The Algorithm Design Canvas

Problem name: 2D array - DS

HIRED IN TECH

Constraints

* 6 x 6 2D array
* fixed shape of hourglass
* 16 hourglasses in our array
* each element of the array can be -9 <= a[i][j] <= 9
* 0 <= i, j <= 5

Ideas

* verify inputs validity
* maxSum = -64 (min smallest value - worst case -63, all -9)
* N x M -> matrix sizes
* define a hourglass "path" (positions to sum)
* loop until i < N - 2 and j < M - 2
* for each position we sum up hourglass values and set new max (if needed)
* return maxSum

O(n)

Test Cases

Code