

You have an empty sequence, and you will be given N queries. Each query is one of these three types:

- 1 x -Push the element x into the stack.
- 2 -Delete the element present at the top of the stack.
- 3 -Print the maximum element in the stack.

Input Format

The first line of input contains an integer, N . The next N lines each contain an above mentioned query. *(It is guaranteed that each query is valid.)*

Constraints

$$1 \leq N \leq 10^5$$

$$1 \leq x \leq 10^9$$

$$1 \leq type \leq 3$$

Output Format

For each type **3** query, print the maximum element in the stack on a new line.

Sample Input

```
10
1 97
2
1 20
2
1 26
1 20
2
3
1 91
3
```

Sample Output

```
26
91
```