

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

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

$Q_0$ : **Insert** 23 at index 5.

$L_0 = [12, 0, 1, 78, 12, 23]$

$Q_1$ : **Delete** the element at index 0.

$L_1 = [0, 1, 78, 12, 23]$

Having performed all  $Q$  queries, we print  $L_1$  as a single line of space-separated integers.

