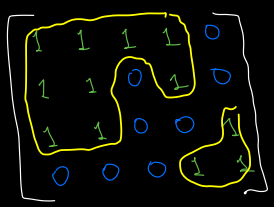
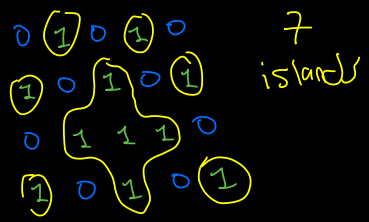
Problem: Given 2d array containing 1's (land) and 0's (water), count the # of islands.



2 islands - diagonally adj. does not count



7 islands

An island is land connected horizontally or vertically not diagonally

Intro:
- Verify Constraints
  - [] 0
  - [[], []] 0
- Create Testcases (from problem)

Brute Force:
- Brainstorming & Pattern Observations
- Pseudocode
- Write code
- Run through testcases
- Analyze time and space complexity

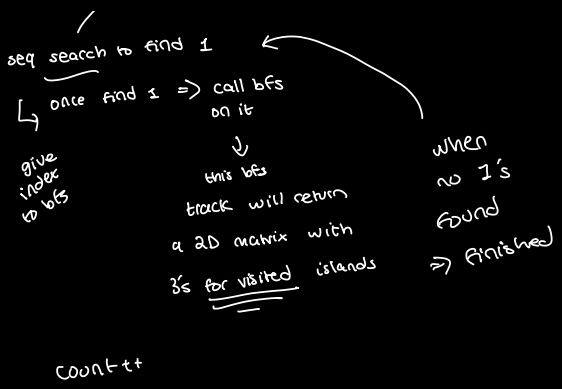
Optimal:
- Brainstorming & Pattern Observations
- Pseudocode
- Write code
- Run through testcases
- Analyze time and space complexity

seq. search

dfs, bfs
space: O(n)

Time: O(n)
space: O(1)

— no additional space


seq search to find 1
once find 1 => call bfs on it
give index to bfs
this bfs track will return a 2D matrix with 3's for visited islands
when no 1's found => finished

count++