Problem 354: Russian Doll Envelopes

Problem Information

Difficulty: Hard
Acceptance Rate: 37.59%
Paid Only: No
Tags: Array, Binary Search, Dynamic Programming, Sorting

Problem Description

You are given a 2D array of integers `envelopes` where `envelopes[i] = [wi, hi]` represents the width and the height of an envelope.

One envelope can fit into another if and only if both the width and height of one envelope are greater than the other envelope's width and height.

Return _the maximum number of envelopes you can Russian doll (i.e., put one inside the other)_.

Note: You cannot rotate an envelope.

Example 1:

Input: envelopes = [[5,4],[6,4],[6,7],[2,3]] **Output:** 3 **Explanation:** The maximum number of envelopes you can Russian doll is 3 ([2,3] => [5,4] => [6,7]).

Example 2:

Input: envelopes = [[1,1],[1,1],[1,1]] **Output:** 1

Constraints:

* `1 <= envelopes.length <= 105` * `envelopes[i].length == 2` * `1 <= wi, hi <= 105`

Code Snippets

C++:

```
class Solution {
public:
int maxEnvelopes(vector<vector<int>>& envelopes) {

}
};
```

Java:

```
class Solution {
public int maxEnvelopes(int[][] envelopes) {

}
}
```

Python3:

```
class Solution:
def maxEnvelopes(self, envelopes: List[List[int]]) -> int:
```