

# Text Editor

## Problem Description

You are asked to implement a simple text editor that maintains a cursor and supports four operations on a mutable string.

The cursor sits between characters. Initially, it is at the end of the initial string (i.e. after the last character).

The text editor supports the following four operations:

- **L** — Move the cursor one position to the left (ignored if the cursor is already at the beginning).
- **R** — Move the cursor one position to the right (ignored if the cursor is already at the end).
- **I c** — Insert the single printable character **c** at the cursor position. After insertion, the cursor is positioned immediately after the inserted character.
- **D** — Delete the character immediately to the left of the cursor (ignored if there is no character to the left).

After processing all  $M$  operations, output the final string.

## Input Format

The first line contains the initial string.

The second line contains an integer  $M$  — the number of operations.

The next  $M$  lines each contain one of the four operations described in the previous section.

## Output Format

A single line — the final string after all operations are applied.

## Constraints

- All characters in the initial string and all inserted characters are printable ASCII

characters (ASCII codes 33 to 126).

- $1 \leq M \leq 9 \times 10^6$  °
- Number of insertion operations(**I c**)  $\leq 2.2 \times 10^6$ .
- Length of the initial string  $\leq 255$  °

## Example Test Case

### Sample Input 1

```
abc
7
L
L
I X
R
D
I Y
R
```

### Sample Output 1

```
aXYc
```

### Explanation of Sample 1

$abc| \rightarrow ab|c \rightarrow a|bc \rightarrow aX|bc \rightarrow aXb|c \rightarrow aX|c \rightarrow aXY|c \rightarrow aXYc|$

### Sample Input 2

```
abc
5
R
R
R
I D
L
```

### Sample Output 2

```
abcD
```

### Explanation of Sample 2

$abc| \rightarrow abc| \rightarrow abc| \rightarrow abc| \rightarrow abcD| \rightarrow abc|D$

### Sample Input 3

abc  
5  
L  
L  
L  
L  
D

### Sample Output 3

abc

### Explanation of Sample 3

$abc| \rightarrow ab|c \rightarrow a|bc \rightarrow |abc \rightarrow |abc \rightarrow |abc$

Since the cursor is already at the beginning, the last delete operation has no effect.