
Problem A. Minimal Agapov Code

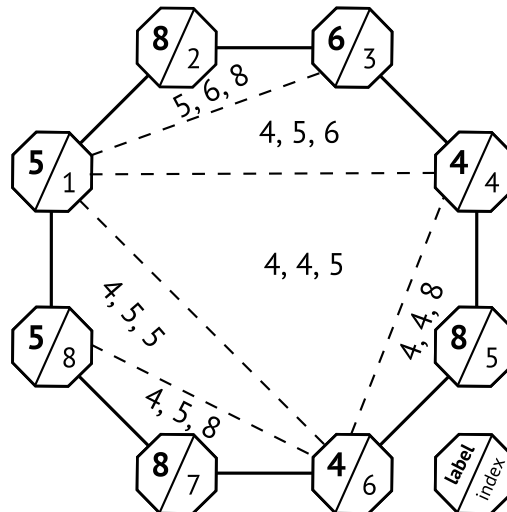
Input file: `stdin`
Output file: `stdout`
Time limit: 8 seconds
Memory limit: 512 megabytes

Triangulation is a decomposition of a polygon into a set of triangles that the triangle vertices are in the vertices of the polygon. The triangles in a triangulation can't have internal common points, and they should cover all the polygon. It is easy to see that triangulation of n -gon always consists of $n - 2$ triangles.

You are given a regular polygon with n vertices. The vertices are labeled with integer numbers. *Agapov code* of its triangulation is constructed as follows:

- write a code for each triangle: a sequence of labels of a triangle vertices in non-decreasing order;
- concatenate all triangle codes in such order that the resulting sequence is lexicographically minimal.

A sequence $a = \langle a_1, a_2, \dots, a_m \rangle$ is lexicographically less than $b = \langle b_1, b_2, \dots, b_m \rangle$ if there is such index i ($1 \leq i \leq m$) that $a_i < b_i$ and $a_j = b_j$ for all j ($1 \leq j < i$).



Triangle codes are written in triangles, the *Agapov code* is
 $\langle 4, 4, 5, 4, 4, 8, 4, 5, 5, 4, 5, 6, 4, 5, 8, 5, 6, 8 \rangle$.

Given a labeled regular polygon write a program to find the triangulation with lexicographically minimal *Agapov code*.

Input

The first line contains integer n ($3 \leq n \leq 5 \cdot 10^5$). The second line contains n space-separated integers: $c_1, c_2, \dots, c_n$ ($1 \leq c_i \leq n$), where c_i denotes the label on the i -th vertex. Vertices are indexed clockwise.

Output

Print $n - 2$ lines describing the required triangulation, one line per triangle. In each line print three integers: indices of triangle vertices in order of non-decreasing of their labels. Lines should be ordered in such a way that concatenation of triangle codes in order of output will give the required lexicographically minimal *Agapov code*.

If there are multiple solutions, print any of them.

Examples

stdin	stdout
8 5 8 6 4 8 4 8 5	4 6 1 6 4 5 6 8 1 4 1 3 6 8 7 1 3 2