

3 cases of  
Max arr

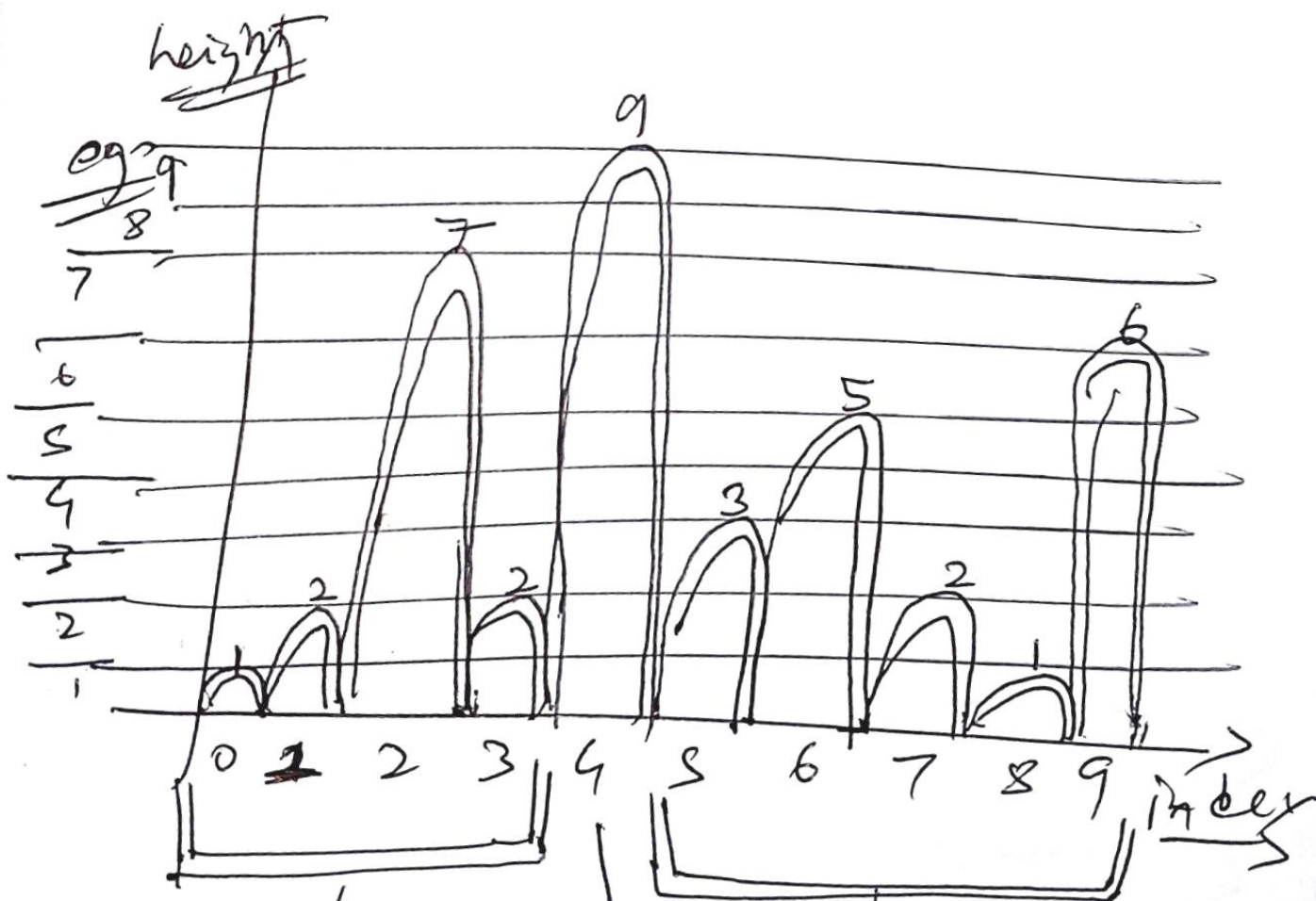
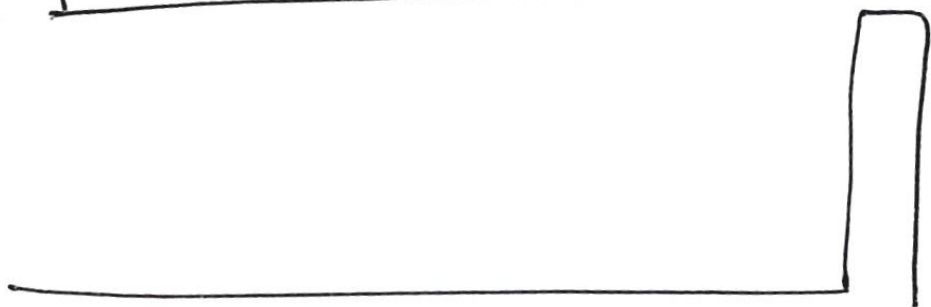
(i)



