

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.

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Round #179 (Div. 2)

Finished

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greedy math

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- Announcement 
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