

Assignment on:

Maximum Subarray Problem

CSE 4809: Algorithm Engineering



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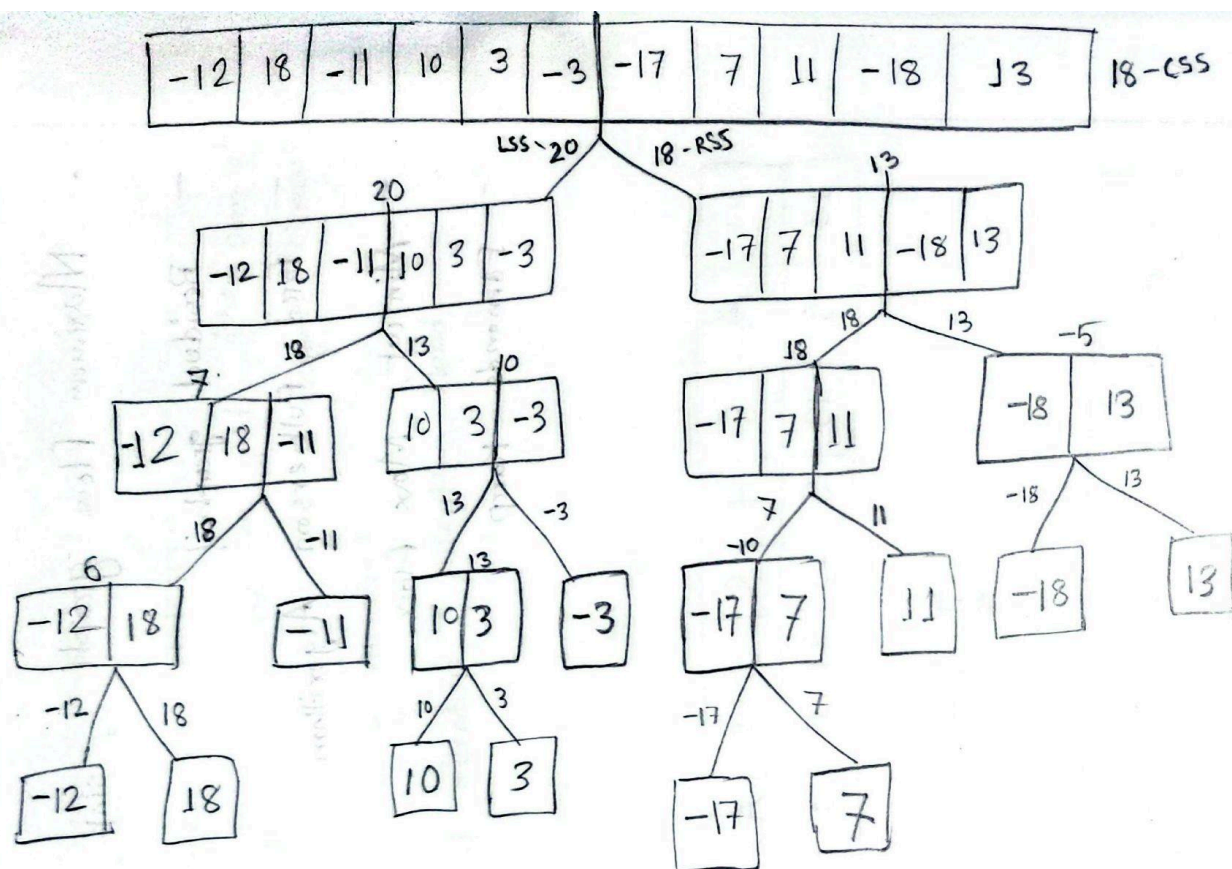
Submitted By:

Mashrur Ahsan (200042115)

M	A	S	H	R	U	R	A	H	S	A	N
13	1	19	8	18	21	18	1	8	19	1	14

↓ Difference Array

-12	18	-11	-10	3	-3	-17	7	11	-18	13
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Here, Right Subarray Sum (RSS) = 18
Left Subarray Sum (LSS) = 20
Cross Subarray Sum (CSS) = 18

So, the value of the
Maximum Subarray = 20

...

18	-11	10	3
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 ...

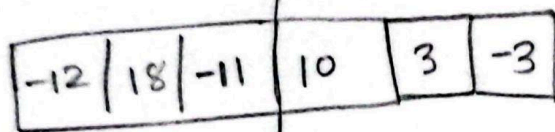
20

An example:

$$\dots 18 + (-11) + 10 + 3 \dots$$

20 - CSS

Here the CSS is written in the middle top section of all arrays



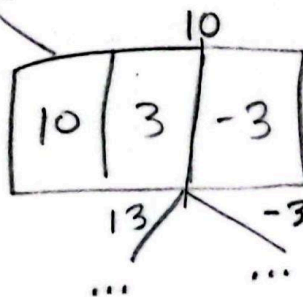
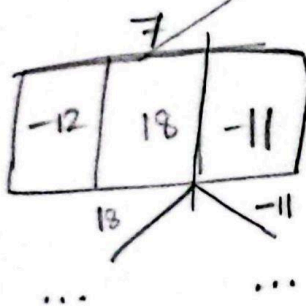
LSS - 18

13 - RSS

$$\max(7, 18, -11)$$

↓

18



$$\max(10, 13, -3)$$

↓

13

In this small section ; CSS - 20
LSS - 18
RSS - 13