

For this problem, we have **2** types of queries you can perform on a [List](#):

1. Insert ***y*** at index ***x***:

```
Insert
x y
```

2. Delete the element at index ***x***:

```
Delete
x
```

Given a list, ***L***, of ***N*** integers, perform ***Q*** queries on the list. Once all queries are completed, print the modified list as a single line of space-separated integers.

### Input Format

The first line contains an integer, ***N*** (the initial number of elements in ***L***).

The second line contains ***N*** space-separated integers describing ***L***.

The third line contains an integer, ***Q*** (the number of queries).

The ***2Q*** subsequent lines describe the queries, and each query is described over two lines:

- If the first line of a query contains the String **Insert**, then the second line contains two space separated integers ***x y***, and the value ***y*** must be inserted into ***L*** at index ***x***.
- If the first line of a query contains the String **Delete**, then the second line contains index ***x***, whose element must be deleted from ***L***.

### Constraints

- $1 \leq N \leq 4000$
- $1 \leq Q \leq 4000$
- Each element in is a *32-bit integer*.

### Output Format

Print the updated list ***L*** as a single line of space-separated integers.

### Sample Input

```
5
12 0 1 78 12
2
Insert
5 23
Delete
0
```

### Sample Output

```
0 1 78 12 23
```

### Explanation

***L*** = [12, 0, 1, 78, 12]

***Q*<sub>0</sub>**: **Insert** 23 at index 5.

***L*<sub>0</sub>** = [12, 0, 1, 78, 12, 23]

***Q*<sub>1</sub>**: **Delete** the element at index 0.

***L*<sub>1</sub>** = [0, 1, 78, 12, 23]

Having performed all ***Q*** queries, we print ***L*<sub>1</sub>** as a single line of space-separated integers.

