Problem I
Lie Detector

Andi is a young and prominent detective in the police force. His ability to track down criminals, uncover the truth, and solve cases never ceases to amaze all of his colleagues. One day, he is faced with a suspicious eyewitness testimony when working on a certain case. In usual cases, Andi simply ignores such unreliable testimony; however, in this case, the eyewitness testimony is too important to be ignored. To resolve this situation, Andi has to rely on technology, i.e. using a lie detector.

Andi proceeds to use a lie detector to detect whether the eyewitness testimony is true. However, Andi notices that the lie detector he used might have been tampered, thus, he employs a second lie detector to detect whether the first lie detector's result is correct. This situation happens repeatedly such that Andi ends up employing N lie detectors in total. The ith lie detector reports the truth of the $(i-1)^{th}$ lie detector for $i = 2..N$, and the 1st lie detector reports the truth of the eyewitness testimony.

In the end, Andi knows that the last (N^{th}) lie detector has not been tampered and always report the truth correctly. Now, he needs to determine whether the eyewitness testimony is true given the result of all lie detectors.

For example, let $N = 4$ and the lie detectors result are $(\texttt{LIE}, \texttt{LIE}, \texttt{TRUTH}, \texttt{TRUTH})$.

- The 4th lie detector reports that the 3rd lie detector is TRUTH. As the 4th lie detector always report the truth correctly, then the 3rd lie detector's result is correct as it is.

- The 3rd lie detector reports that the 2nd lie detector is TRUTH. As the 3rd lie detector's result is correct as it is, then the 2nd lie detector's result is also correct as it is.

- The 2nd lie detector reports that the 1st lie detector is LIE. As the 2nd lie detector's result is correct as it is, then the 1st lie detector's result is wrong.

- The 1st lie detector reports that the eyewitness testimony is LIE. As the 1st lie detector's result is wrong, then the eyewitness testimony is correct; in other words, what the eyewitness says is true.

Therefore, the eyewitness testimony in this example is true.

Input

Input begins with a line containing an integer N ($2 \leq N \leq 100000$). The next N lines, each contains a string S_i (either TRUTH or LIE) representing the output of the ith lie detector for $i = 1..N$ respectively.

Output

Output contains a string TRUTH or LIE in a line whether the eyewitness testimony is true or false.

Sample Input #1

```
4
LIE
LIE
TRUTH
TRUTH
```

Sample Output #1

```
TRUTH
```

Explanation for the sample input/output #1

This sample is illustrated in the problem description above.

Sample Input #2

```
3
LIE
LIE
LIE
```

Sample Output #2

```
LIE
```