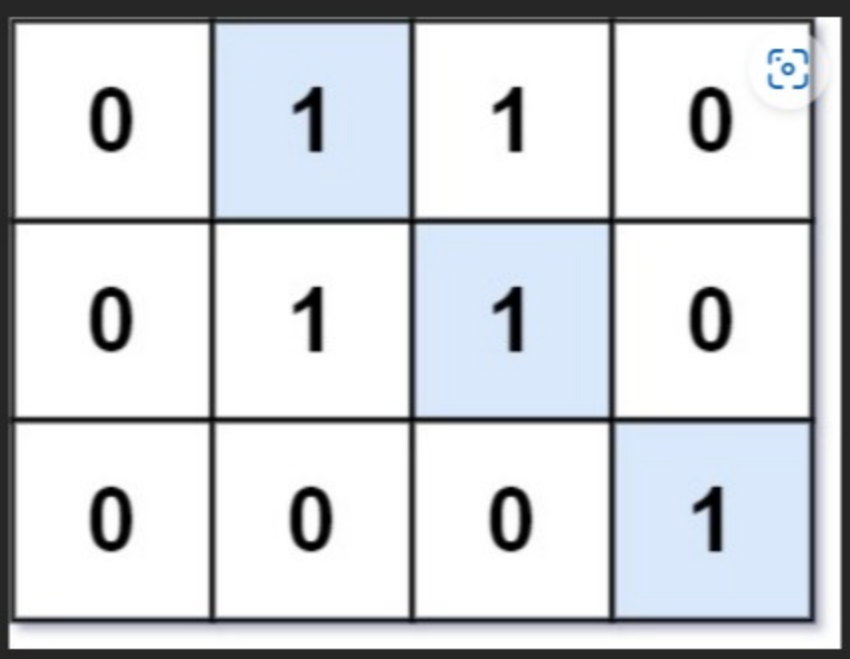
562. Longest Line of Consecutive One in Matrix Premium

Medium | Topics | Companies | Hint

Given an `m x n` binary matrix `mat`, return *the length of the longest line of consecutive one in the matrix.*

The line could be horizontal, vertical, diagonal, or anti-diagonal.

Example 1:




```
Input: mat = [[0,1,1,0],[0,1,1,0],[0,0,0,1]]
Output: 3
```

Example 2:


```
Input: mat = [[1,1,1,1],[0,1,1,0],[0,0,0,1]]
Output: 4
```

Constraints:

- `m == mat.length`
- `n == mat[i].length`
- `1 <= m, n <= 10^4`
- `1 <= m * n <= 10^4`
- `mat[i][j]` is either `0` or `1`.

Seen this question in a real interview before? 1/5

Yes No

Accepted 77.8K | Submissions 154.2K | Acceptance Rate 50.5%

Topics

Array Dynamic Programming Matrix

Companies

0 - 6 months

Google 2

6 months ago

TikTok 3

Hint 1

One solution is to count ones in each direction separately and find the longest line. Don't you think it will take too much lines of code?

Hint 2

Is it possible to use some extra space to make the solution simple?

Hint 3

Can we use dynamic programming to make use of intermediate results?

Hint 4

Think of a 3D array which can be used to store the longest line obtained so far for each direction.

Discussion (5)