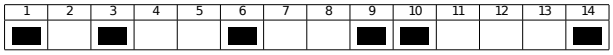
Traffic Jam X05864_en

Luke and Lucy are caught in a traffic jam, and they are bored, so they create a new game to play. The board is a street divided into small cells, numbered from 1. Some cars are standing on the street.



Lucy plays first, and in each turn, a player can take one car and moves it toward 1. A car cannot stand in a place where another car already is, and cannot jump over other cars. The player who makes the last move (after which cars are standing in positions $1, 2, \ldots, N$) wins. 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 cars ($1 \leq N \leq 10000$).
For $i = 1$ to N, i-th following line contains a_i, the number of the cell where i-th car is standing, $1 \leq a_1 \leq a_2 \cdots a_N \leq 100000000$.

Output

Output either Lucy or Luke.

Sample input 1

```
5
1
2
3
4
5
```

Sample output 1

```
Luke
```

Sample input 2

```
5
2
3
4
5
6
```

Sample output 2

```
Lucy
```

Sample input 3

```
6
1
3
6
9
10
14
```

Sample output 3

```
Luke
```

Problem information

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