22nd March

22 March 2022 21:09

Subarray Minima :-

[1, 2, 3]

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

1 + 1 + 1 + 2 + 2 + 3 = 10

3, 2, 1, 2 => 1, 2, 2, 3 = n log(n)

1 + 1 + 1 + 1 + 2 + 2 + 2 + 2 + 2 + 3

10 + 3 = 17

ans = 0

ans = arr[i] x (arr.length - i)

1 x 4 = 4 + (2 x 3) = 6 = 10

+ 2 x (2) = 10 + 4 = 14

3 x 1 = 3 + 14 = 17

10, 20, 30

10 + 10 + 10 + 20 + 20 + 30 = 100

[3, 2, 1, 2] => (3), (3,2), (3,2,1), (3,2,1,2)

3 2 1 1

2, (2,1), (2,1,2)

1, (1,2)

2

0 + (2 x 2) + (1 x 3) + 3

3 + 2 + 1 + 2

3 + 2 x 2 + 1 + 1 + 1 + 1

11

2

3

-1, 0, -1, 0

30, 20, 10, 20

-1 -1 3, -1

30 + 20 + 20 + (10 x 1) + ?

[10, 9, 8, 7, 6, 5, 4, 3, 2, 1]

1 x 10

2 x 9

3 x 8

SL = -1 -1 1 1 -1

0 1 2 3 4

[4, 1, 3, 2, 1]

RL = 1 5 3 4 5

Next Largest Elements-

1, 3, 2, 4

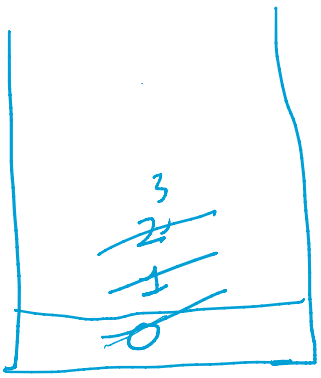
3, 4, 4, -1

0 1 2 3 4 5 6

[1, 5, 3, 6, 7, 8, 4]

[5, 6, 6, 7, 8, -1, -1]

ci = ~~1~~ ~~2~~ 3

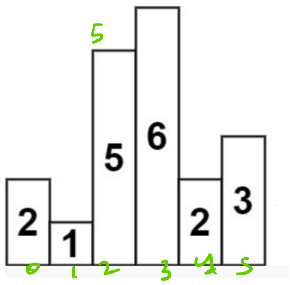


0 1 2 3 4 5 6

[1, 5, 3, 6, 7, 8, 4]

[-1, -1, 5, -1, -1, -1, 8]

Largest Rect. Histograms-



$5 \times 2 = 10$

$(4-1)-1 = 2$

$(6-1)-1 =$

0 1 2 3 4 5

LSI: [-1, -1, 1, 2, 1, 4] => O(n)

[2, 1, 5, 6, 2, 3]

RSI = [1, 6, 4, 4, 6, 6] => O(n)

RSI - LSI - 1

$1-(-1)-1 = 1 \times 2$

$6-(-1)-1 = 6 \times 1 = 6$

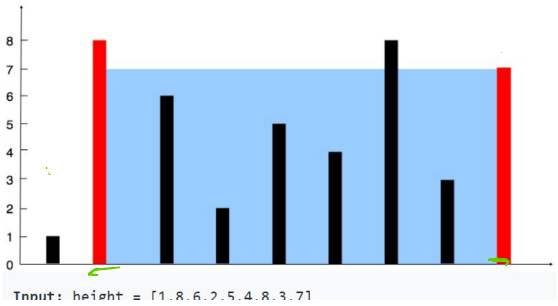
$4-(1)-1 = 2 \times 5 = 10$

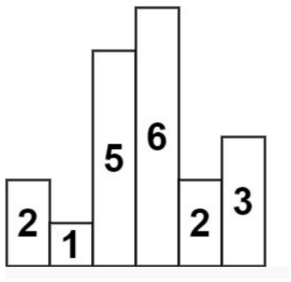
max = ~~0~~ ~~2~~ 6 10

$4-2-1 = 1 \times 6 =$

$6-1-1 = 4 \times 2 = 8$

$6-4-1 = 1 \times 3 = 3$





Stock Span

0 1 2 3 4 5 6

[100, 80, 60 70 60 75 85]

LSI = [0, 1, 2, 2, 4, 2, 1]

$0-0 = 0+1$

$1-1 = 0+1$

$2-2 = 0+1$

$3-2 = 1+1 = 2$

$4-4 = 0+1 =$

$5-2 = 3+1 = 4$

$6-1 = 5+1 = 6$

4, 6