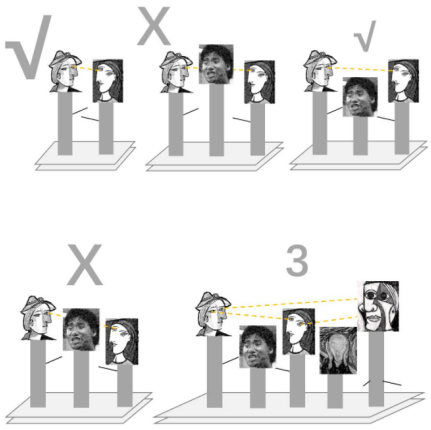
note @42 176 views

PA1 - 1003 Discussion Thread

After enjoying CS101 in the morning, you decide to eat at Baiyulan dining hall. However, as the teaching assistant, Yining She, said in the video (BV17t4y1q7yU), the extremely LONG LONG queue of people blocks your way to the food. You start to be impatient and look for your friends. At the same time, two facts arouse your curiosity.

- If two students A and B are adjacent to each other in a queue, they are visible to each other.
- If students between A and B are shorter than the shorter one of A and B, A and B are still able to see each other.
- If anyone of the students between A and B is taller than the shorter one of A and B, those two students are not able to see each other.

Please count how many pairs of students can see each other.



Input

In the first line, the total number of people in this team is given as N.

There are N positive integers in the second line, indicating the height of the students in the team.

- For 30% cases, $N <= 100$
- For 60% cases, $N <= 1e4$
- For 100% cases, $N <= 5e5$, height$<= 1e4$

Output

An integer P, indicating P pairs of people are visible to each other. It is guaranteed $P <= 1e9$

programming

Updated 2 months ago by Yining She (佘以宁)

followup discussions *for lingering questions and comments*

◉ Resolved ○ Unresolved

龚可 2 months ago

What if some student between A and B is as tall as the shorter one of A and B? e.g. $(3, 1, 2, 1, 2)$, will the first student and the last student be able to see each other?

helpful! | 0

连奕航 2 months ago

Yes, they are able to see each other in this case.

“shorter than” here actually means “no taller than”. We will fix the description soon. Sorry for inconvenience.

good comment | 0

张龙文 2 months ago

Updated, thanks for your reply!

good comment | 0

Resolved Unresolved

Anonymous Calc 2 months ago

what if 3 students are at the same height, such as {2,2,2},can the first one see the third one?

helpful! | 0

张龙文 2 months ago

yes

good comment | 0