(ii)



(iii)



arr2 (left arr)

=> malloc  
4 units

$j = \max_{arr} = 4$

arr3 (right arr)

malloc  
 $n - j - 1 = 10 - 4 - 1 = 5$  units

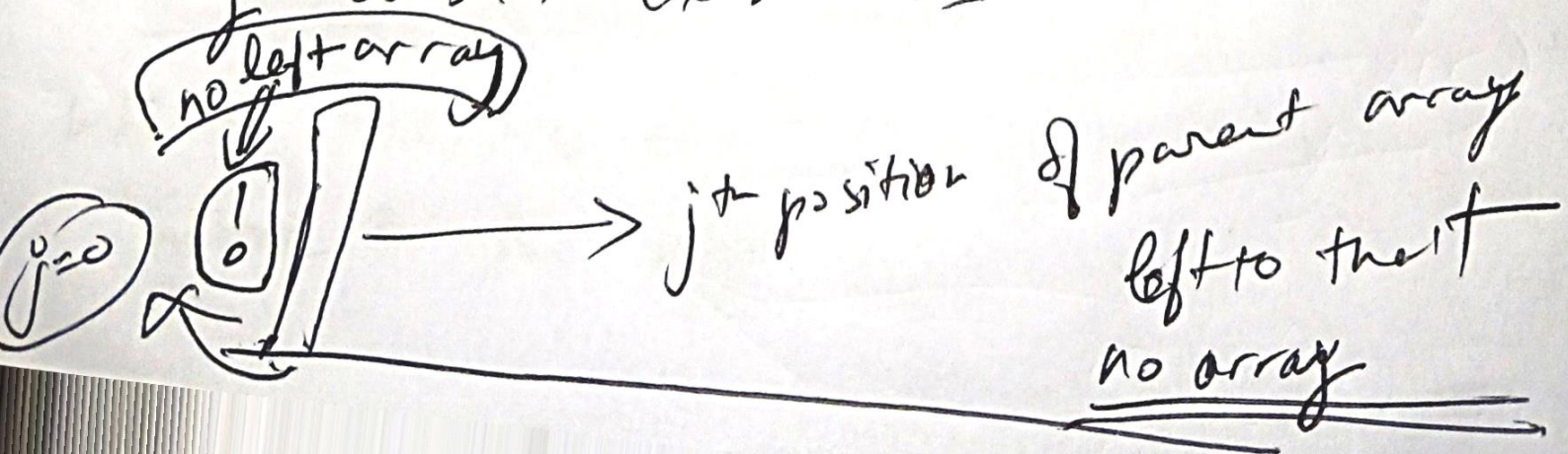
side side max left function is called

↳ to get left array max.

