**6 kyu**

**Simple Fun #110: Array Operations**

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C#

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**Task**

You are given an array of integers a and a non-negative number of operations k, applied to the array. Each operation consists of two parts:

find the maximum element value of the array;

replace each element a[i] with (maximum element value - a[i]).

How will the array look like after k such operations?

**Example**

For a = [-4, 0, -1, 0] and k = 2, the output should be [0, 4, 3, 4].

initial array: [-4, 0, -1, 0]

1st operation:

find the maximum value --> 0

replace each element: --> [(0 - -4), (0 - 0), (0 - -1), (0 - 0)]

--> [4, 0, 1, 0]

2nd operation:

find the maximum value --> 4

replace each element: --> [(4 - 4), (4 - 0), (4 - 1), (4 - 0)]

--> [0, 4, 3, 4]

For a = [0, -1, 0, 0, -1, -1, -1, -1, 1, -1] and k = 1,

the output should be [1, 2, 1, 1, 2, 2, 2, 2, 0, 2].

initial array: [0, -1, 0, 0, -1, -1, -1, -1, 1, -1]

1st operation:

find the maximum value --> 1

replace each element: -->

[(1-0),(1- -1),(1-0),(1-0),(1- -1),(1- -1),(1- -1),(1- -1),(1-1),(1- -1)]

--> [1, 2, 1, 1, 2, 2, 2, 2, 0, 2]

**Input/Output**

* [input] integer array a

The initial array.

Constraints:

1 <= a.length <= 100

-100 <= a[i] <= 100

* [input] integer k

non-negative number of operations.

Constraints: 0 <= k <= 100000

* [output] an integer array

The array after k operations.

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using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

public static int[] ArrayOperations(int[] a, int k)

{

//coding and coding..

int max = int.MinValue;

for (int op = 0; op < k; op++)

{

for (int i = 0; i < a.Length; i++)

{

max = Math.Max(max, a[i]);

}

for (int i = 0; i < a.Length; i++)

{

a[i] = max - a[i];

}

}

return a;

}

static void Main(string[] args)

{

int[] a = { -4, 0, -1, 0 };

int k = 2;

int[] res = ArrayOperations(a, k);

foreach(int item in res )

{

Console.Write(item + " ");

}

Console.ReadLine();

}

}

}