

## Largest square formed in a matrix

**Medium** Accuracy: 38.52% Submissions: 7726 Points: 4

Given a binary matrix **mat** of size  $n * m$ , find out the maximum size square sub-matrix with all 1s.

### Example 1:

**Input:**  $n = 2, m = 2$

**mat** =  $\{\{1, 1\},$   
           $\{1, 1\}\}$

**Output:** 2

**Explanation:** The maximum size of the square sub-matrix is 2. The matrix itself is the maximum sized sub-matrix in this case.

### Example 2:

**Input:**  $n = 2, m = 2$

**mat** =  $\{\{0, 0\},$   
           $\{0, 0\}\}$

**Output:** 0

**Explanation:** There is no 1 in the matrix.

### Your Task:

You do not need to read input or print anything. Your task is to complete the function **maxSquare()** which takes  $n, m$  and **mat** as input parameters and returns the size of the maximum square sub-matrix of given matrix.

**Expected Time Complexity:**  $O(n \cdot m)$

**Expected Auxiliary Space:**  $O(n \cdot m)$

**Constraints:**

$1 \leq n, m \leq 50$

$0 \leq \text{mat}[i][j] \leq 1$

### Company Tags



☐ Amazon   ☐ Samsung

### Topic Tags



☐ Dynamic Programming

### Related Interview Experiences



☐ Samsung r d bangalore internship experience 2018