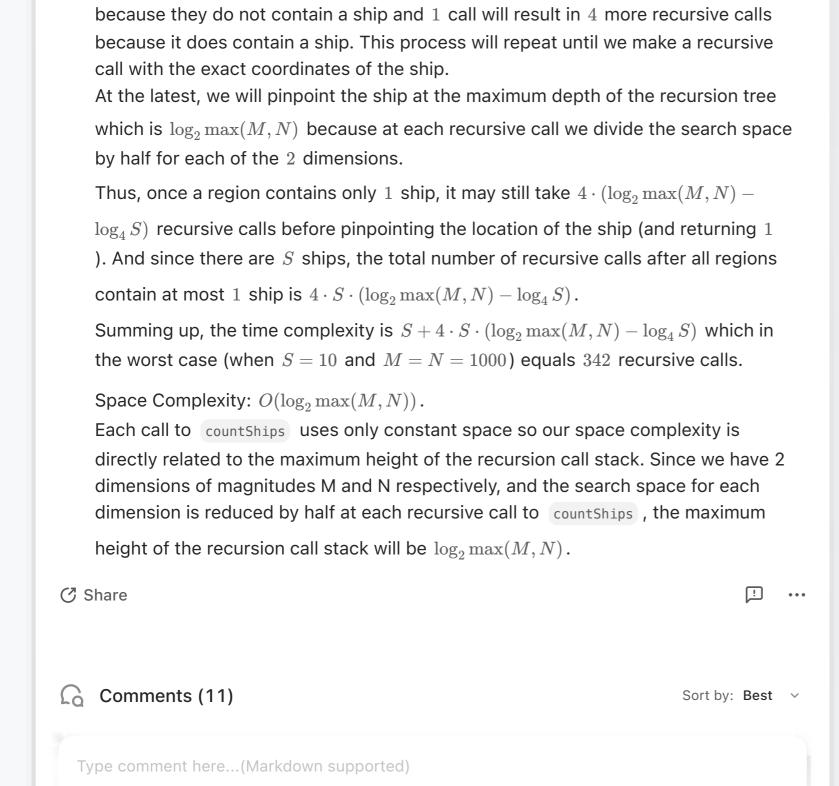


midX + 1, midY + 1



Each call to countShips requires only constant time so the time complexity will be

The worst-case scenario is when there is the maximum number of possible ships

(S=10) and they are spread out such that after S recursive calls (the $\log_4 S$ level

of the recursion tree), there are ${\cal S}$ regions that each contain ${\bf 1}$ ship and the

Each region that contains 1 ship, will result in 4 recursive calls. 3 will return 0

O(1) times the maximum possible number of calls to countShips.

Time Complexity: $O(S \cdot (\log_2 \max(M, N) - \log_4 S))$

remaining regions are empty.

