Height of Soldiers

? Ask Doubt

Time-Limit: 1 sec Score: 0/100 Difficulty :

Memory: 256 MB Accepted Submissions: 100 Relevant For: AZ-202 AZ-301

Description

There are N soldiers standing in a row, numbered 1 through N. The height of i-th soldier is H_i. For each non-empty contiguous segment of the line, strength is defined as the minimum height of the soldier in that segment.
You have to tell the maximum strength for each x size group, for all groups of size x between 1 to N.

Input Format

The first line of the input contains one integer T - the number of test cases. Then T test cases follow.
The first line of each test case contains one integer N - the length of the array.
The second line of each test case contains N space-separated integers - $H_1, H_2, \ldots H_N$, heights of soldiers.

Output Format

For each test case, print N integers in one line. For each x from 1 to N, print the maximum strength among all groups of size x.

Constraints

$1 \le T \le 100$
$1 \le N \le 10^5$
$1 \le H_i \le 10^9$
Sum of N over all test cases doesn't exceed 5×10^5

Sample Input 1

Copy

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

Sample Output 1

Copy

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

Note

C++14[GCC]

Submit

```
1
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