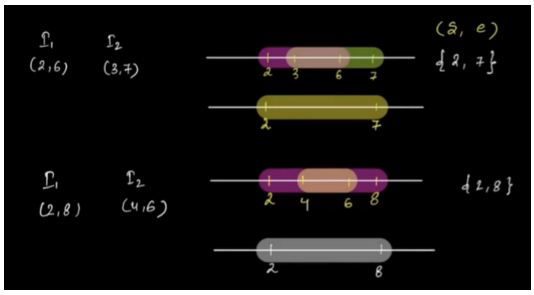
Agenda

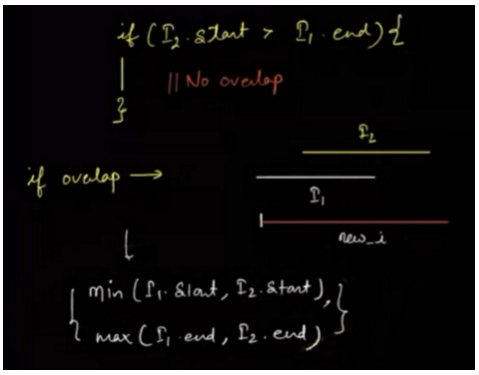
16 June 2024 13:29

1. Merge Overlapping Intervals
2. Insert a new interval in a list of sorted non-overlapping intervals.
3. First missing positive integer in an array.

