01 Matrix

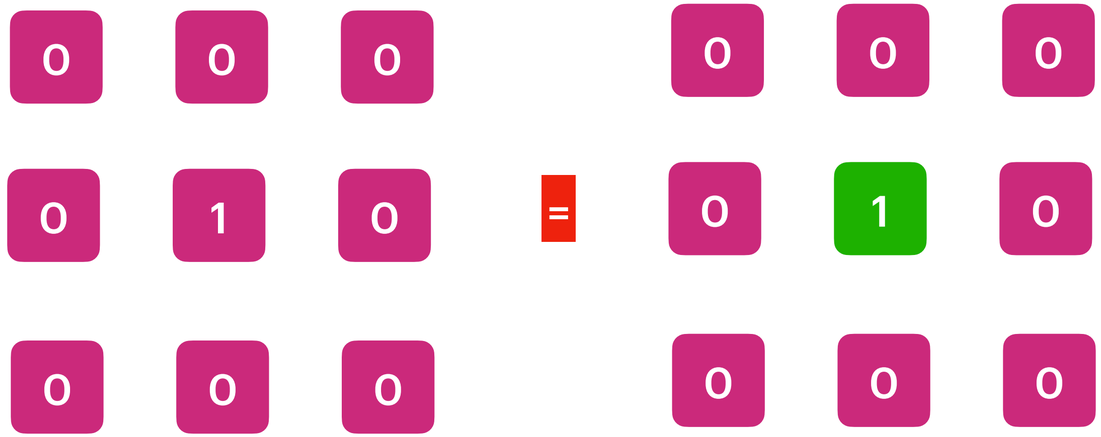
Given an m x n binary matrix mat, return the distance of the nearest 0 for each cell.
The distance between two adjacent cells is 1.

Input: mat = [
[0,0,0],
[0,1,0],
[0,0,0]
]
Output: [
[0,0,0],
[0,1,0],
[0,0,0]
]

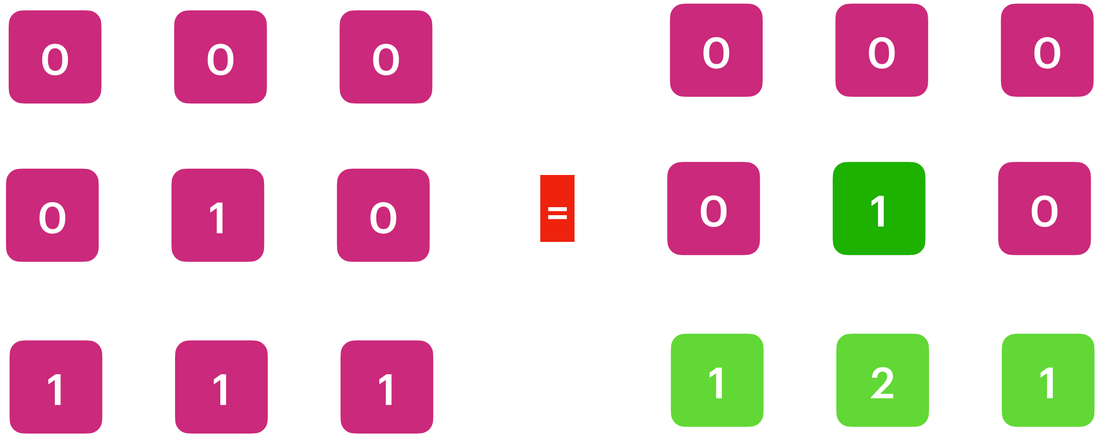
Input: mat = [
[0,0,0],
[0,1,0],
[1,1,1]
]
Output: [
[0,0,0],
[0,1,0],
[1,2,1]
]

Constraints:

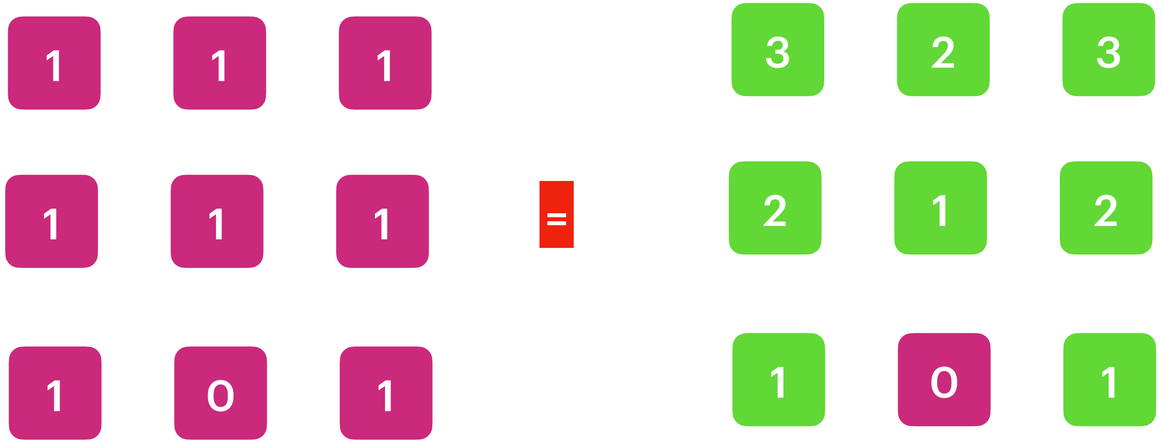
m == mat.length
n == mat[i].length
1 <= m, n <= 104
1 <= m * n <= 104
mat[i][j] is either 0 or 1.
There is at least one 0 in mat.

