



# Approach (Leaders in an array)

## Q2. Leaders in an array </>

✓ Solved



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### Problem Description

Given an integer array **A** containing **N** distinct integers, you have to find **all the leaders** in array **A**. An element is a leader if it is **strictly greater than** all the elements to its **right side**.

**NOTE:** The rightmost element is always a leader.

### Problem Constraints

$$1 \leq N \leq 10^5$$

$$1 \leq A[i] \leq 10^8$$

### Input Format

There is a single input argument which is an integer array **A**

### Output Format

Return an integer array denoting all the **leader elements** of the array.

### Example Input

Input 1:

A = [16, 17, 4, 3, 5, 2]

Input 2:

A = [5, 4]

### Example Output

Output 1:

[17, 2, 5]

Output 2:

[5, 4]

## Example Explanation

### Explanation 1:

Element 17 is strictly greater than all the elements on the right side to it.

Element 2 is strictly greater than all the elements on the right side to it.

Element 5 is strictly greater than all the elements on the right side to it.

So we will return these three elements i.e [17, 2, 5], we can also return [2, 5, 17] or [5, 2, 17] or any other ordering.

### Explanation 2:

Element 5 is strictly greater than all the elements on the right side to it.

Element 4 is strictly greater than all the elements on the right side to it.

So we will return these two elements i.e [5, 4], we can also any other ordering.

⇒ Approach (currently)

→ Start iterating from end of the array

→ carry forward the maximum element

→ keep on adding the maximum elements found as they are found and updated

16	17	4	3	5	2
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max = 2

add (2)

← element = 5, 5 > max

add (5)

← element = 3, 3 is not > max

← element = 4, 4 is not > 5

always have the rightmost element as a leader, as there are no elements to its right which are greater!

←  
element = 17 , 17 > max  
⇒ add (17)

←  
element = 16