

A. Yaroslav and Permutations

time limit per test

2 seconds

memory limit per test

256 megabytes

input

standard input

output

standard output

Yaroslav has an array that consists of n integers. In one second Yaroslav can swap two neighboring array elements. Now Yaroslav is wondering if he can obtain an array where any two neighboring elements would be distinct in a finite time.

Help Yaroslav.

Input

The first line contains integer n ($1 \leq n \leq 100$) — the number of elements in the array. The second line contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 1000$) — the array elements.

Output

In the single line print "YES" (without the quotes) if Yaroslav can obtain the array he needs, and "NO" (without the quotes) otherwise.

Examples

input

```
1
1
```

output

```
YES
```

input

```
3
1 1 2
```

output

```
YES
```

input

```
4
7 7 7 7
```

output

```
NO
```

Note

In the first sample the initial array fits well.

In the second sample Yaroslav can get array: 1, 2, 1. He can swap the last and the second last elements to obtain it.

In the third sample Yaroslav can't get the array he needs.