

Prompt	Scratchpad	Our Solution(s)	Video Explanation	Run Code
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Solution 1	Solution 2	Solution 3	Solution 4
<pre>1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved. 2 3 using namespace std; 4 5 bool isSquareOfZeroes(vector<vector<int>> matrix, int r1, int c1, int r2, int c2); 6 7 // O(n^4) time O(1) space - where n is the height and width of the matrix 8 ▾ bool squareOfZeroes(vector<vector<int>> matrix) { 9 int n = matrix.size(); 10 ▾ for (int topRow = 0; topRow < n; topRow++) { 11 ▾ for (int leftCol = 0; leftCol < n; leftCol++) { 12 int squareLength = 2; 13 ▾ while (squareLength <= n - leftCol && squareLength <= n - topRow) { 14 int bottomRow = topRow + squareLength - 1; 15 int rightCol = leftCol + squareLength - 1; 16 if (isSquareOfZeroes(matrix, topRow, leftCol, bottomRow, rightCol)) return true; 17 squareLength++; 18 } 19 } 20 } 21 return false; 22 } 23 24 // r1 is the top row, c1 is the left column 25 // r2 is the bottom row, c2 is the right column 26 ▾ bool isSquareOfZeroes(vector<vector<int>> matrix, int r1, int c1, int r2, int c2) { 27 ▾ for (int row = r1; row < r2 + 1; row++) { 28 if (matrix[row][c1] != 0 matrix[row][c2] != 0) return false; 29 } 30 ▾ for (int col = c1; col < c2 + 1; col++) { 31 if (matrix[r1][col] != 0 matrix[r2][col] != 0) return false; 32 } 33 return true; 34 }</pre>			