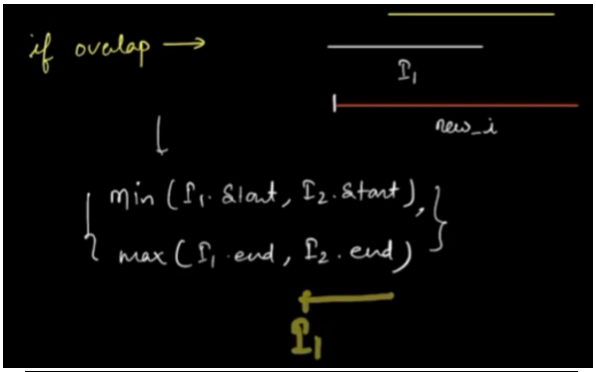
1. Merge Overlapping Intervals

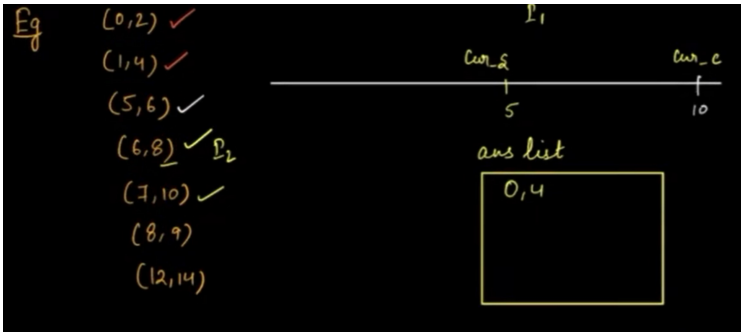
16 June 2024 13:32

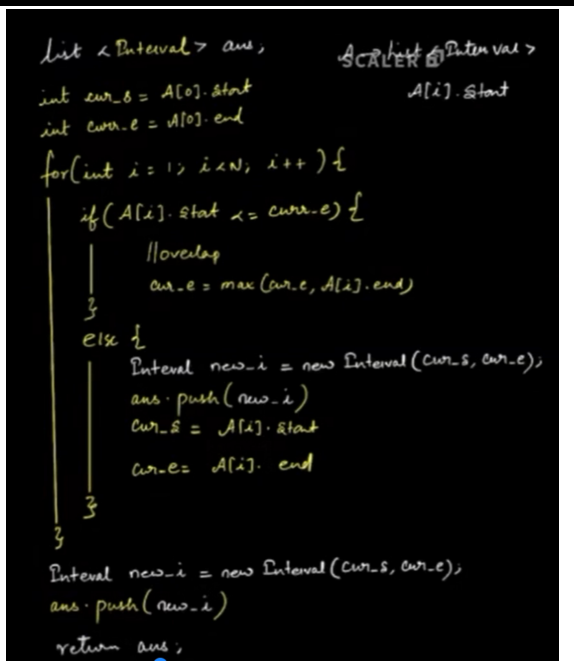


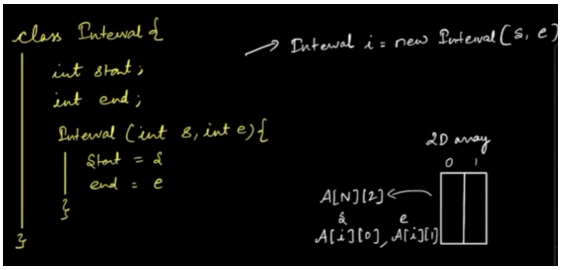


Q1) Given a sorted (based on start time) list of overlapping intervals. Merge All overlapping intervals and return sorted list.





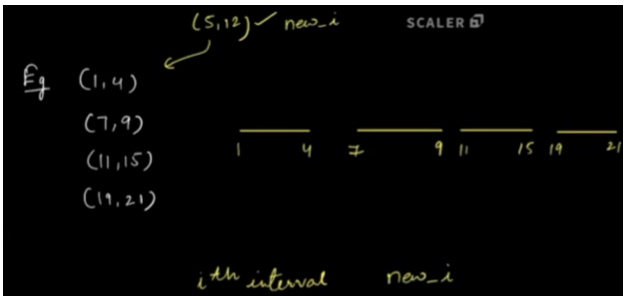


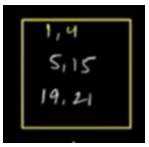


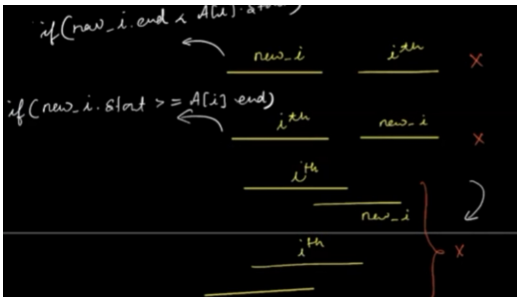
2. Sorted List of Non Overlapping Interval

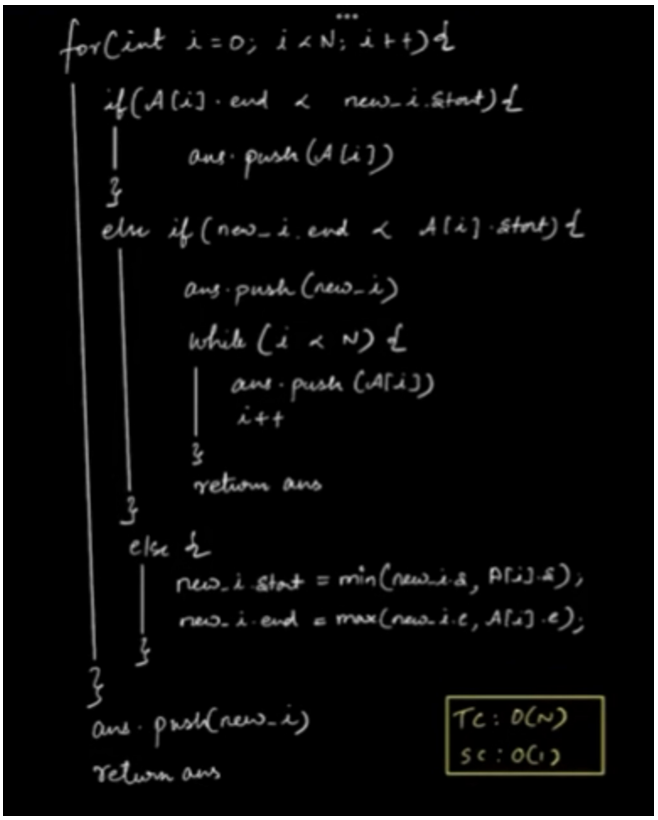
26 June 2024 15:57

Question: Sorted List of Non Overlapping Interval sorted based on start time.
Insert a new interval such that the final list is sorted and non overlapping







