

Problem 1198: Find Smallest Common Element in All Rows

Problem Information

Difficulty: Medium

Acceptance Rate: 76.77%

Paid Only: Yes

Tags: Array, Hash Table, Binary Search, Matrix, Counting

Problem Description

Given an $m \times n$ matrix `mat` where every row is sorted in **strictly increasing** order, return **the smallest common element** in all rows.

If there is no common element, return `-1`.

Example 1:

Input: `mat = [[1,2,3,4,5],[2,4,5,8,10],[3,5,7,9,11],[1,3,5,7,9]]` **Output:** 5

Example 2:

Input: `mat = [[1,2,3],[2,3,4],[2,3,5]]` **Output:** 2

Constraints:

$m == \text{mat.length}$ $n == \text{mat}[i].\text{length}$ $1 \leq m, n \leq 500$ $1 \leq \text{mat}[i][j] \leq 10^4$ `mat[i]` is sorted in strictly increasing order.

Code Snippets

C++:

```
class Solution {  
public:  
    int smallestCommonElement(vector<vector<int>>& mat) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int smallestCommonElement(int[][] mat) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def smallestCommonElement(self, mat: List[List[int]]) -> int:
```