$i$  which  $j$  is passed to max of arr  
function

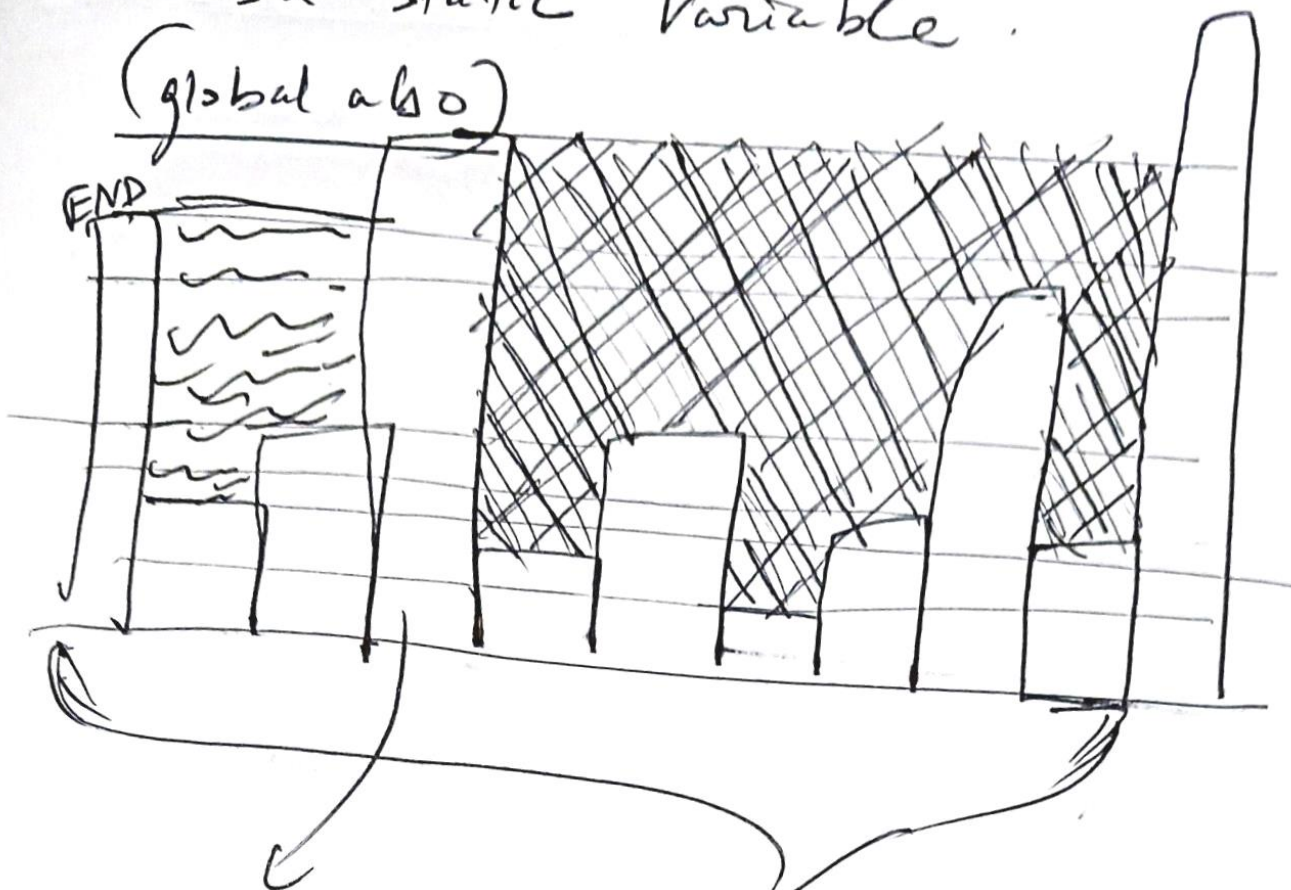
line (12) to (15) (refer)

↳ here if  $j == 0$  ; the left  
array doesn't exist as





sum is a static variable.  
(global also)



line 33  
index = k

leftarray



trapped  
rain water

b/w

max leftarr (&) max of parent array

line 38

sum = adding the  
regions



as shown in drawing

next checking if  $k > 0$ , i.e.,

max leftarr not in the END

which means water can be trapped  
more in the ~~left~~ left too

so recursively called

side side left max

arguments  $\rightarrow$  ~~arguments~~  $\left( \begin{array}{l} \text{this} \\ \text{current} \\ \text{left arr} \end{array} \right)$  , the current left arr max ,

the left sub arr of this  $\left( \begin{array}{l} \text{current} \\ \text{left arr} \end{array} \right)$

also malloced

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for right array : same thing  
applied but in  
right direction

$\Rightarrow$  and the final rainwater  
is added in main() function

$\left( \text{left} + \text{right} \right)$  ~~water~~  
water

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