

Consider a list (`list = []`). You can perform the following commands:

1. `insert i e`: Insert integer e at position i .
2. `print`: Print the list.
3. `remove e`: Delete the first occurrence of integer e .
4. `append e`: Insert integer e at the end of the list.
5. `sort`: Sort the list.
6. `pop`: Pop the last element from the list.
7. `reverse`: Reverse the list.

Initialize your list and read in the value of n followed by n lines of commands where each command will be of the **7** types listed above. Iterate through each command in order and perform the corresponding operation on your list.

Input Format

The first line contains an integer, n , denoting the number of commands.

Each line i of the n subsequent lines contains one of the commands described above.

Constraints

- The elements added to the list must be *integers*.

Output Format

For each command of type `print`, print the list on a new line.

Sample Input 0

```
12
insert 0 5
insert 1 10
insert 0 6
print
remove 6
append 9
append 1
sort
print
pop
reverse
print
```

Sample Output 0

```
[6, 5, 10]
[1, 5, 9, 10]
[9, 5, 1]
```