TOPICS:Multi Dimentional Arrays **Allowed Time:** 60 Minutes
Instructions: **Total Marks:** 50

1. Gossips are not allowed.
2. Teacher assistants are for your help, so be nice with them. Respect them as they are teaching you. Raise your hands if you have some problem and need help from TA. Avoid calling them by raising your voice and disturbing the environment of Lab.
3. TA may deduct your marks for any kind of ill-discipline or misconduct from your side.
4. Evaluation will be considered final and you cannot debate for the marks. So, focus on performing the tasks when the time is given to you.

Task 01: (10 Marks, 15 min)

You are given a binary matrix (only 0's and 1's).
Your tasks are to make two functions:

1. Identify the row (0-based index) that contains the maximum number of 1's.
2. Identify the column (0-based index) that contains the maximum number of 1's.

Sample Output:

```
Enter the number of rows and columns: 3 4
Enter the elements of the matrix:
1 0 1 0
1 0 0 0
1 1 1 1
2 row is with highest no of ones
0 col is with highest no of ones
```

Task 02: (15 Marks, 15 min)

Given an array consisting only of integers 0, 1, and 2, sort the array in ascending order. You are required to do it without using nested loops.
(5 marks if used nested loops)

Sample Output:

Enter array size: 6
Enter array elements: 0 1 2 0 0 1
Sorted Array: 0 0 0 1 1 2

Task 03: (15 Marks, 25 min)

You're given an N x N square matrix.
Rotate it 90 degrees clockwise in-place, without using any extra matrix.
Break the logic into atleast 2 functions.

Sample Output:

```
Enter the size of square matrix: 3
Enter the elements of the matrix:
1 2 3
4 5 6
7 8 9
Rotated Matrix by 90 degrees clockwise:
7 4 1
8 5 2
9 6 3
```