

Problem J: The Turn Game

time limit per test: 1 second memory limit per test: 256 megabytes input: standard input output: standard output

Monkey D. Luffy and Roronoa Zoro are engaged in a strategic number swapping game. The game involves two numbers, A and B, each of length n. In each turn, the players will perform actions based on the values of digits of the numbers denoted by a_i and b_i ($1 \le i \le n$).

The rules of the game are:

- Game starts at turn 1 from the left digits of A and B.
- in the *i*-th turn, if $a_i > b_i$, the current player keeps playing the next turn.
- in the *i*-th turn, if $a_i < b_i$, the current player loses his turn and the other player plays the next turn.
- in the i-th turn, if $a_i = b_i$, the current player has two choices. Either he keeps playing the next turn or lets the other player play the next turn.
- The game ends in the (n+1)-th turn. The winner is the player who has the turn in the (n+1)-th turn.

Given A and B, your task is determine the winner of the game if Luffy begins playing in the first turn and both players play optimally.

Input:

The first line of input contains a single integer n ($1 \le n \le 4 \times 10^6$), the number of digits of A and B.

The second line of input contains a single integer A.

The second line of input contains a single integer B.

Output:

Print a single line containing "Luffy" if Luffy wins or "Zoro" if Zoro wins.

Note:

input:

3 234

155

output:

Luffy

input:

2394

1595

output:

Zoro

Explanation:

First example:

In the first turn, 2 > 1 so Luffy keeps playing. In the second turn, 3 < 5 so Luffy loses his turn. In the third turn, 4 < 5 so Zoro also loses his turn. In the fourth turn, the game ends with Luffy having this turn, so Luffy wins.

Second example

In the first turn, 2 > 1 so Luffy keeps playing. In the second turn, 3 < 5 so Luffy loses his turn. In the third turn, Zoro choses to let Luffy play the next turn. In the fourth turn, 4 < 5 so Luffy loses his turn. In the fifth turn, the game ends with Zoro having this turn, so Zoro wins.

