National University of Computer and Emerging Sciences, Lahore Campus

Course:	**Object Oriented Programming**	**Course Code:**	**CS217**
Program:	**BS(Computer Science)**	**Semester:**	**Spring 2021**
Due Date:	**29-March-2021**	**Total Marks:**	**10**
Section:	**2E**	**Weight (Tentative)**	**3%**
Evaluation:	**Assignment-01**	**Page(s):**	**2**

Submission Path: Google classroom

Question 01:

You are given a 2D array having some elements as shown below. Your task is to remove all zero elements from the array by making a new 2D array and assign it only the non-zero elements. Assume that rows and columns of the input array are defined by the user.

2	3	1	0	0	0
0	0	0	1	1	0
1	0	0	0	0	0
1	1	1	2	0	2
5	0	0	0	10	0

Output Array:

2	3	1	
1	1		
1			
1	1	2	2
5	10		

Question 02:

You are given a 2D binary array, where there are only 1's and 0's in the array. Your task is to compress the input binary array by counting ones and create new array which will contains the count of ones and second column will contains the digit 1. Further, you need to use the compressed array to transform it to the original input array.
(Note: you can use another 2D array as intermediate array).

Input Array:

1	1	1	0	0	0
0	0	0	1	1	0
1	0	0	0	0	0
1	1	1	0	0	1
1	0	0	0	1	0

Output Array-01:

3	1
2	1
1	1
4	1
2	1

Output Array-02:

Use intermediate 2D array for the location of 1 (or 0). In this 2D array the first row will contain the location of 1. For example the first row will looks like this 1, 2, 3. Which represents that 1s in first row are at location 1, 2 and 3 and rests of the elements are zero.

1	1	1	0	0	0
0	0	0	1	1	0
1	0	0	0	0	0
1	1	1	0	0	1
1	0	0	0	1	0