

Introduction to Algorithms Assignment 4
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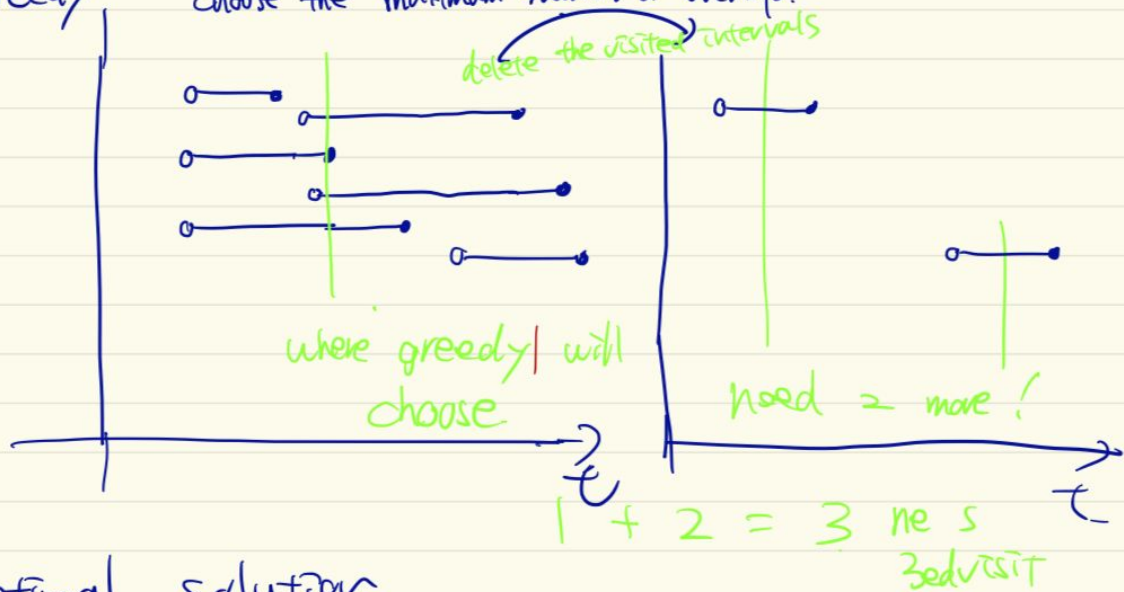
①

(a) Give a counter example.

Assume we have intervals $[1,2], [1,3], [1,4], [2,5,6], [2,7,7], [5.5,7.5]$
 We can draw it in graph

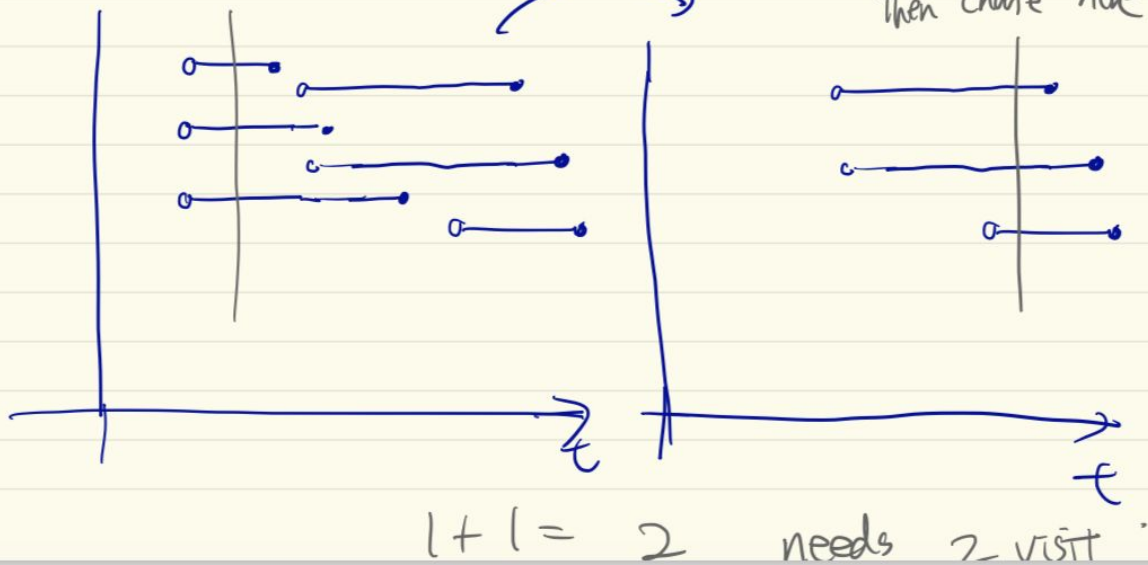
i) Greedy

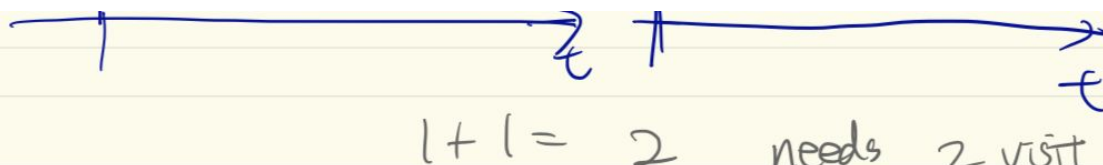
choose the maximum number of overlap.



ii) Optimal solution

choose here delete the visited intervals.





Since we can find another way ⁽²⁾ to pick the visiting time and the number of visit is smaller than the greedy algorithm given, this is an counter example to show that the given greedy algorithm is not always optimal.