

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.

Example

$N = 4$

`append 1`

`append 2`

`insert 3 1`

`print`

- `append 1`: Append **1** to the list, $arr = [1]$.
- `append 2`: Append **2** to the list, $arr = [1, 2]$.
- `insert 3 1`: Insert **3** at index **1**, $arr = [1, 3, 2]$.
- `print`: Print the array.

Output:

```
[1, 3, 2]
```

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]
```