Zero Matrix

⇒ If any element in M×N matrix is 0 then entire row & column is set to zero

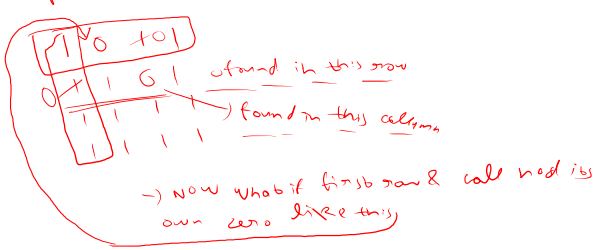
⇒ Here the problem is how are we going to deal with previously or initially zero & the new 0's.

⇒ If range > 0, what we can do is → ✗
Instead of 0 make all rows & column −1
& at last just make all −1 = 0, this is a way but this will convert initial zeros to −1 also, so this is also not possible.

Brute force → Make a copy of matrix
⇒ This will take O(mn) space
& O(m·n) time

We can reduce space
⇒ make a class & create array of that class that contains location of zero as coordinates.

→ Using above technique we can nullify & perform the task
→ But we can do this in O(1) space & O(mn) time by using the space of first row & first matrix itself.



→ Now what if first row & col need its own zero like this

So, basically first row has zero & first col has zero → This will solve it

we need to check this first