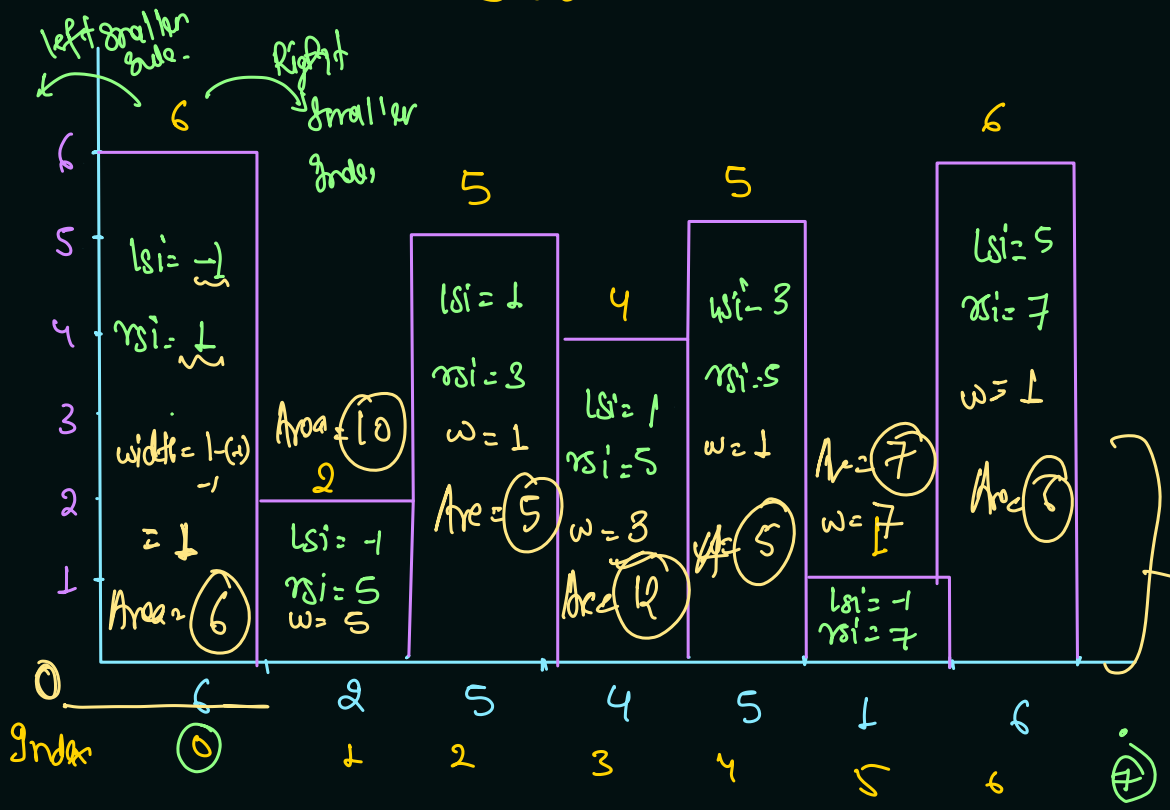
Largest Area Histogram:

Hint: next greater / smaller



Consider any two histogram & find largest area.

max Area
1 - 5] → 5 sq. units
2 - 4] → 12 sq. unit

max Area = 12

Steps:

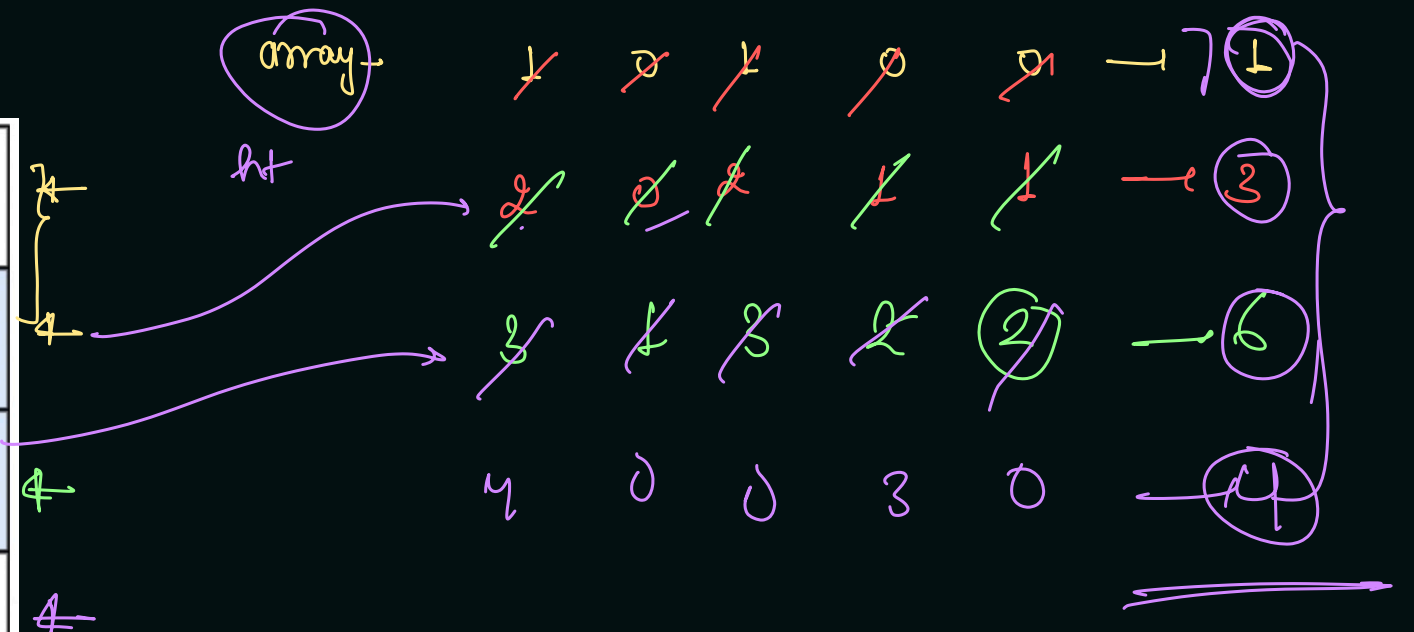
- left smaller index] → if not available then -1
- Right smaller index] → if not " " Array length
- Find Area using width = [rsi - lsi - 1] & maximize Area

