

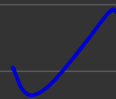
2 pointers

— Priyansh



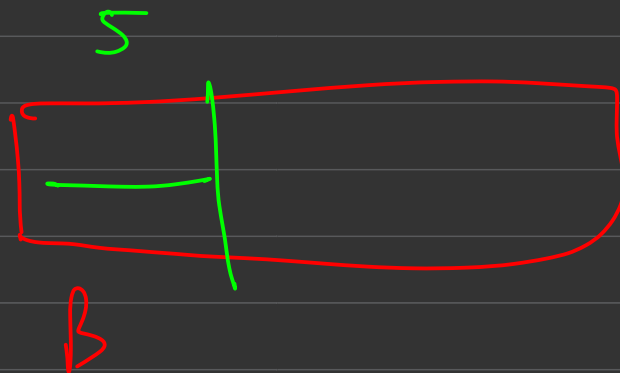
$A[0]$ $A[1]$

5



≥ 5

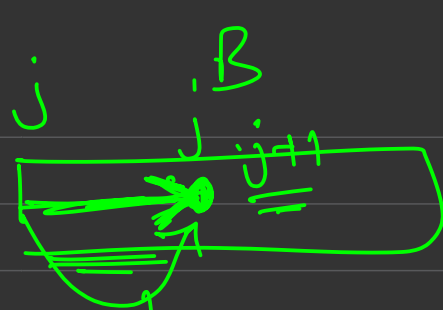
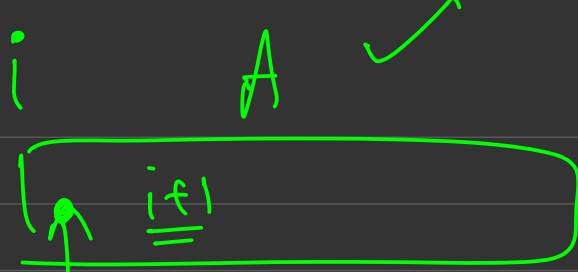
< 5



$B[0], B[1] \dots B[4] < \underline{\underline{A[0]}}$

$B[0], B[1] \dots B[4], B[5]$

5



$$A[i] > B[j]$$

$\rightarrow j+1$ 0 based indexing

$\rightarrow n$

$\rightarrow m$

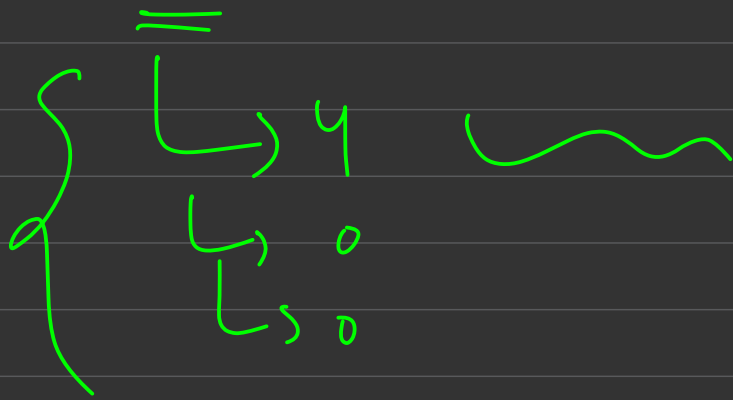
$$O(n+m)$$

10123

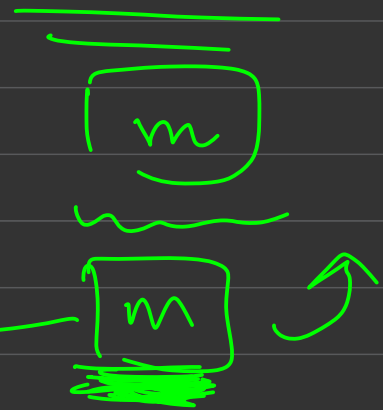
5[3] call()

