# Queries

**Problem Statement**

You have a singly linked list which is **empty** initially. Then you will be given **Q** queries. In each query you will be given two values **X** and **V**.

- If **X** is **0** that means you will insert the value **V** to the head of the linked list.

- If **X** is **1** then you will insert the value **V** to the tail of the linked list.

- If **X** is **2** then you will delete the value **Vth** index of the linked list. Assume that index starts from 0. If the index is invalid, then you shouldn't perform the deletion.

- After each query you need to print the linked list.

**Note**: You must use singly linked list, otherwise you will not get marks.

**Input Format**

- First line will contain **Q**.

- Next **Q** lines will contain **X** and **V**.

**Constraints**

1. $1 <= Q <= 1000$;

2. $0 <= X <= 2$;

3. $0 <= V <= 10^9$

**Output Format**

- For each query ouput the updated linked list.

**Sample Input 0**

```
4
0 10
1 20
1 30
0 40
```

**Sample Output 0**

```
10
10 20
10 20 30
40 10 20 30
```

**Sample Input 1**

```
11
0 10
2 5
1 20
1 30
0 40
2 0
0 50
2 2
1 60
2 3
2 3
```

## Sample Output 1

```
10
10
10 20
10 20 30
40 10 20 30
10 20 30
50 10 20 30
50 10 30
50 10 30 60
50 10 30
50 10 30
```

## Sample Input 2

```
10
1 4
2 1
0 9
0 10
2 2
1 5
2 0
2 1
2 5
2 2
```

## Sample Output 2

```
4
4
9 4
10 9 4
10 9
10 9 5
9 5
9
9
9
```