



Southeastern European Regional Programming Contest
Bucharest, Romania - Vinnitsa, Ukraine
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Problem B

Bitris

Input File: B.IN

Output File: standard output

Program Source File: B.C, B.CPP, B.JAVA

There is a set of $2 \times N$ cubes. Each cube has an integer ranging from 1 to N assigned to it, labeling each of the cube's sides. Each number is written on exactly two cubes. Cubes are placed one on top of another, in a pile. If two cubes with the same number stand next to each other, they annihilate: both cubes disappear, and cubes standing above come down to fill the space.

Your task is to disassemble the pile – eliminate all cubes. You are allowed to swap any two neighboring cubes. A swap could be done only after all possible annihilations are done.

2
4
1

For example, if $N=4$ and cubes are standing as you see on the right then you need to make one swap. Cubes with label 3 annihilate immediately; you swap the fourth bottom cube (with label 1) and the fifth bottom cube (with label 4); afterwards, cubes with labels 4 annihilate, followed by cubes with labels 1 and labels 2. Other option is to swap third and fourth bottom cubes (in this case cubes with labels 1 and 4 annihilate at same time, followed by cubes with label 2), or second and third.

3
3
4
1
2

If $N=3$, and cubes are standing like shown on the right, you need to perform 3 swaps. One way to solve is to swap fifth and sixth cubes, then fourth and fifth; cubes with labels 2 annihilate; then swap second and third; other cubes annihilate simultaneously.

2
3
1

The task is to find the minimal number of swaps, such that all cubes are eliminated.

2
3
1

Input data. The first line in the input file contains the positive integer N , $2 \leq N \leq 100000$. The second line contains the labels of all cubes, bottom up, split by spaces.

Output data. The only line in the output should contain one non-negative integer M – the minimal number of swaps necessary to destroy all cubes.

Sample input	Sample output
4 2 1 4 3 3 1 4 2	1
Sample input	Sample output
3 1 3 2 1 3 2	3
Sample input	Sample output
3 1 3 2 2 3 1	0