

1905. Count Sub Islands

Medium

 Topics

 Companies

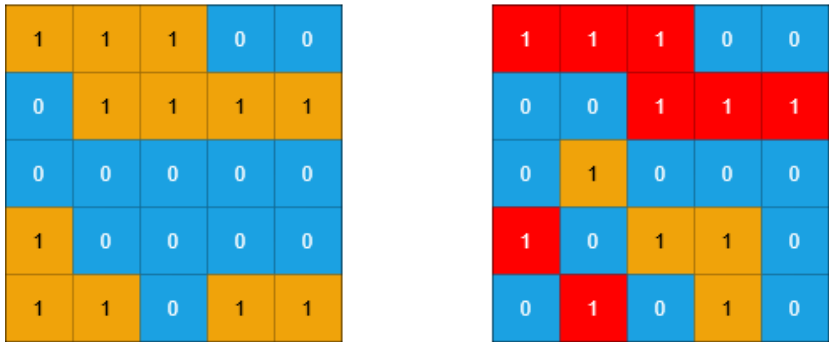
 Hint

You are given two $m \times n$ binary matrices `grid1` and `grid2` containing only 0's (representing water) and 1's (representing land). An **island** is a group of 1's connected horizontally or vertically (4-directional).

An island in `grid2` is considered a **sub-island** if there is an island in `grid1` that contains **all** the cells that make up **this** island in `grid2`.

Return the ***number** of islands in `grid2` that are considered **sub-islands***.

Example 1:

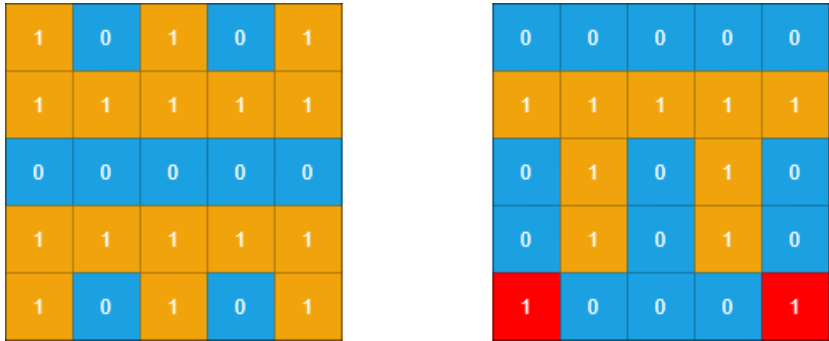


Input: `grid1 = [[1,1,1,0,0],[0,1,1,1,1],[0,0,0,0,0],[1,0,0,0,0],[1,1,0,1,1]]`, `grid2 = [[1,1,1,0,0],[0,1,1,1,1],[0,1,0,0,0],[1,0,1,1,0],[0,1,0,1,0]]`

Output: 3

Explanation: In the picture above, the grid on the left is `grid1` and the grid on the right is `grid2`. The 1s colored red in `grid2` are those considered to be part of a sub-island. There are three sub-islands.

Example 2:



Input: `grid1 = [[1,0,1,0,1],[1,1,1,1,1],[0,0,0,0,0],[1,1,1,1,1],[1,0,1,0,1]]`, `grid2 = [[0,0,0,0,0],[1,1,1,1,1],[0,1,0,1,0],[0,1,0,1,0],[1,0,0,0,1]]`

Output: 2

Explanation: In the picture above, the grid on the left is `grid1` and the grid on the right is `grid2`. The 1s colored red in `grid2` are those considered to be part of a sub-island. There are two sub-islands.

Constraints:

- $m == \text{grid1.length} == \text{grid2.length}$
- $n == \text{grid1}[i].\text{length} == \text{grid2}[i].\text{length}$
- $1 \leq m, n \leq 500$
- `grid1[i][j]` and `grid2[i][j]` are either 0 or 1.

Seen this question in a real interview before? 1/4

Yes

No

Accepted 82.5K

Submissions 122.7K

Acceptance Rate 67.3%

 Topics