Symmetric or not

Given a list of numbers check if it is symmetric by its middle element or not i.e. $\{1,2,2,1\}$ and $\{1,2,3,2,1\}$ are symmetric while $\{1,2,3\}$ and $\{1,2,2\}$ are not symmetric.

Input

First line contains N, size of the list $(1 \le N \le 50)$

Second line contains N numbers (0 <= each number <= 50) representing the list of numbers.

Output

Prints one line containing either "Yes" if it is symmetric or "No" if it is not symmetric.

Example

Input:

5

12321

Output:

Yes