**. Array Challenge**

For each element of an array, a *counter* is set to *0.* The element is compared to each element to its left. If the element to the left is greater, the absolute difference is subtracted from the counter.  If the element to the left is less, the absolute difference is added to the counter. For each element of the array, determine the value of the counter. These values should be stored in an array and returned.

**Example**

*n = 3,* the number of elements

*arr = [2, 4, 3]*

* For *arr[0] = 2, counter* starts at *0* and there are no elements to the left so *counter = 0*.
* For *arr[1] = 4,* *counter* starts at *0* and then increases by *| 4 - 2 | = 2* at the first and only comparison: *counter = 2*.
* Testing *arr[2] = 3*, first against *4, counter = 0 - |3 - 4| = -1,* and then against *2, counter = -1 + |3 - 2| = 0.*
* The answer array is *[0, 2, 0].*

**Function Description**

Complete the function *arrayChallenge* in the editor below.

arrayChallenge has the following parameter(s):

*int arr[n]:*  an array of integers

Returns

*int[n]:* an array of integers calculated as described

**Constraints**

* 1 ≤ *n* ≤ 105
* 1 ≤ *arr[i]* ≤ 109

Input Format For Custom Testing

The first line contains an integer, *n*, the number of elements in *arr*.

Each line *i* of the *n* subsequent lines (where *0 ≤ i < n*) contains an integer that describes *arr[i]*.

Sample Case 0

**Sample Input**

STDIN Function

----- -----

3 → arr[] size n = 3

2 → arr = [2, 1, 3]

1

3

**Sample Output**

0

-1

3

**Explanation**

The first element has none to its left, so *counter = 0.*

The second element, *counter = 0 - |1- 2| = -1.*

The third element, *counter = 0 + |3 - 1| + |3 - 2| = 3.*

Sample Case 1

**Sample Input**

STDIN Function

----- -----

4 → arr[] size n = 4

1 → arr = [1, 2, 2, 3]

2

2

3

**Sample Output**

0

1

1

4

**Explanation**

The first element has none to its left, so *counter = 0.*

The second element, *counter = 0 + |2 - 1| = 1.*

The third element, *counter = 0 + |2 - 2| + |2 - 1| = 1.*

The fourth element, *counter = 0 + |3 - 2| + |3 - 2| + |3 - 1| = 4.*

Language

C#



Autocomplete Ready

More

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using System.CodeDom.Compiler;

class Result

{

    /\*

     \* Complete the 'arrayChallenge' function below.

     \*

     \* The function is expected to return a LONG\_INTEGER\_ARRAY.

     \* The function accepts LONG\_INTEGER\_ARRAY arr as parameter.

     \*/

    public static List<long> arrayChallenge(List<long> arr)

    {

    }

}

class Solution



Line: 34 Col: 15

Test Results

Custom Input

Run Code

Run Tests

Submit