74. Search a 2D Matrix

Medium 8459 286 Add to List Share

Write an efficient algorithm that searches for a value `target` in an `m x n` integer matrix `matrix`. This matrix has the following properties:

- Integers in each row are sorted from left to right.
- The first integer of each row is greater than the last integer of the previous row.

Example 1:

1	3	5	7
10	11	16	20
23	30	34	60

Input: matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 3
Output: true

Example 2:

1	3	5	7
10	11	16	20
23	30	34	60

Input: matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 13
Output: false

Constraints:

- `m == matrix.length`
- `n == matrix[i].length`
- `1 <= m, n <= 100`
- `-10^4 <= matrix[i][j], target <= 10^4`

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```cpp
class Solution {
public:
    bool searchMatrix(vector<vector<int>>& matrix, int target) {

        int i = 0;
        int j = matrix[0].size()-1;

 while(i < matrix.size() && j >= 0){

 if(target == matrix[i][j]){

   return true;
            }

 else if(target < matrix[i][j]){

   j--;
            }

 else{

   i++;
            }
        }

 return false;
    }
};
```

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Accepted Runtime: 0 ms

Your input [[1 [10

Output

Expected true