Maximum sum Rectangle

Given a 2D matrix M of dimensions RxC. Find the maximum sum submatrix in it.

Example 1:

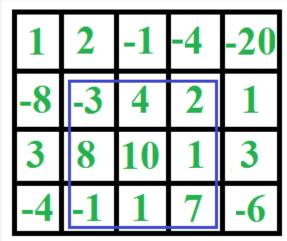
Input: R=4 C=5 M=[[1,2,-1,-4,-20], [-8,-3,4,2,1], [3,8,10,1,3], [-4,-1,1,7,-6]]

Output:

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Explanation:

The matrix is as follows and the blue rectangle denotes the maximum sum rectangle.



Example 2:

Input:

R=2

C=2

M = [[-1, -2], [-3, -4]]

Output:

-1

Explanation:

Taking only the first cell is the optimal choice.

Your Task:

You don't need to read input or print anything. Your task is to complete the function **maximumSumRectangle()** which takes the number R, C, and the 2D matrix M as input parameters and returns the maximum sum submatrix.

Expected Time Complexity:O(R*R*C)

Expected Auxillary Space:O(R*C)

Constraints:

1<=R,C<=500

 $-1000 \le M[i][j] \le 1000$