Maximal Rectangle

Hint: Largest Area Histogram

Largest Area Histogram
L.A.H.

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



Maximise = 6

Pattern → observation
- pattern graphing
- word problem → pattern Extract

Diameter →

Sliding window max:

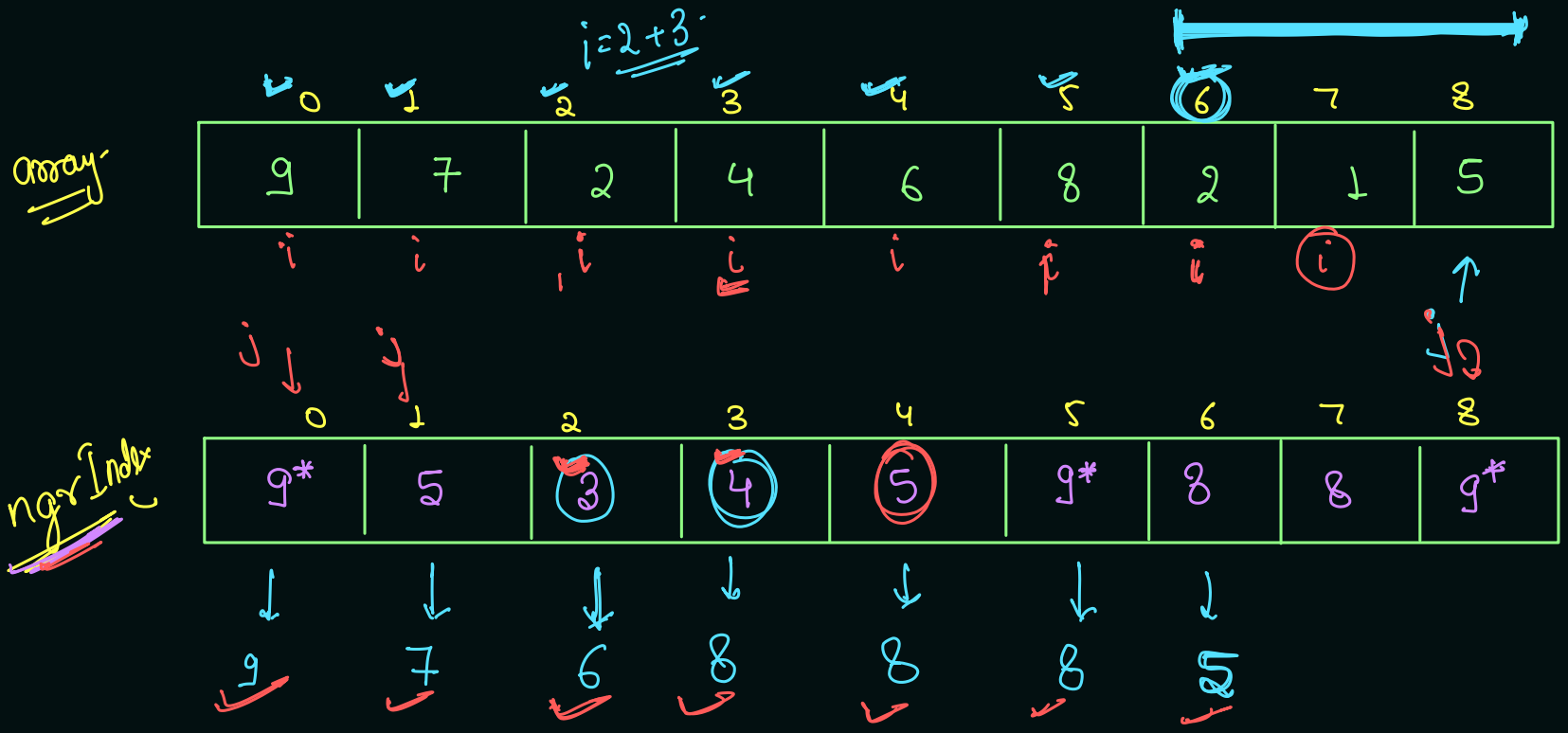
window · k = 3 · ma

Brute force → O(kn) → optimise → O(n)

i < length - k

length = 9

i = 2 + 3



(i + k > ngr[i])

j = ngr[i];

```
public static void slidingWindowMax(int[] arr, int k) {
    int[] ngr = ngrIndex(arr);
    int j = 0;

    for(int i = 0; i <= arr.length - k; i++) {
        if(j < i) {
            j = i;
        }
        while(ngr[j] < i + k) {
            j = ngr[j];
        }
        System.out.println(arr[j]);
    }
}
```

while 2 4 ·

worst complexity → 2n

time complexity → O(n)

To Solve: ① Celebrity problem
② Merge overlapping Interval] Sunday.

Monday → Test] → [frog]

[Evaluation
Stack & Que] Main was Stuck one Que