

# Sum 2

## [T] Partial sums

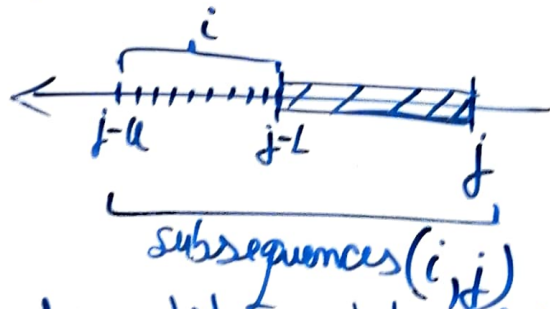
$$S_m = S_{m-1} + A_m, S_0 = 0, \text{ where } A \text{ is an array}$$

$$\Rightarrow \text{Sum}(A[i, j]) = S_j - S_{i-1}$$

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$$\text{Length} \in [L, U]$$

Find max sum subseq from subseqs  $(i, j)$ , where  $i \in [j-L, j-U]$  and  $j$  fixed



Max sum = sum from which we subtract less

$$\Rightarrow \text{Max subseq. from } (i, j) : S_j - \min(S_{j-L}, S_{j-L-1}, \dots, S_{j-U})$$

$$\text{len} = U - L + 1 = K$$

$\Rightarrow$  Find min on each  $K$  len seg. in vector  $S$ , compute each min at the time of traversing  $S$