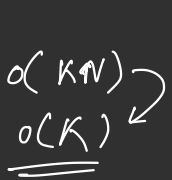
L23
Arrays - Practice 3

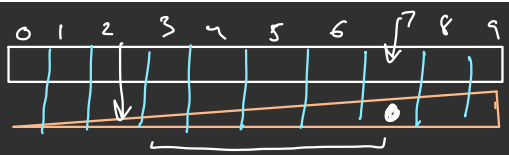
Stay tuned for the System Design Course Announcement.

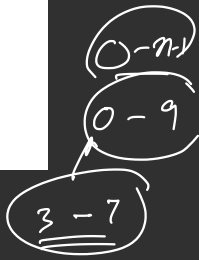
Join Discord - https://bit.ly/ly-discord

Recap

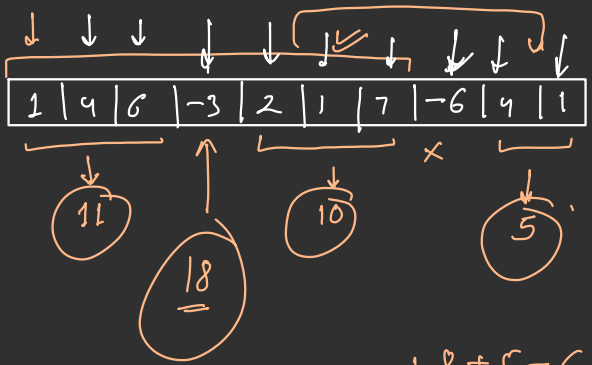
1. Did some practice:
    a. https://leetcode.com/problems/merge-sorted-array/description/
        i. Solved using 2-pointers.
    b. https://leetcode.com/problems/running-sum-of-1d-array/description/
        i. Follow-up: Find prefix max array
        ii. Follow-up 2: Given queries: each query has some i, find the max of all numbers except the ith one.
            1. Solved using max and 2nd max.
            2. And then using pref_max and suf_max



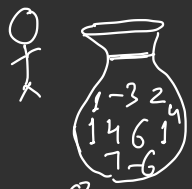




Given an array of integers, find the maximum subarray sum
[important]

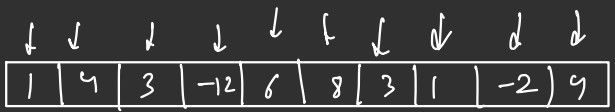


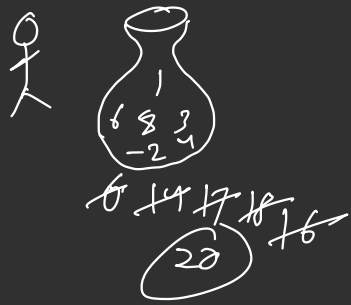
18+5-6 17 ✗



8 ~~10 11 18~~ ~~16~~ ~~12~~ 17

max
1
5
11 ←
18





	sums
	1
	5
	8
	14
	17
	18
	20

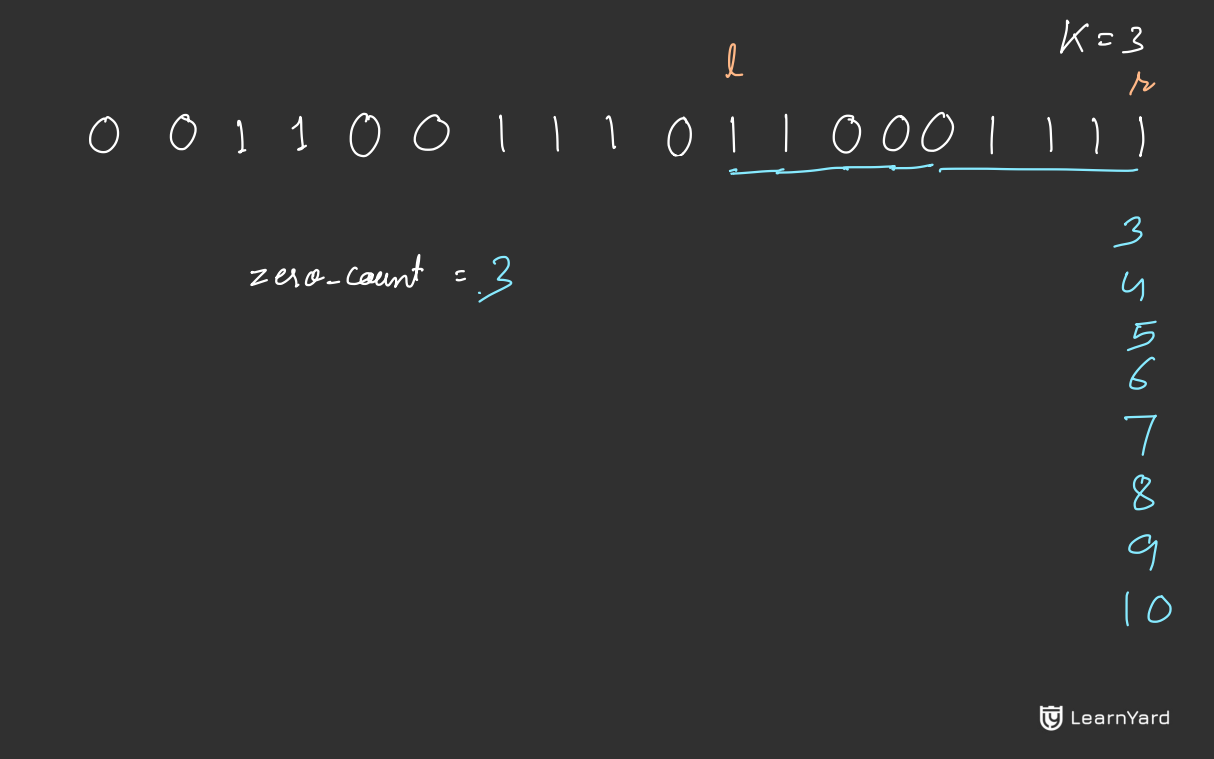
Max consecutive ones - part 2

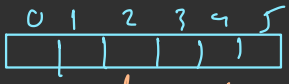
0 or 1

zero_count += 1;

include element r++

window invalid l++





r-l+1

4-2+1 = 3

4-1+1 = 4

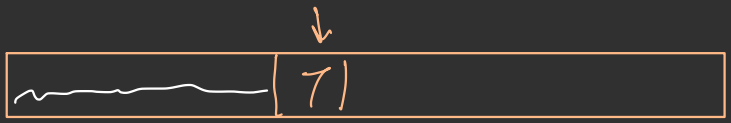
```
int zeros_count = 0;
int l = 0, ans = 0;
for (int r = 0; r < n; r++)
{
    if (nums[r] == 0) zeros_count++;
    // make the window valid again.
    while (zeros_count > K)
    {
        if (nums[l] == 0) zeros_count--;
        l++;
    }
    ans = max(ans, r - l + 1);
}
```

nums[j] - nums[i]

i < j

nums[j] > nums[i]

Max difference b/w increasing elements



i region j region

7 1 5 | 4

i

j

ans = ~~7~~ 4

min_till_now = 1

Thank You!

Reminder: Going to the gym & observing the trainer work out can help you know the right technique, but you'll muscle up only if you lift some weights yourself.

So, PRACTICE, PRACTICE, PRACTICE!