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 $(1 \le n \le 100)$ — the number of elements in the array. The second line contains n integers $a_1, a_2, ..., a_n$ $(1 \le a_i \le 1000)$ — 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 Yarosav can't get the array he needs.