200. Number of Islands

`Medium`   🏷 Topics   🔒 Companies

Given an `m x n` 2D binary grid `grid` which represents a map of `'1'`s (land) and `'0'`s (water), return *the number of islands*.

An **island** is surrounded by water and is formed by connecting adjacent lands horizontally or vertically. You may assume all four edges of the grid are all surrounded by water.

Example 1:

```
Input: grid = [
  ["1","1","1","1","0"],
  ["1","1","0","1","0"],
  ["1","1","0","0","0"],
  ["0","0","0","0","0"]
]
Output: 1
```

Example 2:

```python
class Solution:
    def numIslands(self, g: List[List[str]]) -> int:


        grid = g

        ans = 0

        m = len(grid)

        n = len(grid[0])

        arr = [[0,1],[1,0],[0,-1],[-1,0]]


        def getconnected(i,j,g):
            if (i < 0 or j < 0 or i >= m or j >= n):

                return
            if g[i][j] == "1":

                g[i][j] = "0"

                for k in arr:

                    getconnected(i+k[0],j+k[1],g)


        for i in range(0,m):

            for j in range(0,n):

                if(g[i][j] == "1"):

                    ans = ans + 1

                    g[i][j] = "0"

                    for k in arr:

                        getconnected(i+k[0],j+k[1],g)


        return ans
```