100-Days_of-DSA

Kadane's Algorithm

* Calculate Max Subarray Sum

arr : { 3 2 -6 8 2 9 4 }

↳ ans = 23

arr : { -3 2 4 -1 3 -4 3 }

↳ ans = 8

// Ideal :

generate all subarray sum and find max out of them

T.C : $O(n^2)$, S.C : $O(n)$

//idea 2:

Kadane's algo

① {+ve, +ve, +ve, +ve, +ve}

↳ sum of all these

② {-ve, -ve, +ve, +ve, +ve}

↳ sum of these three

③ {+ve, -ve, +ve, -ve, +ve, +ve, +ve}

these if sum < 0

then this is our answer

④ On Every iteration Store max

Algo :

if (Sum >= 0)

add arr[i] to Sum

else → make

Sum = arr[i]