

## C. Salam

Ramadan is here! It is now iftar time and on some charitable iftar (Ma'idat Rahman), people are lined up on a very long table.

According to the tradition, all people used to salute each other and say salam and even shake hands. At first before they sit down to eat and start their iftar, each one is either looking to the left or to the right. Each two persons facing each other start to shake hands and then turn around to face and look to the other side. Handshakes at the same turn are all done at the same time in parallel, and each turn takes exactly 1 second. The rest of the people, who didn't find someone to shake hands with, keep their directions as it is.

Then follow new handshakes and turnings, etc. The iftar will begin when the handshakes end. If they finish at all.

### Input Format

The first line of input contains a string of length  $N$  letters 'L' and 'R', where 'L' means a person looking to the left at the starting moment, while 'R' means a person looking to the right.

### Output Format

Output the time taken till the handshakes end and all handshakes made. If the handshakes never end then output "NEVEREND".

### Subtasks

#### Subtask 1 – 15 Points

- ❖  $N = 2$
- ❖ It is guaranteed that handshakes will end.

#### Subtask 2 – 10 Points

- ❖  $N = 3$
- ❖ It is guaranteed that handshakes will end.

### Subtask 3 – 5 Points

- ❖  $1 \leq N \leq 5$
- ❖ There will be at most one 'R' character in the input.
- ❖ It is guaranteed that handshakes will end.

### Subtask 4 – 10 Points

- ❖  $1 \leq N \leq 5$
- ❖ There will be at most two 'R' characters in the input.
- ❖ It is guaranteed that handshakes will end.

### Subtask 5 – 10 Points

- ❖  $1 \leq N \leq 100$
- ❖ There will be at most one 'R' character in the input.
- ❖ It is guaranteed that handshakes will end.

### Subtask 6 – 15 Points

- ❖  $1 \leq N \leq 100$
- ❖ There will be at most two 'R' characters in the input.
- ❖ It is guaranteed that handshakes will end.

### Subtask 7 – 20 Points

- ❖  $1 \leq N \leq 1,000$
- ❖ It is guaranteed that handshakes will end.

### Subtask 8 – 15 Points

- ❖  $1 \leq N \leq 100,000$

## Examples

#	Input	Output
1	RLRL	2 3
2	RLLRLRR	3 4

## Examples Explanation

In the first example,

1	2	3	4	Action(s) taken
R	L	R	L	1 and 2 shake hands. 3 and 4 shake hands. Finish at second 1.
L	R	L	R	2 and 3 shake hands. Finish at second 2.
L	L	R	R	No two are facing each other so it ends here. So, they start iftar.

In total there are 3 handshakes, and it took 2 seconds to do all the handshakes.