



Window Shaping

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- ✓ Points: 100 (partial)② Time limit: 1.0s
- **Memory limit:** 256M
- **✓** Allowed languages C

You are given an array of $\bf N$ integers, you need to find the maximum of minimum for every window size. The size of the window should vary from $\bf 1$ to $\bf N$ only.

Input Format

- The first line contains an integer T denoting the number of testcases.
- The second line contains integer N (the size of the array).
- The third line contains **N** space-separated positive integers representing the array **A**: A[1], A[2], ..., A[N].

Output Format

- Print **N** integers, each integer A[i] representing the maximum of all minimums of window size i.
- Note i starts from 1

Constraints:

- 1 <= T <= 100
- 1 <= N <= 10^4
- [-10 ^ 9 <= A[i] <= 10 ^ 9

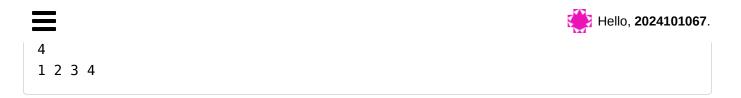
Examples:

Input:

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Output:

```
4 3 2 1 Copy
```

Explanation:

$$A = [1,2,3,4]$$

Minimums of window size 1 are min(1), min(2), min(3), min(4) = (1,2,3,4). Maximum among (1,2,3,4) is 4.

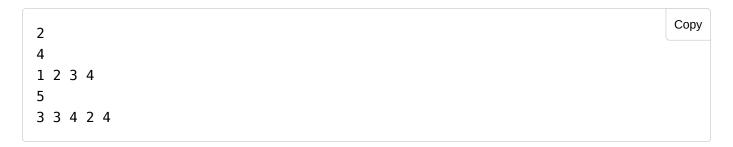
Minimums of window size 2 are $\min(1,2)$, $\min(2,3)$, $\min(3,4) = (1,2,3)$ Maximum among (1,2,3) is **3**.

Minimums of window size 3 are $\min(1,2,3)$, $\min(2,3,4) = (1,2)$ Maximum among (1,2) is **2**.

Minimums of window size 4 are min(1,2,3,4) = 1 Maximum among them is 1.

The output array should be [4,3,2,1].

input:



Output:

```
4 3 2 1
4 3 3 2 2
```

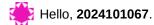
Explanation:

Minimums of window size 1 are (min(3), min(3), min(4), min(2), min(4) = 3, 3, 4, 2, 4)Maximum among (3, 3, 4, 2, 4) is 4.

Minimums of window size 2 are [min(3,3), min(3,4), min(4,2), min(2,4) = 3, 3, 2, 2] Maximum

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Minimums of window size 3 are $[\min(3,3,4), \min(3,4,2), \min(4,2,4) = 3, 2, 2]$ Maximum among (3,2,2) is **3**.

Minimums of window size 4 are min(3,3,4,2), min(3,4,2,4) = 2, 2 Maximum among (2, 2) is **2**.

Minimums of window size 5 are min(3,3,4,2,4) = 2 Maximum among them is 2.

The output array should be [4,3,3,2,2].

Clarifications

Request clarification

No clarifications have been made at this time.

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