsible for reading any input from stdin. The locked *Solution* class in your editor reads in $\mathbf{2}$ lines of input; the first line contains \mathbf{N} , and the second line describes the *elements* array.

Constraints

- $1 \le N \le 10$
- ullet $1 \leq elements[i] \leq 100$, 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

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).

4/4/2018 HackerRank

To find the maximum difference, *computeDifference* checks each element in the array and finds the maximum difference between any $\mathbf{2}$ elements: $|\mathbf{1} - \mathbf{2}| = \mathbf{1}$

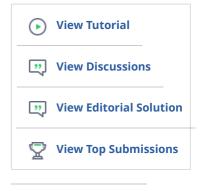
$$|1-5|=4$$

 $|2-5|=3$

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**.



Need Help?



Rate This Challenge:



Download problem statement

Download sample test cases

Suggest Edits

f ⊌ in

```
Java 8
Current Buffer (saved locally, editable) & • •
 1 ▶ import ↔;
 6
 7
   class Difference {
 8
 9
        private int[] elements;
10
        public int maximumDifference;
        // Add your code here
11
12 ▼
        Difference(int[] arr) {
13
            elements = arr;
14
15
        void computeDifference() {
16 ▼
17
            Arrays.sort(elements);
            maximumDifference = elements[elements.length-1]-elements[0];
18 ▼
19
        }
20 } // End of Difference class
21
22 ▼ public class Solution {
23
        public static void main(String[] args) {
24 ▼
            Scanner sc = new Scanner(System.in);
```