BeeCity

Help BeeCity to spend less.

In BeeCity there is a street called Beestreet, and in this street there are buildings with numbers from `1 to n`. To attract more tourists to this street, Mayor wants the street to be more pleasing to the eye. To accomplish this, all of the buildings in the street should be **strictly taller than** previous buildings. For this reason, Mayor contracted with a construction company. This company can **decrease** (even dig underground) or **increase** the height of a building by **1 with cost of 1**.

Can you provide a plan that will make Beestreet more beautiful and will give the construction company least amount of money?

Submit Solution

Points: 1

Time limit: 1.0s
Java 8: 4.0s
Python: 8.0s

All submissions

Best submissions

My submissions

Input Format:

First line contains n as the number of buildings.

The second line contains n integers $h_1, h_2,...h_n$

Constraint:

$1 \leq n \leq 3000$

$1 \leq h_i \leq 10^9$ (height of building)

Output Format:

Only `minimum total cost`

Sample Input:

```
4
1 5 3 6
```

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Sample Output:

```
3
```

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Explanation:

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We can decrease the length of the second building to 2, so that it is taller than the previous building with a cost of 3, and now length of all buildings are in increasing order, and total cost of this case is 3.

Or we can increase the length of the third building to 6 with a cost of 3, but in such case we also have to increase the length of the fourth building to 7 with a cost of 1, so that length of all buildings are in increasing order, and total cost of this case is 4.

We should choose first case for least cost, therefore the total cost will be 3.

Request clarification

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