Candy Game   X05322_en

Luke and Lucy have a new game to play. They have a large heap of candies of different types. Lucy plays first, and in each turn, a player can take one or more candies of the same type from the heap. The player who takes the last candy from the heap loses.
Who will win the game, assuming that both players play optimally?

Input

The first line of input contains a single integer N, the number of candy types ($1 \leq N \leq 10000$).
For $i = 1$ to N, i-th following line contains a_i, the number of candies of type i, $1 \leq a_i \leq 10000$.

Output

Output either Lucy or Luke.

Sample input 1	Sample output 1
3 3 4 5	Lucy

Sample input 2	Sample output 2
3 1 1 1	Luke

Problem information

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Generation : 2013-09-02 16:01:53