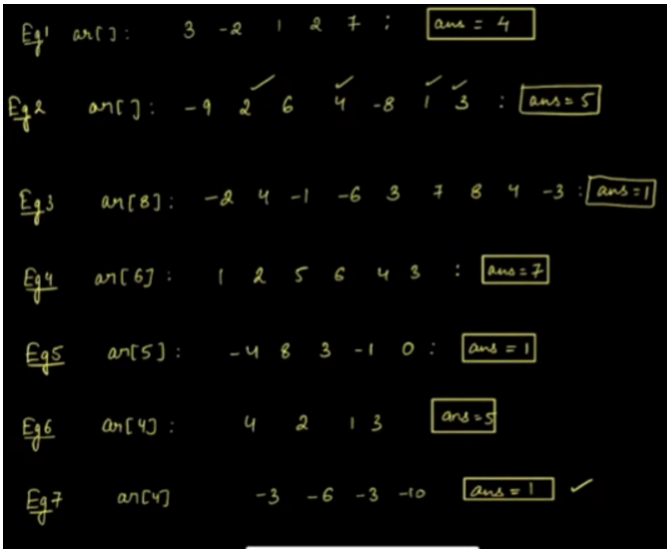


- Iterate from 0 to end.
- Check for non overlapping condition, if true add it to answer.
- Else If found the insert position add the interval in answer consecutively add all other left out intervals, as they are already non overlapping.
- Else overlapping perform **merging of overlapping intervals.**

3. Missing Integer

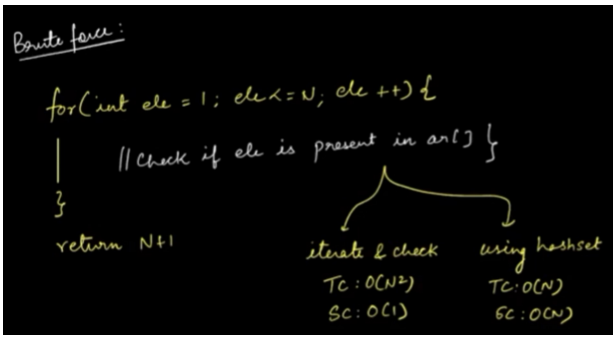
26 June 2024 16:31

Question: Given N array elements, find first missing positive integer.



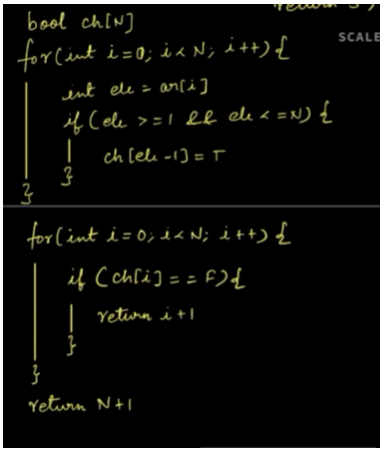
Brute Force Approach:

- Start setting missing value as 1, iterate from 1 to N, and check for the missing values, every time found increment missing value else return it as the answer.

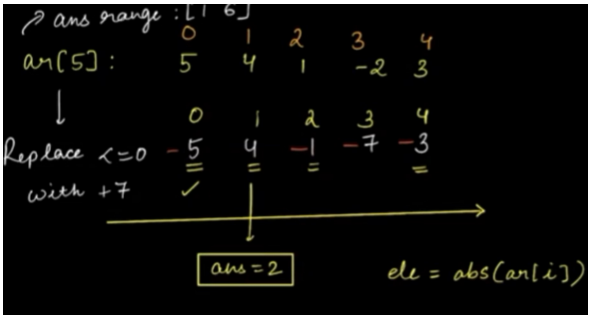


Optimised Approach:

Optimised 1:



Optimised 2:



- Iterate and If element is less than = 0, update it as N+2
- Again iterate and if element is present at index-1 mark it as negative
- Again iterate and get first unmarked. Return it.