



STL Priority Queue

Implement different operations on Priority Queue .i.e. adding element, removing element, size of priority queue, print the queue and top element of queue.

Input:

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 x to the priority queue and print the queue)
- 2 (Removing the element from the top of the priority queue and printing that element)
- 3 (Get the element at the top of the priority queue)
- 4 (Get the size of the priority queue)
- 5 (Print the priority queue)

Output:

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

Constraints:

$1 \leq T \leq 100$

$1 \leq Q \leq 100$

Example:

Input:

```
1
8
1 6
1 1
1 7
4
3
2
5
2
```

**Output:**

```
6
6 1
7 6 1
3
7
7
6 1
6
```

Explanation:

1 6 means adding 6 in the queue and printing that, similarly adding 1 and 7 in the queue and printing the queue i.e. 7 6 1. By 4 it returns the size of the queue i.e 3. With 3 as input, it returns the element at the top i.e 7. With 2 it removes the top element i.e 7 from the queue and prints the element i.e. 7. Having 5 as input, it prints the queue i.e. 6 1 and again 2 remove the element and prints that i.e 6.