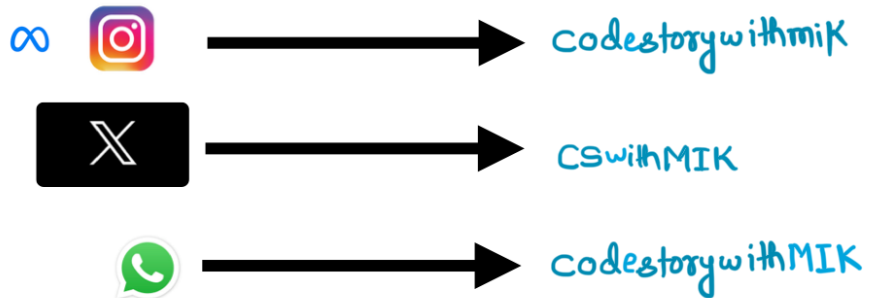


Line Sweep Algorithm

Concepts & Qns



Video-4 ...

Motivation :

Every problem in life is temporary,

but the regret of knowing you
 didn't give 100% when it mattered
 is permanent.
 So, head down, work hard, and make
 sure your preparation is stronger than
 your excuses.



MIK...

Meeting Rooms II

Am / Meh / Jbr

Difficulty: Medium

Accuracy: 48.01%

Submissions: 19K+

Points: 4



Given two arrays start[] and end[] such that start[i] is the starting time of ith meeting and end[i] is the ending time of ith meeting. Return the minimum number of rooms required to attend all meetings.

Note: A person can also attend a meeting if its starting time is same as the previous meeting's ending time.

Examples:



Input: start[] = [1, 10, 7], end[] = [4, 15, 10]

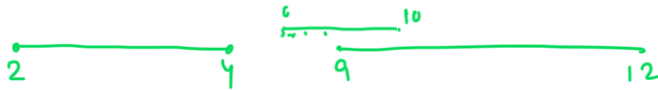
Output: 1

Explanation: Since all the meetings are held at different times, it is possible to attend all the meetings in a single room.

Input: start[] = [2, 9, 6], end[] = [4, 12, 10]

Output: 2

Explanation: 1st and 2nd meetings at one room but for 3rd meeting one another room required.



Constraints Analysis :-

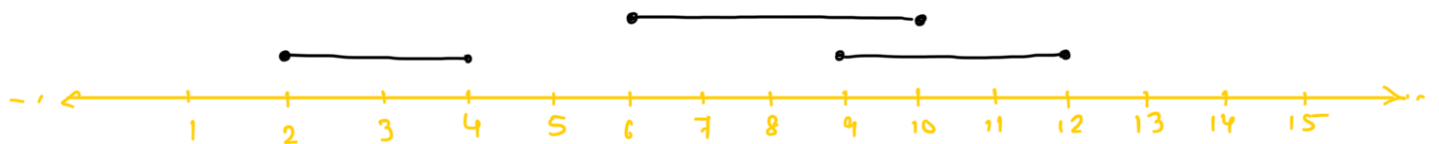
$$(*) \quad 1 \leq \text{start.size()} = \text{end.size()} \leq 10^5$$

$$(*) \quad 0 \leq \text{start}[i] < \text{end}[i] \leq 10^6$$

Thought Process

Start = { 2, 9, 6 }

end = { 4, 12, 10 }



M M

Min meeti. Rooms = Max overlaps.

events = { $\downarrow \downarrow$ (2, +1), $\downarrow \downarrow$ (4, -1), $\downarrow \downarrow$ (6, +1), $\downarrow \downarrow$ (10, -1), (9, +1), (12, -1) }

Sort:

$\{(2,1), (4,-1), (6,1), (9,1), (10,-1), (12,-1)\}$

overlaps = 0

maxOverlap = 2 \leftarrow 2

map
<event, delta>

2 \rightarrow 1

4 \rightarrow -1

6 \rightarrow 1

9 \rightarrow 1

10 \rightarrow -1

12 \rightarrow -1

Melt II.

Max overlap.