Coding Exercise

CRXMARKETS

INPUT: array of integer numbers
OUTPUT: a number, further called "volume"

Imagine that the array describes profile of a surface, for example:

ARRAY: 3 2 4 1 2

Now imagine that there was a heavy rain, and all possible "holes" are filled with water.
In this case, we have volume == 2 units of water:

ARRAY: 3 2 4 1 2

Another example, here we have volume == 8 units of water:

ARRAY: 4 1 1 0 2 3

TASK:

Write an application which takes an array as an input, and calculates the volume of water which remained after the rain, in units.

Make a statement on complexity of your solution (time and memory).

Acceptable programming languages are Python / Java / C++.

We evaluate in particular:

* accuracy of the solution
* quality of code
* breath and depth of the knowledge in programming concepts