Problem 3531: Count Covered Buildings

Problem Information

Difficulty: Medium
Acceptance Rate: 38.29%
Paid Only: No
Tags: Array, Hash Table, Sorting

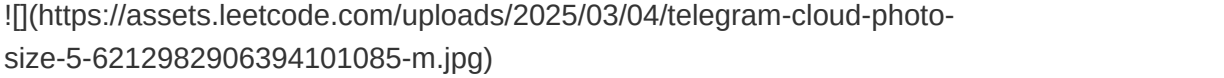
Problem Description

You are given a positive integer `n`, representing an `n x n` city. You are also given a 2D grid `buildings`, where `buildings[i] = [x, y]` denotes a **unique** building located at coordinates `[x, y]`.

A building is **covered** if there is at least one building in all **four** directions: left, right, above, and below.

Return the number of **covered** buildings.

Example 1:



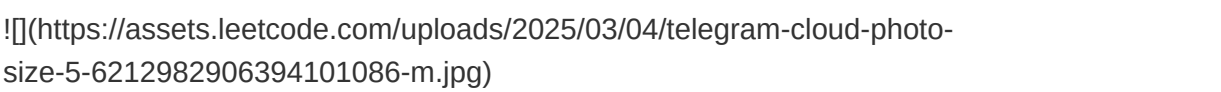
Input: n = 3, buildings = [[1,2],[2,2],[3,2],[2,1],[2,3]]

Output: 1

Explanation:

* Only building `[2,2]` is covered as it has at least one building: * above (`[1,2]`) * below (`[3,2]`) * left (`[2,1]`) * right (`[2,3]`) * Thus, the count of covered buildings is 1.

Example 2:



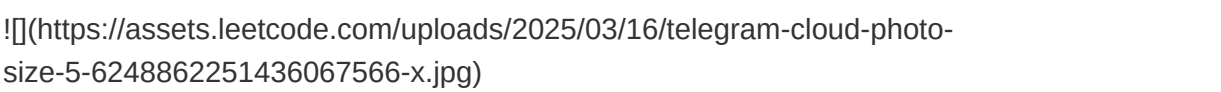
Input: n = 3, buildings = [[1,1],[1,2],[2,1],[2,2]]

Output: 0

Explanation:

* No building has at least one building in all four directions.

Example 3:



Input: n = 5, buildings = [[1,3],[3,2],[3,3],[3,5],[5,3]]

Output: 1

Explanation:

* Only building `[3,3]` is covered as it has at least one building: * above (`[1,3]`) * below (`[5,3]`) * left (`[3,2]`) * right (`[3,5]`) * Thus, the count of covered buildings is 1.

Constraints:

* `2 <= n <= 105` * `1 <= buildings.length <= 105 ` * `buildings[i] = [x, y]` * `1 <= x, y <= n` * All coordinates of `buildings` are **unique**.

Code Snippets

C++:

```
class Solution {
public:
int countCoveredBuildings(int n, vector<vector<int>>& buildings) {

}
```

```
};
```

Java:

```
class Solution {
public int countCoveredBuildings(int n, int[][] buildings) {

}
}
```

Python3:

```
class Solution:
def countCoveredBuildings(self, n: int, buildings: List[List[int]]) -> int:
```