2024 … AND THE COLLECTION CAPER

In *"The Masked Lady and the Collection Caper"* our conquerer championed the collapsing character of a condemned curator — custodian of cherished curiosities, conglomerate curios and copious cash. Climactically the cantankerous caretaker confessed.

A row of n items had sat for many years in the storage area, each item belonging to a single collection. Each month the caretaker had taken a group of adjacent items (at least 2 at a time) where all the items belonged to the same collection, before pushing the remaining items in the row together (without changing their order).

Some time later, after all the items had been removed, the theft was discovered and the investigations began.

For example, suppose that the items on the row belonged to collections 1112211:

- If the leftmost triplet, then then rightmost pair, then the remaining pair were removed, the row would have transformed 1112211 → 2211 → 22 → empty!
- If the 22 pair was removed first, the remaining elements could be removed in one further step 1112211 → 11111 → empty!

SAMPLE INPUT

```
6
1
1
2
2
1
1
```

The first line of the input will contain a single integer, n ($1 < n \leq 256$) indicating the number of items in storage. This will be followed by n lines, the i^{th} containing an integer c_i ($1 \leq c_i \leq n$) indicating the collection to which the i^{th} item belongs.

You will always be given input where the caretaker can acquire all the items.

You should output a single integer, the smallest number of months that were required for the caretaker to remove all the items.

SAMPLE OUTPUT

```
2
```