

A. Alice and Bob

time limit per test: 2 seconds
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output

It is so boring in the summer holiday, isn't it? So Alice and Bob have invented a new game to play. The rules are as follows. First, they get a set of n distinct integers. And then they take turns to make the following moves. During each move, either Alice or Bob (the player whose turn is the current) can choose two distinct integers x and y from the set, such that the set doesn't contain their absolute difference $|x - y|$. Then this player adds integer $|x - y|$ to the set (so, the size of the set increases by one).

If the current player has no valid move, he (or she) loses the game. The question is who will finally win the game if both players play optimally. Remember that Alice always moves first.

Input

The first line contains an integer n ($2 \leq n \leq 100$) — the initial number of elements in the set. The second line contains n distinct space-separated integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^9$) — the elements of the set.

Output

Print a single line with the winner's name. If Alice wins print "Alice", otherwise print "Bob" (without quotes).

Examples

input
2 2 3
output
Alice
input
2 5 3
output
Alice
input
3 5 6 7
output
Bob

Note

Consider the first test sample. Alice moves first, and the only move she can do is to choose 2 and 3, then to add 1 to the set. Next Bob moves, there is no valid move anymore, so the winner is Alice.

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Round #201 (Div. 1)

Finished

→ Virtual participation

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