Problem D. Destructive Game

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	1024 megabytes

There are N stone piles, numbered by sequential integers from 1 to N. The i-th pile contains a_i stones. Additionally, each pile i has an integer b_i associated with it.

Alice and Bob play the following game using those stone piles.

They are alternately performing the following operation: choose pile i and a nonnegative integer k such that b_i^k is not greater than the current number of stones in pile i, and remove b_i^k stones from pile i. If a player cannot do that on their turn, the opposite player wins.

Alice moves first. Determine who will win if both players are playing optimally.

Input

The first line of input contains one integer N ($1 \le N \le 10^5$), the number of piles. The i-th of the following N lines contains two integers a_i and b_i ($1 \le a_i, b_i \le 10^9$): the initial number of stones in the i-th pile and the integer associated with it, respectively.

Output

If Alice wins the game when both sides are playing optimally, print "`Alice`". Otherwise, print "`Bob`".

Examples

standard input	standard output
2 10 3 7 4	Bob
16 903 5 246 38 884 12 752 10 200 17 483 6 828 27 473 21 983 35 953 36 363 35 101 3 34 23 199 8 134 2 932 28	Alice
16 35 37 852 17 789 37 848 40 351 27 59 32 271 11 395 20 610 3 631 33 543 14 256 28 48 8 277 24 748 38 109 40	Bob