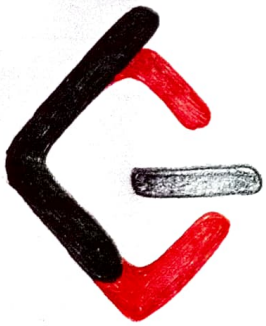


LeetCode

STRIVER'S SDE SHEET

RAISONI GROUP
a vision beyond

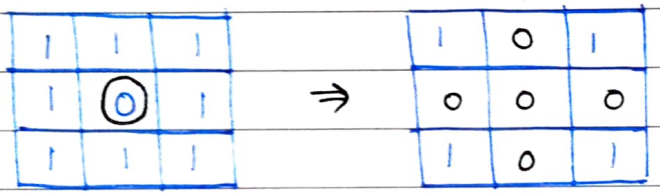
Day - 1

① Set Matrix Zeroes :- [Medium]

Given an 'mxn' integer matrix, if an element is "0" set the entire row and column to ⇒ 0.

You must do it in place :

Input :-



Brute-force approach :-

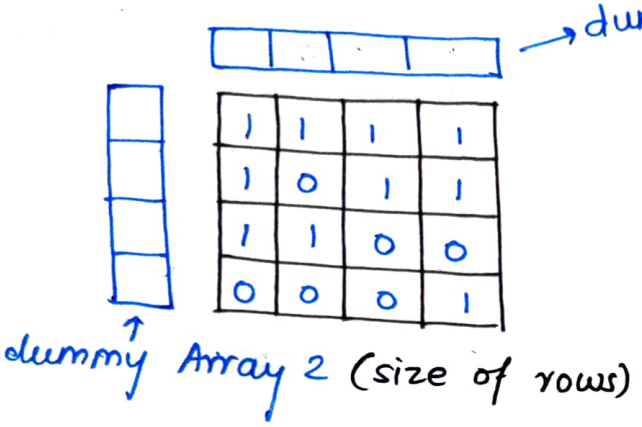
Whenever we find "0" → then go through its row and make all elements ⇒ -1.
and same, go through column and make all elements ⇒ -1

After checking the whole 2D array, then change the -1 element ⇒ to "0"
and here we have got our answer.

Complexity :- (NxM) x (N+M)

Space complexity ⇒ O(1)

Optimized approach



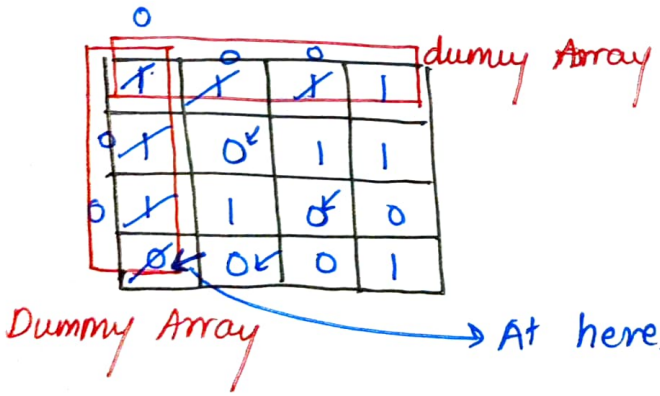
We'll take two dummy arrays

⇒ linearly traverse ⇒ Whenever you find ⇒ 0 then make
0 ⇒ in the columnth index &
0 ⇒ in the rowth index

Complexity ⇒ O(N x m + N x m)

Space Complexity ⇒ O(N) + O(M)

Most Optimized Approach :-



Take new variable
bool col = true

At here, we change ⇒ col = false;

Now travese from back & check whether for that particular element, zero is present in the dummy column array or dummy row array if yes then convert that element to Zero (0).

Time complexity = 2*(N x m)

Space Complexity ⇒ O(1)