5 pointers \rightarrow $(p_1 + p_2 + \dots + p_5)$

A = ⁱ9 ⁱ10 11 12



B = ^j4 ^j5 ^j6 ^j7

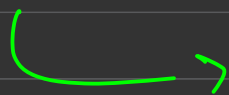


n

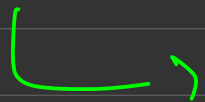
$O(n+m)$



Subarray of length x $\leq k$

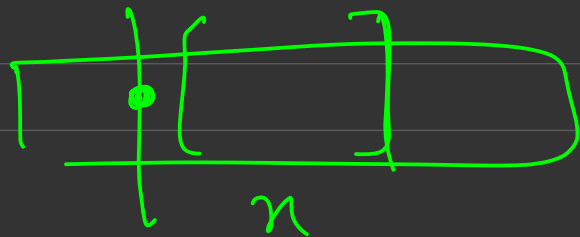


$x-1$ $\leq k$



$x-2$ $\leq k$

$\leq k$



\vdots

1

$\leq k$

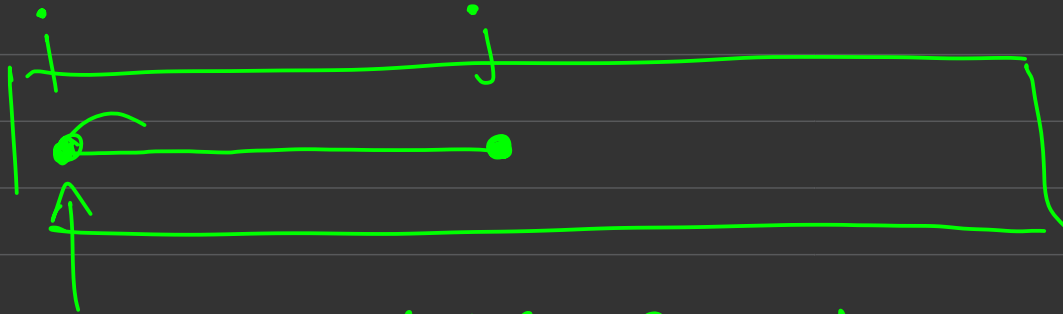
10
TTTT --- T F F F F F F F F F F F

Binary Search

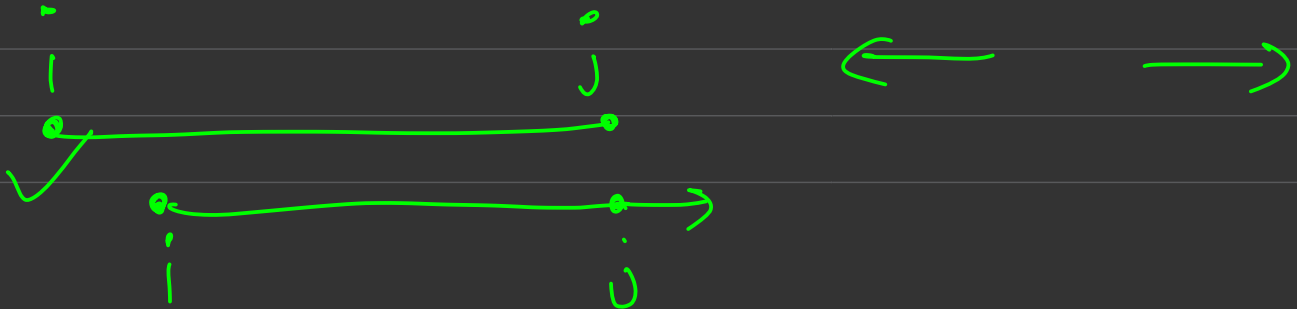
Subarray of length $n \leq k \leq k$



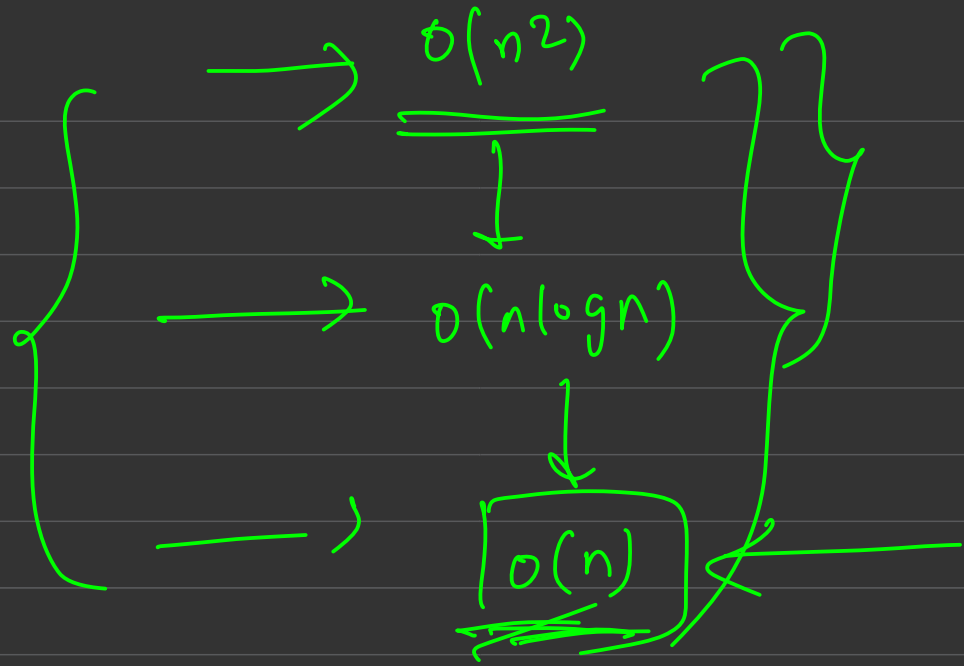
$O(n \log n)$



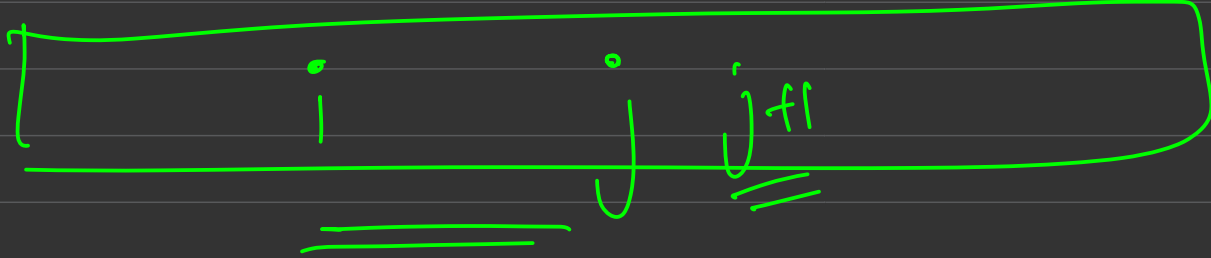
$\text{Sum}(A[i:j]) \leq k$ $j - i + 1$



Array



min length subarray ending at j



$$\left\{ \text{sum}(\underline{\underline{A[i:j]}}) \geq k \right\}$$

$$\left\{ \text{sum}(\underline{\underline{A[i:j+1]}}) \geq k \right\}$$

② if some subarray of length ~~X~~ works
then some $X+1$
 $X+2$
 \vdots
 n

