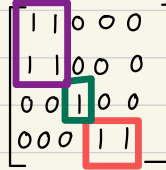
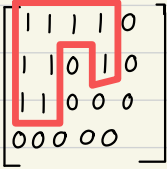


Week3 Number of Islands (#200)

200. Number of Islands

Medium 4846 180 Add to List Share

Given a 2d grid map of '1's (land) and '0's (water), count 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.



class Solution

```
def numIslands(self, grid: List[List[str]]) -> int
```

```
    if (grid is None or len(grid) == 0)
```

```
        return 0
```

```
    numIslands = 0
```

```
    for i in range(len(grid))
```

```
        for j in range(len(grid[i]))
```

```
            numIslands += self.dfs(grid, i, j)
```

```
    return numIslands
```

```
def dfs(self, grid: List[List[str]], i: int, j: int)
```

```
    if (i < 0 or i >= len(grid) or j < 0 or j >= len(grid[i]) or grid[i][j] == '0')
```

```
        return 0
```

```
    grid[i][j] = '0' # Make sunk that land so that we don't visit again
```

```
    self.dfs(grid, i+1, j) # Down
```

```
    self.dfs(grid, i-1, j) # Up
```

```
    self.dfs(grid, i, j+1) # Right
```

```
    self.dfs(grid, i, j-1) # Left
```

```
    return 1
```