L22
Arrays - Practice 2

*Please don't forget to join the doubt session tomorrow (11th Feb, Sun) at **9 PM**.*

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

Recap

1. Did the time complexity analysis for dynamic arrays push_back/add operations
2. Did some practice
    a. https://leetcode.com/problems/max-consecutive-ones/description/
    b. https://www.geeksforgeeks.org/problems/max-sum-subarray-of-size-k5313/1

Merge 2 sorted arrays.

[Important Concept]

m = 4

nums1 = [1, 5, 6, 10, 0, 0, 0, 0, 0, 0]

nums2 = [2, 2, 3, 5, 6, 6]

n = 6

[1, 2, 2, 3, 5, 5, 6, 6, 6, 10]

copy to nums1

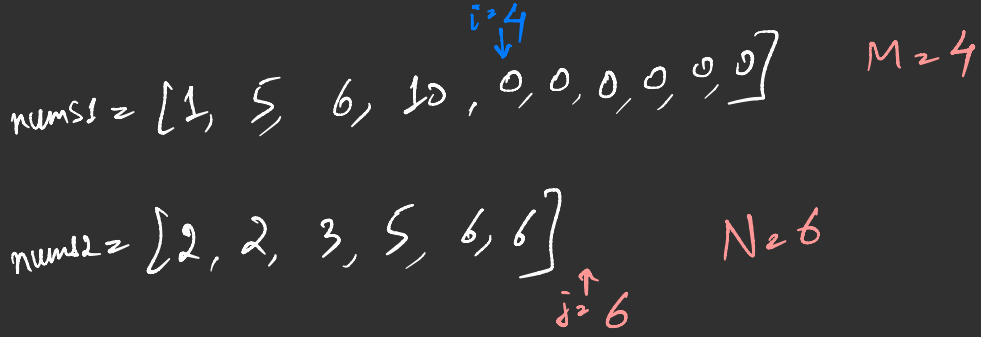
nums1 = [1, 2, 2, 3, 5, 5, 6, 6, 6, 10]

nums1 = [1, 5, 6, 10, 0, 0, 0, 0, 0, 0]

nums2 = [2, 2, 3, 5, 6, 6]

aux = [1, 5, 6, 10, 2, 2, 3, 5, 6, 6] $\Rightarrow N+M$

$O((N+M) * \log(N+M))$



Prefix Sum Array

[important concept]

arr = [5, 1, 0, -3, 2, 5]

ans = [5, 6, 6, 3, 5, 10]

Prefix Max Array?

arr = [2, 1, 3, 5, 4, 5, 7, 6]

ans = [2, 2, 3, 5, 5, 5, 7, 7]

ans[i] = max(ans[i-1], arr[i]);

Given an array and M queries,
each query will have an index i,
we need to find max of
all array elements except a[i];

N = 8

M = 4

arr = [2, 1, 3, 5, 4, 5, 7, 6]

4

7

6

3

pref = [2, 2, 3, 5, 5, 5, 7, 7]

suf = [7, 7, 7, 7, 7, 7, 7, 6]

ans =

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!