Problem C. A Permutation Problem

Input file:	*standard input*
Output file:	*standard output*
Time limit:	3 seconds
Memory limit:	256 mebibytes

Zenyk has a permutation of n integers from 1 to n, inclusive. His task is to sort the permutation, and he has to swap each pair of integers exactly once.

Can you help him to do that?

Input

The first line contains a single integer n ($2 \le n \le 1000$). The second line contains the permutation P of integers between 1 and n.

Output

Print "no" if it's impossible to sort the permutation. Otherwise, print $\frac{n(n-1)}{2}$ lines that describe the pairs of values (not indices) to swap on the corresponding turn.

Examples

standard input	standard output
4 3 2 4 1	1 2 4 1 1 3 2 3 2 4 3 4
3 1 3 2	1 3 3 2 1 2
2 1 2	no