Lexicographically Largest Subsequence

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Points: 100 (partial)
Time limit: 1.0s
Memory limit: 256M

Allowed languages
C

Given an array, the task is to find the lexicographically largest subsequence.

Note: A subsequence is a sequence derived from another sequence by deleting some or no elements without changing the order of the remaining elements. The lexicographically largest subsequence is the subsequence that appears last in dictionary order.

For example, in the array `[3, 1, 2]`, all possible subsequences are:

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

The lexicographically largest subsequence is `[3, 2]`.

Input Format

- The first line contains an integer `T`, the number of test cases.
- For each test case:
  - The first line contains an integer `N`, the number of elements in the array.
  - The second line contains `N` space-separated integers `a1, a2, ..., aN`, representing the elements of the array.

Output Format

- $1 \le T \le 100$
- $1 \le N \le 10^5$
- $1 \le a_i \le 10^9$
- The sum of `N` over all test cases does not exceed $5 * 10^5$.

Example

Input

Copy

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

Output

Copy

```
7
4 4 1
3 2
5 4 4
```

Clarifications

Request clarification

No clarifications have been made at this time.