2 Mall Easter Bunny

It is every parent's worst nightmare...standing in line at the mall to get pictures with the Easter Bunny! To make things worse, the appointment system is malfunctioning and we do not know what the mall line actually looks like. Please help us before we get attacked by a mob of angry parents.

2.1 Input

The first line will be an integer of how many people are currently in the mall line. The second line will list the order of people as strings of who is in the mall line. The third line will be an integer of how many operations are to follow. The remaining lines will be one of the following formats with strings:

`I [X] [Y]`
Insert operation where X is the person being inserted into the mall line and Y is who they will be behind. If the person they will be behind is not in the mall line, they get inserted at the back of the mall line.

`R [X]`
Remove operation where X is the person being removed from the mall line. If the person is not in the mall line, do nothing.

`S [X] [Y]`
Swap operation where X and Y are the two people that will be swapping positions in the mall line (X goes where Y is and Y goes where X is).

Note: You may assume there will be no duplicates in the line.

2.2 Output

The complete lineup of people with each name separated by a white space.

2.3 Sample Input/Output

Sample Input 1	Sample Output 1
3	John Sam Rex Tyler
John Salley Rex	
4	
I Tyler Sam	
I Sam Rex	
R Salley	
S Rex Sam	

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