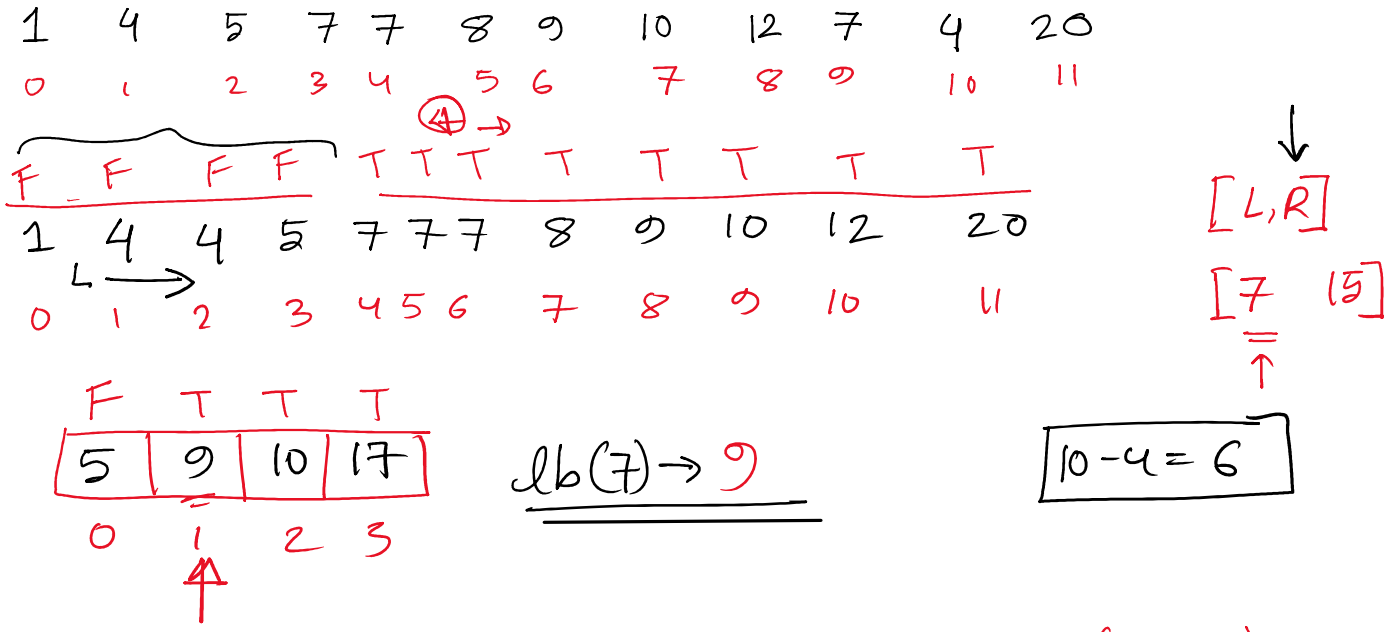
Class 6: Binary Search

Saturday, November 25, 2023 11:05 AM

C - Points in Segments



lb(7) → 9

Step1: Do a sort on the array $O(N \log N)$

Step2: Lower Bound $O(\log N)$

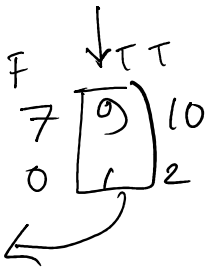
Step3: Upper Bound $O(\log N)$

Step4: Difference $O(1)$

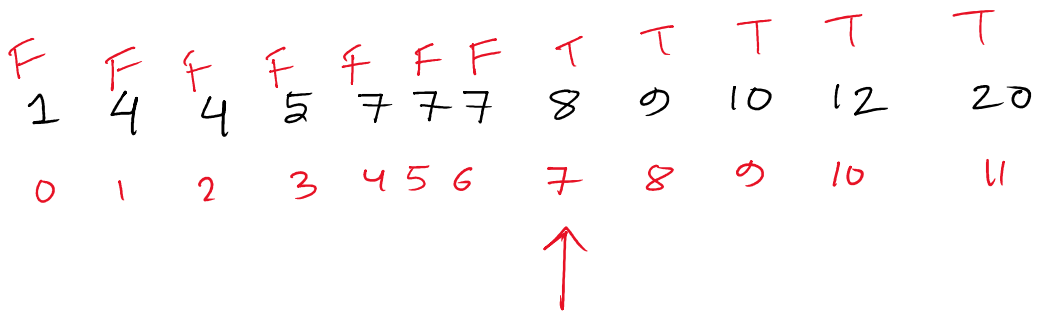
$[-2^{31} - 2^{31}]$

Integer Overflow →

$(2^{31} + 1)$ ←

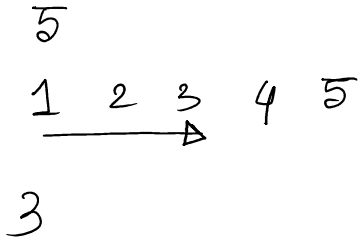


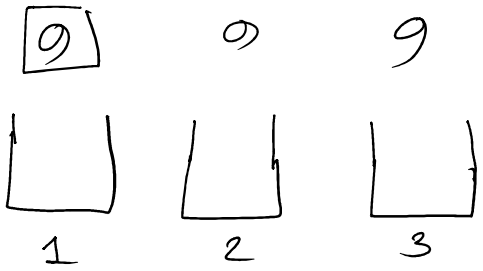
3/2 = 1

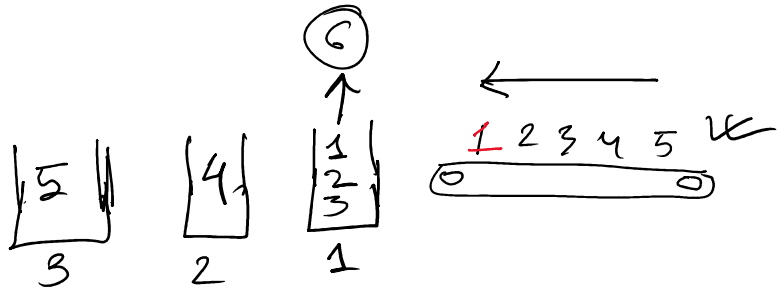


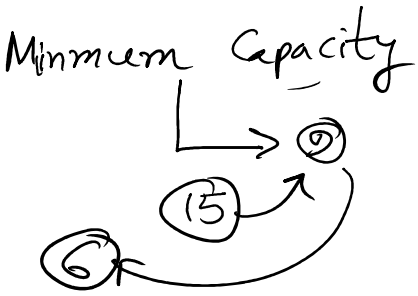
