

Problem A

A Game with Cows

Time Limit: 1 second
Memory Limit: 512 megabytes

Hieu and RR are two cowherd boys working in a barn. This barn has 10^9 stalls, numbered 1 to 10^9 from the left to the right. Each stall can hold at most one cow.

There are N cows numbered from 1 to N ($N \leq 10^6$). Every day at 3PM, the cows come back to the stalls from the lawn. Each cow will take a random stall. The i^{th} cow will take stall a_i and all a_i are pairwise distinct.

To make the feeding process easier, Hieu and RR want to move all N cows to the left (occupied stall 1 to stall N). They decided to make a game, taking alternative turns:

- ☐ Hieu is the first to move.
- ☐ In each turn, the player must move the rightmost cow (the cow in the stall $\max(a_i)$) to any empty stall on its left.
- ☐ If a player can not make a move, he loses.

Given the initial positions of N cows, your task is to determine who wins if they both play optimally.

Input

The input contains multiple test cases, starting with an integer T ($1 \leq T \leq 10^5$) – the number of test cases. The following lines contain the description of each test case.

Each test case starts with a single integer N – the number of cows. ($1 \leq N \leq 10^6$). The second line consists of N distinct integers $a_1, a_2, \dots, a_N$. ($1 \leq a_i \leq 10^9$).

It is guaranteed that the sum of N over all test cases does not exceed 10^6 .

Output

For each test case, output “Hieu” (without the quotes) if Hieu wins or “RR” (without the quotes) if RR wins, given that they both play optimally.



Sample Input

Sample Output

4	RR
2	Hieu
3 4	Hieu
3	RR
1 2 4	
3	
1 3 5	
5	
1 2 3 4 5	