

Daily temperature

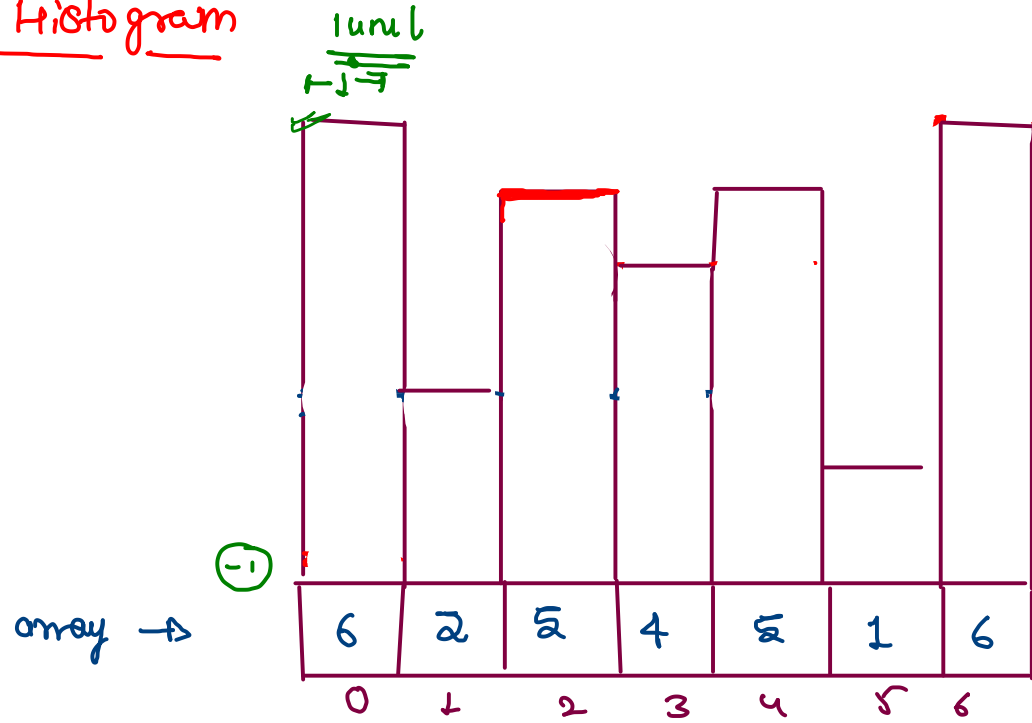
For example, given the list of temperatures `temperatures = [73, 74, 75, 71, 69, 72, 76, 73]`, your output should be `[1, 1, 4, 2, 1, 1, 0, 0]`.

		0	1	2	3	4	5	6	7
		73	74	75	71	69	72	76	73
Next greater right index	→	1	2	6	5	5	6	6*	7*
	res =	1	1	4	2	1	1	0	0

Note: In the original image, the last two elements of the result array (0, 0) are enclosed in a red bracket, and the indices 6 and 7 are marked with red asterisks and a red bracket, indicating they are the last elements for which no greater element exists to the right.

Largest Area Histogram

$$\text{width} = \text{rsi}[i] - \text{lsi}[i] - 1$$



arr.length

max = 0

6
16
12

left smaller index

-1	-1	1	1	2	-1	2
----	----	---	---	---	----	---

→ O(n)

right smaller index

1	5	2	5	5	7	7
---	---	---	---	---	---	---

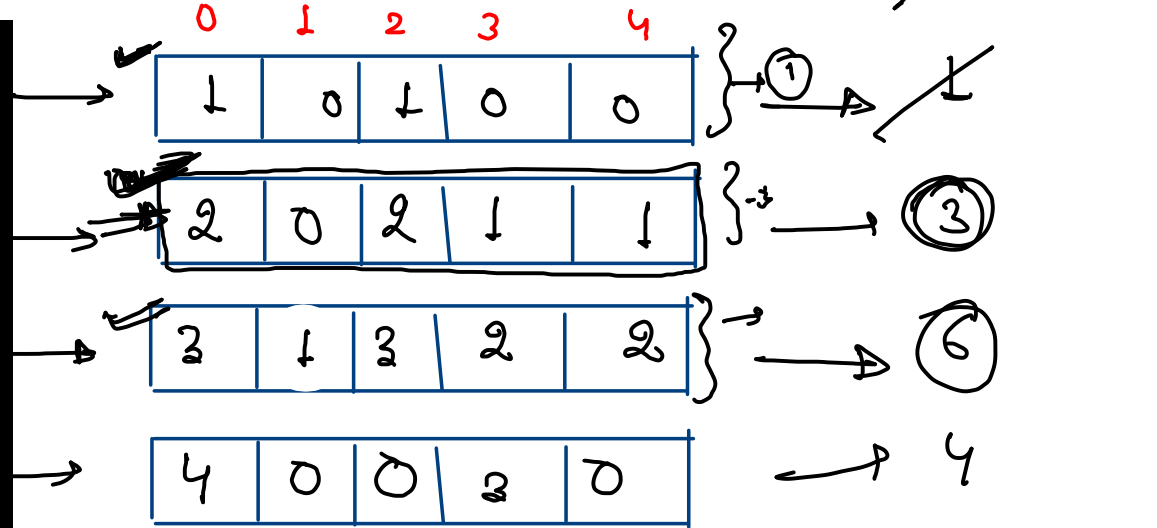
→ O(n)

Area =

width →	1	5	1	2	1	7	1
height →	6	2	5	4	5	1	6
Area →	6	10	5	12	5	7	6

Maximal Rectangle

1	0	1	0	0
1	0	1	1	1
1	1	1	1	1
1	0	0	1	0



What?

Why?

How?

$$arr[i][j] = 1$$

height +

$$arr[i][j] = 0$$

$$max = 6$$

Sliding Window Max

k=4

i + k > j

What?
Why?
How?

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	9	3	8	1	7	12	6	14	4	32	0	7	19	8	12	6

Diagram illustrating the sliding window process. The array is shown with indices 0 to 16. The current window is from index 4 to 7 (values 1, 7, 12, 6). Arrows indicate the movement of the window boundaries: i points to index 4, j points to index 7, and k points to index 7.

next Index

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	6	3	6	5	6	8	8	10	10	17*	12	13	17*	15	17*	17*

Diagram illustrating the next step in the sliding window process. The array is shown with indices 0 to 16. The current window is from index 5 to 8 (values 6, 8, 8, 10). The next index to be processed is 9. The values 17* and 15 are marked with asterisks, indicating they are not part of the current window.

9 9 8 12 12 14 14 32 32 32 32 19 19 19