986. Interval List Intersections

Description

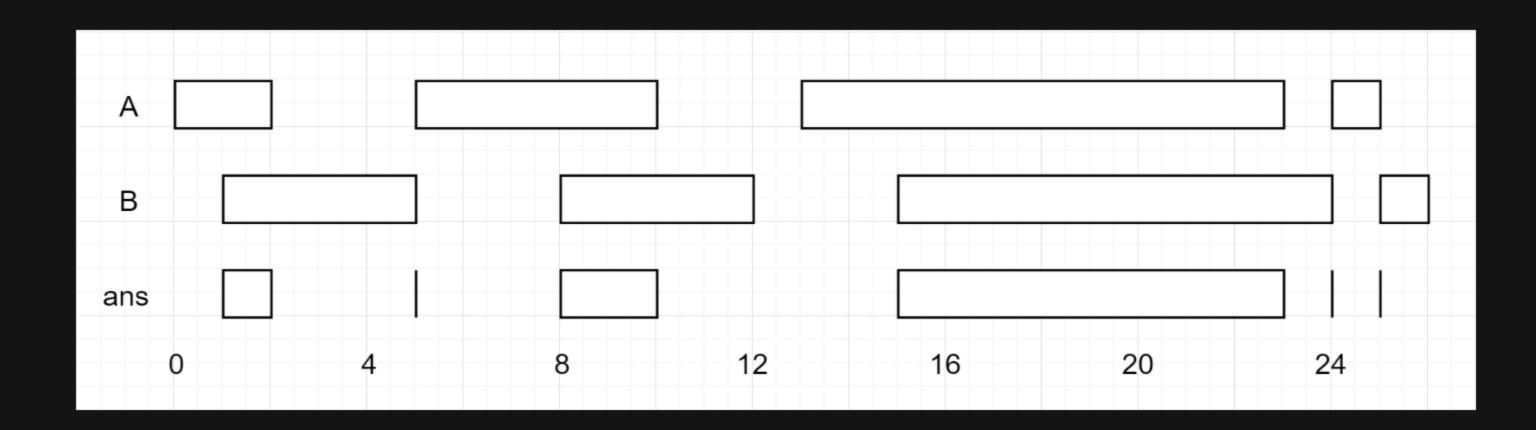
You are given two lists of closed intervals, firstList and secondList, where firstList[i] = [start i, end i] and secondList[j] = [start j, end j]. Each list of intervals is pairwise **disjoint** and in **sorted order**.

Return the intersection of these two interval lists.

A closed interval [a, b] (with $a \leftarrow b$) denotes the set of real numbers x with $a \leftarrow x \leftarrow b$.

The **intersection** of two closed intervals is a set of real numbers that are either empty or represented as a closed interval. For example, the intersection of [1, 3] and [2, 4] is [2, 3].

Example 1:



Input: firstList = [[0,2],[5,10],[13,23],[24,25]], secondList = [[1,5],[8,12],[15,24],[25,26]]
Output: [[1,2],[5,5],[8,10],[15,23],[24,24],[25,25]]

Example 2:

Input: firstList = [[1,3],[5,9]], secondList = []
Output: []

Constraints:

- 0 <= firstList.length, secondList.length <= 1000
- firstList.length + secondList.length >= 1
- 0 <= start $_{i}$ < end $_{i}$ <= 10 9
- end i < start i+1
- 0 <= start $_j$ < end $_j$ <= 10 9
- end j < start j+1