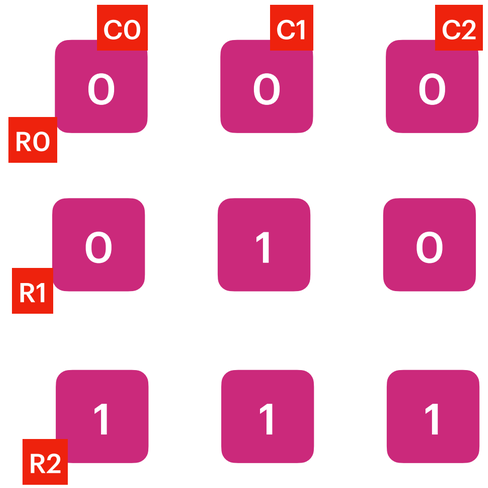


Input: mat = [
[0,0,0],
[0,1,0],
[0,0,0]
]
Output: [
[0,0,0],
[0,1,0],
[0,0,0]
]



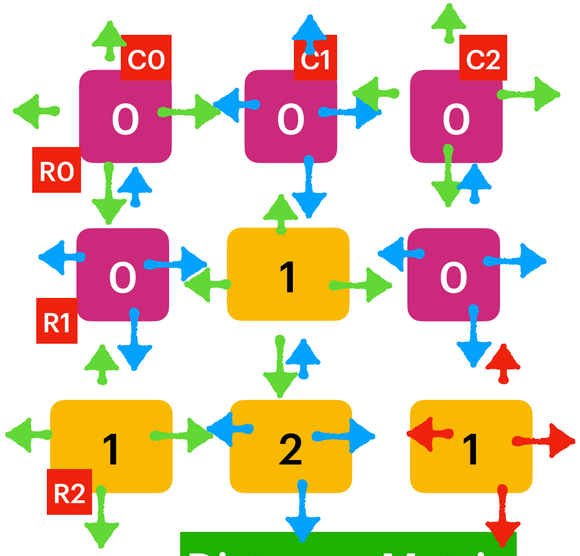
Input: mat = [
[0,0,0],
[0,1,0],
[1,1,1]
]
Output: [
[0,0,0],
[0,1,0],
[0,0,0]
]


1 1 1
1 1 1
1 0 1
=
3 2 3
2 1 2
1 0 1



Input-Matrix

=

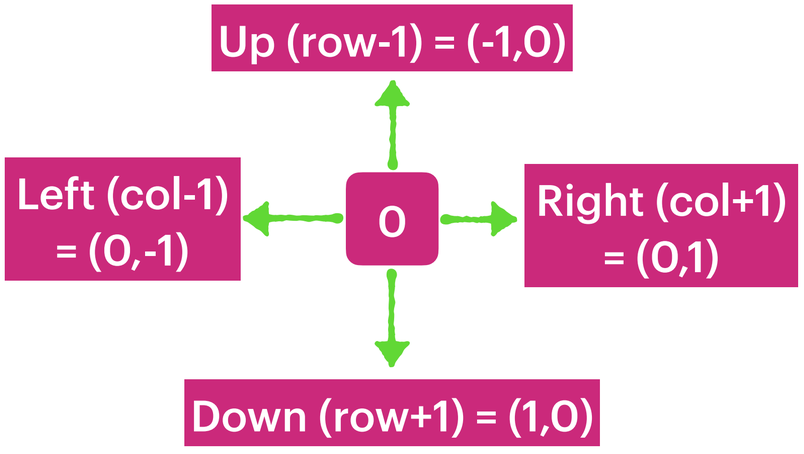


Distance-Matrix

dir_Cell > currentCell_Value + 1

Time Complexity : O(M*N)
Space Complexity : O(M*N)

Queue []



(0,0)
(0,1)
(0,2)
(1,0)
(1,2)
(1,1)
(2,0),
(2,2)
(2,1)