Binary Search on a Range

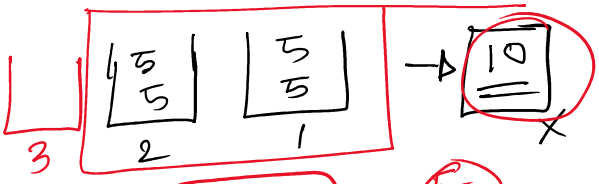
E - Get the Containers





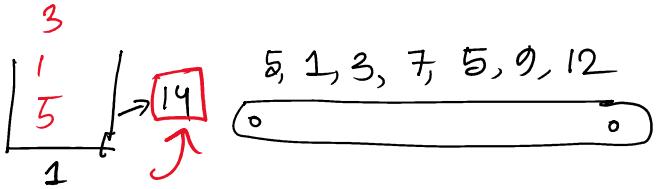


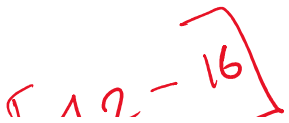


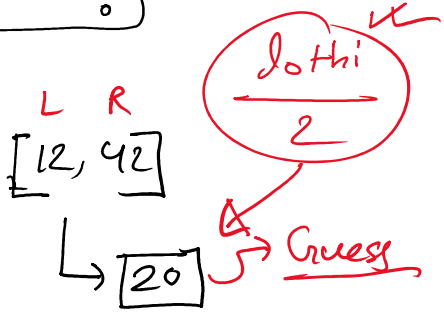


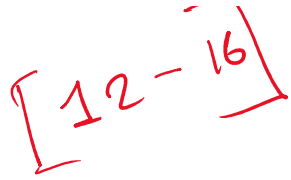
5 5 5 5 5

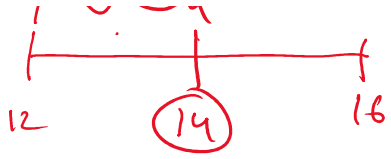
Min Capa. =

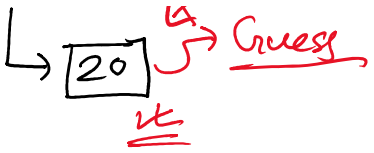


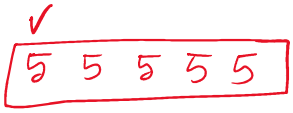


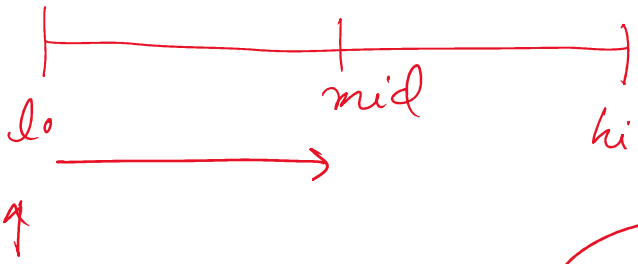


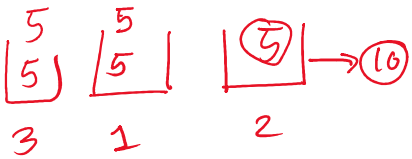












hi ⇐

$$mid = \frac{(lo + hi)}{2}$$

$$mid = lo + \frac{(hi - lo)}{2}$$