Mehak and Parade (30 Points)

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	256 megabytes

Mehak and her friends went to attend the Republic Day Parade 2019. Mehak being the nice girl that she is, reached the venue early and saved seats for her friends who arrived much later. Mehak and her friends were looking forward to enjoy the parade in their moderately comfortable seats. But to their surprise, the audience were so energetic that once the parade started all of them abandoned their seats and stood up to get the best possible view of the proceedings. Mehak noticed that with everyone standing, the shorter people standing behind the taller individuals could not get a decent view to enjoy the parade.

Subtask 1 (30 Points)
Mehak was against this injustice and therefore decided to insist the people to change their places such that everyone can get a decent view of the parade. She feels that this can only happen in the following arrangement: In a row of **n** people, having heights **H[1...n]**, **H[i]>H[j] only when i>j**.

Given **n** and the **initial** order of heights **H**, your task is find the final order of heights in which everyone is able to enjoy the parade.

Input

First line contains the number of test cases **T**.
First line of each test contains **n**.
Second line of each test contains n space separated integers representing the array **H**.

$1 \leq T \leq 5$
$1 \leq n \leq 10^5$
$1 \leq H_i \leq 10^5$

Output

Print in one line, n space separated integers: the final order of heights.

Example

standard input	standard output
2 3 2 1 3 5 3 2 1 1 6	1 2 3 1 1 2 3 6

Note

Though you can use any algorithm (implemented by you) that you feel can be used to solve this problem, Merge-Sort can be easily extended to solve the Subtask 2.