
Problem A. Restroom

Input file: `input.txt`
Output file: `output.txt`
Time limit: 2 seconds
Memory limit: 256 megabytes

— Oh! I haven't showed you the restroom yet! Let's go! — Simon rushed down the stairs and Chris followed him. He was already tired of this "tour", but he believed that they walked almost around the whole building.

There was a dim light in the room, the wall were draped with some dark material. Chris stopped in the doorway, but Simon pushed him, and he made a couple of steps. The door closed behind him. He stayed still for several minutes. At last, his eyes got used to the dim light and he turned to the door.

— We already tried to open it and not only that one. I think, it's quite clear that we weren't really successful in this, — two guys approached Chris, — I am Bob and this is Max.

— We've "stayed" here for three weeks already, — Max smiled, — They feed you, give you something to drink, offer you to work but don't insist. The thing is, though, that you cannot escape. Even from this floor.

Bob and Max told Chris that the room doors on the floor are opened not only with staff's personal electronic keys, but with "guest" cards too. The cards are organized like this: contact paths are laid on a plastic base. There are at most 30 paths but not all of them are spattered: sometimes there is only a drawn rectangle. Each time the card fell into Bob's and Max's hands they remembered the "scheme" and which door you can open with it and wrote it down.

After Chris heard them out he assumed that the closer the doors the fewer differences there have to be between the keys. But this assumption needed verification. First, it is necessary to find the most "similar" two cards among the cards that Bob and Max had.

Formally speaking: we'll assume that each card scheme is a natural number written in the binary form. Let's consider by "similarity" criteria the result of the *XOR* operation between the cards scheme describing numbers. Thus, your task is to find the card pair for which the result of the *XOR* operation between the describing numbers is minimal. If there is more than one pair, print out any pair.

Input

The first line contains integer N ($2 \leq N \leq 3 \cdot 10^5$) — amount of the cards.

The second line contains N natural numbers a_1, a_2, \dots, a_N , separated by a space, which describe the cards ($1 \leq a_i \leq 10^9$).

Output

Output in the first line the order numbers of the two cards, where the *XOR* operation between the describing numbers is minimal. If there is more than one solution, output any solution.

Examples

<code>input.txt</code>	<code>output.txt</code>
6 4 7 10 5 2 8	1 4
5 1 2 3 4 3	3 5