Problem O. Migratory Birds

OS Linux

Given an array of bird sightings where every element represents a bird type id, determine the id of the most frequently sighted type. If more than 1 type has been spotted that maximum amount, return the smallest of their ids.

Example
$arr = [1, 1, 2, 2, 3]$

There are two each of types 1 and 2, and one sighting of type 3. Pick the lower of the two types seen twice: type 1.

Function Description

Complete the *migratoryBirds* function in the editor below.

migratoryBirds has the following parameter(s):

- *int arr[n]*: the types of birds sighted

Returns

- *int:* the lowest type id of the most frequently sighted birds

Input Format

The first line contains an integer, n, the size of arr.
The second line describes arr as n space-separated integers, each a type number of the bird sighted.

Constraints

- $5 \leq n \leq 2 \times 10^5$
- It is guaranteed that each type is 1, 2, 3, 4, or 5.

Sample Input 0

```
6
1 4 4 4 5 3
```

Sample Output 0

```
4
```

Explanation 0

The different types of birds occur in the following frequencies:

- Type 1: 1 bird
- Type 2: 0 birds
- Type 3: 1 bird
- Type 4: 3 birds
- Type 5: 1 bird

The type number that occurs at the highest frequency is type 4, so we print 4 as our answer.

Sample Input 1

```
11
1 2 3 4 5 4 3 2 1 3 4
```

Sample Output 1

```
3
```

Explanation 1

The different types of birds occur in the following frequencies:

- Type 1: 2
- Type 2: 2
- Type 3: 3
- Type 4: 3
- Type 5: 1

Two types have a frequency of 3, and the lower of those is type 3.