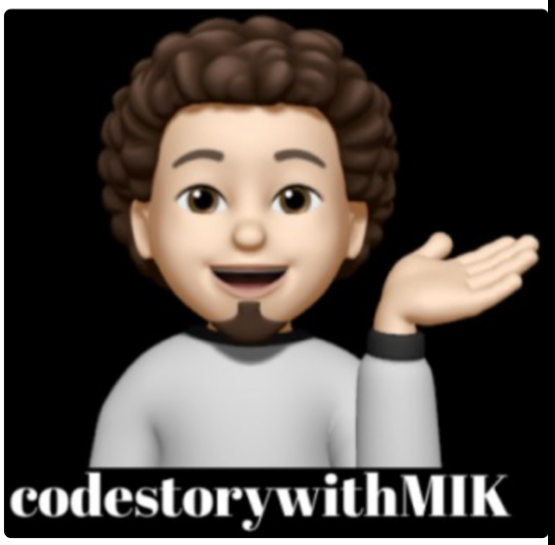
Array : Video - 144

Leetcode - 1749

Medium



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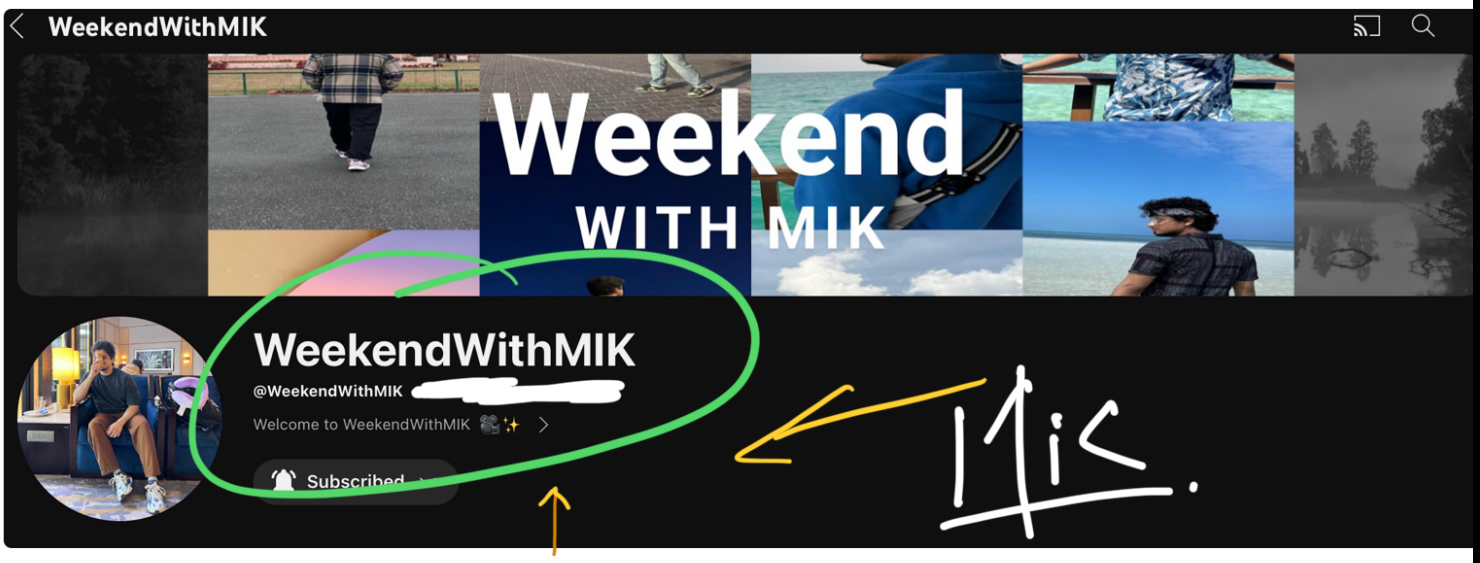

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Motivation -

Whatever heights you achieve in life :-

- Never forget where you came from.
- Stick to the ground & stay humble.
- Always help others.

1749. Maximum Absolute Sum of Any Subarray

Medium | Topics | Companies | Hint

You are given an integer array `nums`. The **absolute sum** of a subarray `[numsl, numsl+1, ..., numsr-1, numsr]` is `abs(numsl + numsl+1 + ... + numsr-1 + numsr)`.

Return *the **maximum** absolute sum of any **(possibly empty)** subarray of* `nums`.

Note that `abs(x)` is defined as follows:

- If `x` is a negative integer, then `abs(x) = -x`.
- If `x` is a non-negative integer, then `abs(x) = x`.

x = -5

abs(x) = -x = -(-5) = 5

x = 5 , abs(x) = 5

Example :- nums = {1, -3, 2, 3, -4}

Output = 5

nums = {2, -5, 1, -4, 3, -2}

Output = 8

(-5 + 1 - 4) = |-8 + 3|

Thought Process

{ [2, 5, 7,] [-100, -5] }

maxSubSum → 14

minSubSum → abs(-105) = 105

{5, 7, -100}

|-88| = 88

Story points:-

1) -ve की don't ignore - absolute

2) max Subarray Sum = abs

3) min Subarray Sum = abs → max result

{ [2, 3] -6}

[1, -3, 2, 3, 1]

maxSubarraySum = 5

minSubarraySum = -4

max (abs(5) , abs(-4)) = 5

{ 2, -5, 1, -4, 3, -2 }

minSubarraySum = -5+1-4
= -8

maxSubarraySum = 3

max (8, 3) = 8

* Max Subarray Sum → Kadane's Algorithm

* Min Subarray Sum

Kadane's Algorithm

Kadane's Algorithm

0	1	2	3	4
1	-3	2	3	-4

currSubSum = 1 → max(nums[i], currSum + nums[i])

maxSubSum = ~~1~~ ~~2~~ 5

```
currSubSum = nums[0];
maxSubSum = nums[0];

for( i = 1 ; i<n ; i++) {

    currSubSum = max/min (nums[i], currSubSum + nums[i]);

    maxSubSum = max/min (maxSubSum, currSubSum);
}

Return maxSubSum;
```

Kadane's

Jan


minsubsum :