

Computer Science II – Prepa Tec Campus Eugenio Garza Lagüera
Activity 9: Multidimensional arrays

Name: _____

Student Id: _____

Section 1. Declare the next arrays

- An array of integers called M1 with 100x100 dimensions.

- An array of booleans called M2 with 1x1 dimensions.

- A matrix M3 of 3 rows and 250 columns.

- A square matrix (same amount of rows and columns) called M4 with 10x10 dimensions.

Section 2. Design a function *countZeroes* that returns how many zeroes are in a matrix. Consider that the matrix can have any dimensions and could even be a ragged array.

For example,

4	3	4
2	0	6
0	7	0

Should yield a result of 3.

Section 3. Do a code trace for the following problems.

Problem 1.

```
double M[][];  
M = new double[2][2];  
double x;  
for (int i = 0; i < M.length; i++) {  
    for (int j = 0; j < M[0].length; j++) {  
        M[i][j] = i * 2 + j;  
    }  
}  
  
x = M[0][0] + M[0][1] + M[1][0] + M[1][1];
```

x = _____

M:

Problem 2.

```
int C[][];  
C = new int[2][3];  
for (int i = C.length - 1; i >= 0; i--) {  
    for (int j = 0; j < C[0].length; j++) {  
        C[i][j] = i;  
    }  
}
```

C:

Section 5. Pick two problems from the next list and solve them. Copy only the answers here.

867. Transpose Matrix

<https://leetcode.com/problems/transpose-matrix/>

566. Reshape the Matrix.

<https://leetcode.com/problems/reshape-the-matrix/>

1252. Cells in Odd Values in a Matrix

<https://leetcode.com/problems/cells-with-odd-values-in-a-matrix/>