COMPUTER PROGRAMMING LAB
(BITS Pilani - K K Birla Campus)
Sem 2 2018-19/Lab 10 – C programming (2-Dimensional Arrays)
Sections 1, 2 and 3– Monday 5:00 pm to 6:15 pm

Course No: *CS F111*   Total: 5 Marks

Question#1   [3M+2M]

Create two **n X n** matrices which store elements by the following method: User enters **n X n** elements for each array. For each entered element, find **element MOD n** to determine the row number where the element will be placed in the array. i.e., if the element is 15 and n is 3, then the element will be placed in 0th row of the array. In same row, the elements will be placed from left to right. In any row, if the number of elements stored is n, then no more elements can be added to that row. After reading n X n input elements if any of the locations are not filled in the array, they have to be filled with zeroes. You need to repeat the same procedure for the second array as well. After filling both arrays, check whether the first array is the permutation of the second array. First array is the permutation of second array if and only if the elements in both the arrays are same (they need not be in same position). You are not allowed to use additional array for this program.

Sample Input :
Enter n : 3
Enter the elements to store in the first matrix
15 25 26 21 56 34 32 21 25
The first matrix is
15 21 21
25 34 25
26 56 32
Enter the elements to store in the second matrix.
25 24 12 26 20 27 44 87 76
The second matrix is
24 12 27
25 76 0
26 20 44
The first matrix is not the permutation of the second matrix.

Sample Input:
Enter n : 4
Enter the elements to store in the first matrix.
27 29 34 45 32 46 56 89 23 78 67 99 21
43 100 121
The first matrix is
32 56 100 0
29 45 89 21
34 46 78 0
27 23 67 99
Enter the elements to store in the second matrix.

34 45 29 27 46 89 32 56 78 99 67 23 100

21 43 121

The second matrix is

32 56 100 0

45 29 89 21

34 46 78 0

27 99 67 23

The first matrix is the permutation of the second matrix.