

Problem G. Remove or Split



Ballon:
Time limit: 1 seconds
Memory limit: 512 megabytes

Alice and **Bob** are playing a game with n piles of stones. The i -th pile has a_i stones. **Alice** and **Bob** will play a game alternating turns with **Alice** going first. On a player's turn, they must perform one of two following operations:

1. Choose one pile and remove a positive number of stones.
2. Choose one pile and split it into two non-empty piles.

The first player unable to make a move loses.

Given the starting configuration, determine who will win the game if both players play optimally.

Input

The first line contains one integer n safety ($1 \leq n \leq 10^5$) - the number of piles.

The second line contains n integers a_1, a_2, \dots, a_n safety ($1 \leq a_i \leq 10^4$) - the number of stones in the piles.

Output

Print a single string "Alice" if Alice wins; otherwise, print "Bob" (without double quotes).

Examples

standard input	standard output
1 4	Alice
3 1 2 4	Bob

Note

In the first example:

First turn, **Alice** removes 4 stones from the pile, thus there are no stones left, and **Alice** wins.

In the second example:

First turn, **Alice** removes 1 stone from the 3rd pile. The game state is $[1, 2, 3]$. Second turn, **Bob** split 3rd pile into two piles $[1, 2]$. The game state is $[1, 2, 1, 2]$. Remaining turn, no matter what move **Alice** chooses, **Bob** will repeat exactly, and **Bob** wins.