

3394. Check if Grid can be Cut into Sections

Medium Topics Companies Hint

You are given an integer n representing the dimensions of an $n \times n$ grid, with the origin at the bottom-left corner of the grid. You are also given a 2D array of coordinates `rectangles`, where `rectangles[i]` is in the form `[startx, starty, endx, endy]`, representing a rectangle on the grid. Each rectangle is defined as follows:

- `(startx, starty)`: The bottom-left corner of the rectangle.
- `(endx, endy)`: The top-right corner of the rectangle.

Note that the rectangles do not overlap. Your task is to determine if it is possible to make **either two horizontal or two vertical cuts** on the grid such that:

- Each of the three resulting sections formed by the cuts contains **at least one rectangle**.
- Every rectangle belongs to **exactly one** section.

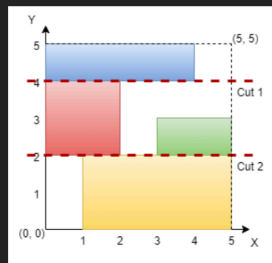
Return `true` if such cuts can be made; otherwise, return `false`.

Example 1:

Input: `n = 5, rectangles = [[1,0,5,2], [0,2,2,4], [3,2,5,3], [0,4,4,5]]`

Output: `true`

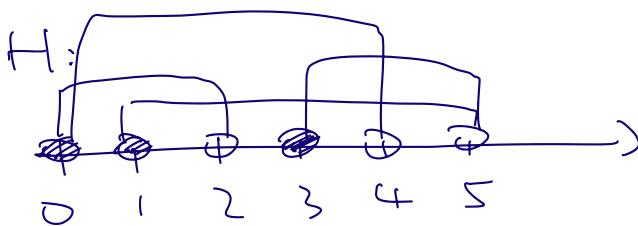
Explanation:



1° Horizontal overlap

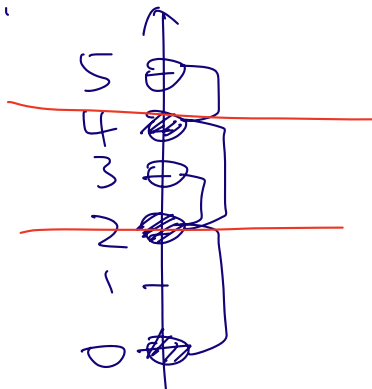
2° vertical overlap

→ interval

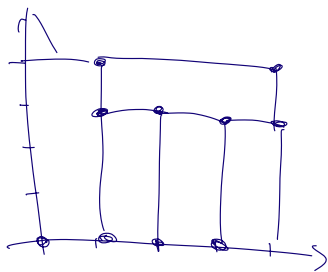


no gap → False

V:



gap ≥ 2 → True



H: (0,1), (1,2), (2,3),
(3,4), (4,5)

All Submissions

Accepted 694 / 694 testcases passed

AndrewC275 submitted at Mar 25, 2025 12:04

Editorial

Solution

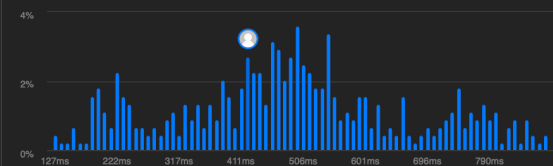
Runtime

421 ms | Beats 69.14%

Analyze Complexity

Memory

83.64 MB | Beats 46.62%



Python3 Auto

```
1 class Solution:
2     def checkValidCuts(self, n: int, rectangles: List[List[int]]) -> bool:
3         h = [(r[1], r[3]) for r in rectangles]
4         v = [(r[0], r[2]) for r in rectangles]
5
6         def gap(arr):
7             arr.sort()
8             res = 0
9             prev = -1
10            for s, e in arr:
11                if s >= prev:
12                    res += 1
13                    prev = max(prev, e)
14            return res
15
16        count = max(gap(v), gap(h))
17
18        return True if count >= 3 else False
19
20
21
22
```

Ln 18, Col 34 Saved