5403. Find the Kth Smallest Sum of a Matrix With Sorted Rows

ons (/contest/weekly-contest-187/problems/find-the-kth-smallest-sum-of-a-matrix-with-sorted-rows/submissions/)

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You are given an $\, m \, * \, n \, matrix$, $\, mat$, and an integer $\, k$, which has its rows sorted in non-decreasing order.

You are allowed to choose exactly 1 element from each row to form an array. Return the Kth **smallest** array sum among all possible arrays.

User Accepted: 0 User Tried: 0 Total Accepted: 0 Total Submissions: 0 Difficulty: Hard

Example 1:

Input: mat = [[1,3,11],[2,4,6]], k = 5

Output: 7

Explanation: Choosing one element from each row, the fir [1,2], [1,4], [3,2], [3,4], [1,6]. Where the 5th sum is

Example 2:

Input: mat = [[1,3,11],[2,4,6]], k = 9
Output: 17

Example 3:

Input: mat = [[1,10,10],[1,4,5],[2,3,6]], k = 7

Output: 9

Explanation: Choosing one element from each row, the first k smallest sum are:

[1,1,2], [1,1,3], [1,4,2], [1,4,3], [1,1,6], [1,5,2], [1,5,3]. Where the 7th sum is 9.

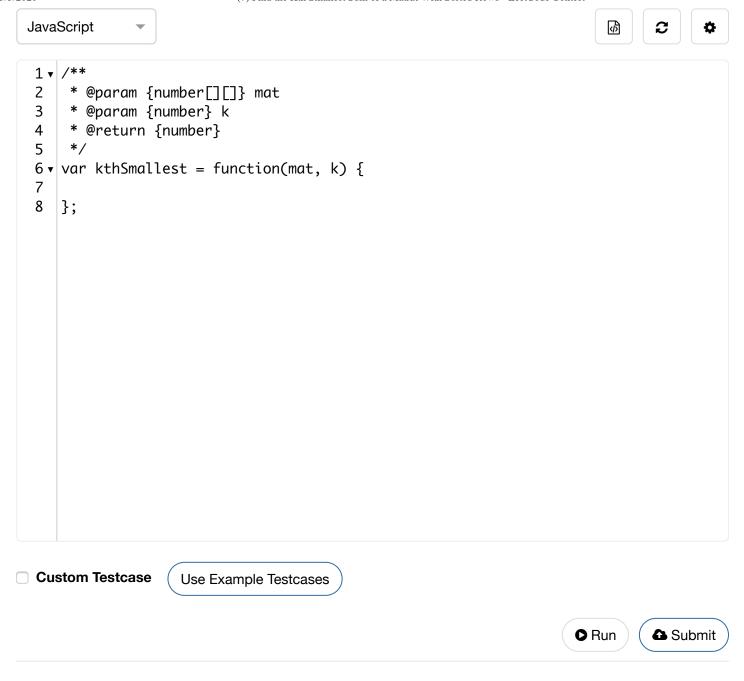
Example 4:

Input: mat = [[1,1,10],[2,2,9]], k = 7

Output: 12

Constraints:

- m == mat.length
- n == mat.length[i]
- 1 <= m, n <= 40
- 1 <= k <= min(200, n ^ m)
- 1 <= mat[i][j] <= 5000
- mat[i] is a non decreasing array.



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