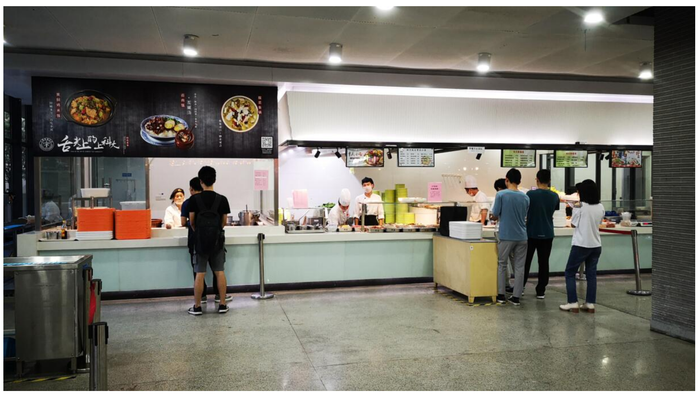
Queue at Dongda dining hall

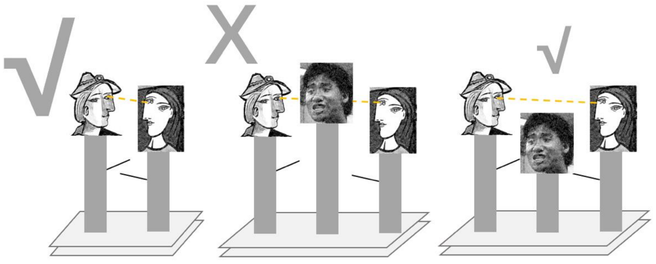
Description

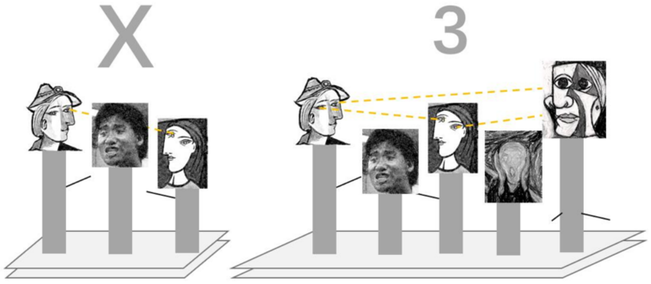
Motivation



After enjoying CS101 at morning, you are immersed in the sunlight shedding on Dongda dining hall, where cusine conjures in your mind. Ho wever, the extremely LONG LONG queue blocks your imagination. You starts to be impatient and looks for your friend. At the same time, tw o facts arouse your curosity.

1. If two students are adjacent in a queue, they are visible to each other.
2. If students between two students are shorter, those two ones are still able to see each other.
3. Otherwise, if any one of them shorter than any student between them. They cannot see each other.





Goal

When you are having your meal, you find yourself can easily memorize the height of all students in the queue. However, you are really curiou s about one thing:

- how many pairs of students could see each other?

Input

1. At first line, an integer N is provided, indicating the population of the queue.
2. At next N lines, N integers are provided, indicating the height of those N students.

No illegal input exists in TestCase. All integers can be well saved in int32.

- For 30% TestCase, N ≤ 100
- For 60% TestCase, N ≤ 10000
- For 100% TestCase, N≤ 500000

Output

A integer P, indicating P pairs of people are visible to each other.P can be well saved in int32.

输入样例 1

```
7
2
4
1
2
2
5
1
```

输出样例 1

```
10
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