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TCS CodeVita VIII Round 1 Zone

TCS: CodeVita - Coding Arena

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## Bottle Necks

— Problem Description

There are N bottles. ith bottle has  $A[i]$  radius. Once a bottle is enclosed inside another bottle, it ceases to be visible. Minimize the number of visible bottles.

You can put ith bottle into jth bottle if following condition is fulfilled:

- 1) ith bottle itself is not enclosed in another bottle.
- 2) jth bottle does not enclose any other bottle.
- 3) Radius of bottle i is smaller than bottle j (i.e.  $A[i] < A[j]$ )

— Constraints

$1 \leq N \leq 100000$ .

$1 \leq A[i] \leq 10^{18}$ .

— Input Format

First line contains a single integer N denoting the number of bottles.

Second line contains N space separated integers, ith integer denoting the radius of ith bottle.

$(1 \leq i \leq N)$ .

— Output

Minimum number of visible bottles.

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  - $1 \leq N \leq 100000$ .
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- Output
  - Minimum number of visible bottles.
- Test Case
- Explanation
  - Example 1
  - Input
    - 8
    - 1 1 2 3 4 5 5 4
  - Output
    - 2
  - Explanation

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— Test Case

— Explanation

Example 1

Input

8

1 1 2 3 4 5 5 4

Output

2

Explanation

1st bottle can be kept in 3 rd one 1→2 , which makes following bottles visible [1,2,3,4,5,5,4]

similarly after following operations, the following will be the corresponding visible bottles

Operation ? Visible Bottles

2 ? 3 [1,3,4,5,5,4]

3 ? 4 [1,4,5,5,4]

4 ? 5 [1,5,5,4]

1 ? 4 [5,5,4]

4 ? 5 [5,5]

finally there are 2 bottles which are visible. Hence the answer is 2

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Upload Solution [ Question : B ]

☐ I, **akhil tiwari** confirm that the answer submitted is my own.

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