



STL deque

Implement different operations on a **Deque** i.e. adding an element in front and end, removing an element from front and end, sort the Deque, reverse the Deque, getting the size of the Deque.

Input Format:

The first line of input contains an integer **T** denoting the no of test cases. For each test case, the first line of input contains an integer **Q** denoting the no of queries followed by **Q** space separated queries.

A query can be of the following types:

- 1 x (Adding an element in front of the deque and printing the deque)
- 2 x (Adding an element in last of the deque and printing the deque)
- 3 (Removing the element from the front of the deque and printing the deque)
- 4 (Removing the element from the last of the deque and printing the deque)
- 5 (Sorting the deque and printing the deque)
- 6 (Reversing the deque and printing the deque)
- 7 (Printing the deque)
- 8 (Returning the size of the deque)
- 9 (Printing the element that is in front of the deque)
- 10 (Printing the element that is in back of the deque)

Output Format:

For each test case, the output is according to the query **Q** performed and if the deque is empty the output is **-1**.

Your Task:

This is a function problem, so you only need to complete the provided functions.

Constraints:

$1 \leq T \leq 100$

$1 \leq Q \leq 100$



Example:

Input:

1
10
1 6
2 9
9
10
5
6
7
8
3
4

Output:

6
6 9
6
9
6 9
9 6
9 6
2
6
-1