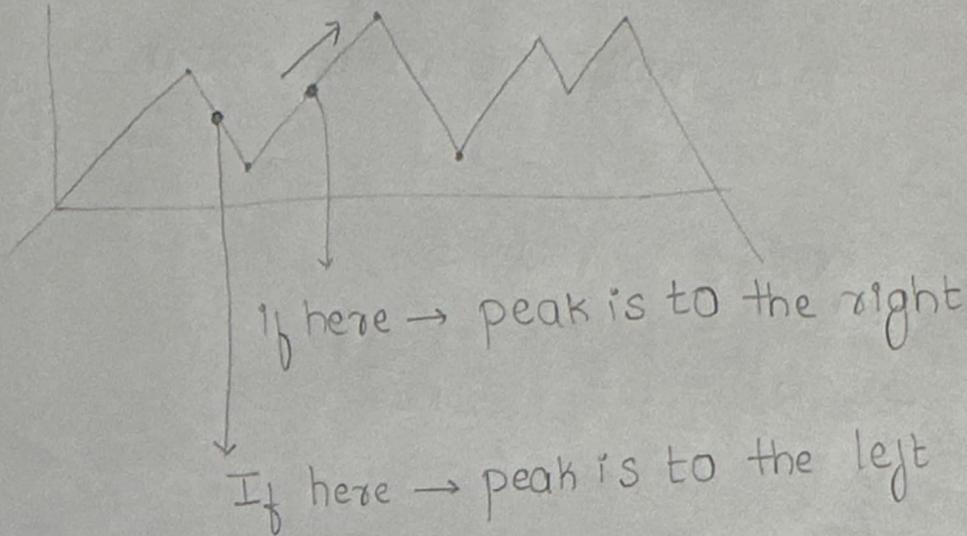


If we consider 1D array, the graph would be like



In Mathematics World, whichever side is increasing we have a peak on that side

In 2D array, we can use same logic

- * We can move up and down a given matrix.
- * So In that way, it is easier to compare either (left to right) or (top to bottom)

For Eg. Lets consider a row → we can easily get an element, that is greater than its left & right numbers

2	9	3	2	3	2
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From here we can easily know 9 is greater.

Now the Only task is, Comparing this element with number above & below it.

- * Now using the 1D array logic, we can eliminate the Upper half or bottom half

Eq: 0

	0	1	2	3	4	5
0	4	2	5	1	4	5
1	2	4	3	2	3	2
2	1	5	4	0	1	3
3	3	6	2	3	7	2

lets compare row wise

$$\text{so } m = 4$$

$$\text{left} = 0 \quad \text{right} = 3 \quad \text{mid} = 1$$

$$\text{arr}[1] = \boxed{2 \ 4 \ 3 \ 2 \ 3 \ 2}$$

$\text{max_ele} = 4$ # just extracting $\text{max}(\text{arr})$ ensures that it is greater than element to the left & to the right

Now Compare with element above & below

$$4 > 2,$$

but $4 < 5 \rightarrow$ here we see there is an element that is greater than current element to the bottom

So we move bottom

Now:

$$\text{left} = 2 \quad \text{right} = 3, \quad \text{mid} = 2$$

$$\text{arr}[2] = \boxed{1 \ 5 \ 4 \ 0 \ 1 \ 3}$$

$$\text{max_ele} = 5$$

Compare with ele above & below.

$$5 > 4,$$

but $5 < 6$, Now again we move below.

Now

$$\text{left} = 3 \quad \text{right} = 3, \quad \text{mid} = 3$$

$\text{arr}[3] = \boxed{3 \ 6 \ 2 \ 3 \ (\textcircled{7}) \ 2}$

$$\text{max_ele} = 7$$

If we check 7 is greater than left & right ele

Also 7 is greater than ele above it, &

since there is no element below, let's consider it to be -1

$$\text{so } 7 > 3, \quad 7 > 2 \quad [\text{left right}]$$

$$7 > 1 \quad 7 > -1 \quad [\text{top bottom}]$$

$$\text{Answer} = 7 //$$