**Assignment 2**

**CLO1-Programming Fundamentals**

**Instructions:**

* **This is an individual task.**
* **Only hand written submission will be accepted. Attach software simulations where needed.**
* **No late submission will be accepted.**

1. Given an array of distinct integers, return all the possible permutations. You can return the answer in any order.

**Example: Input nums=[4,5]**

**Output: [4,5], [5,4]**

1. Take an array of 10 elements and sort this array in the descending order using insertion sort algorithm. Show all the steps of how insertion sort algorithm works?
2. Write a C++ program for adding two matrices of the same order.
3. Write a C++ program for multiplication of two matrices. The program should check first matrices can be multiplied or not?
4. Write a C++ program for finding the largest element of each row and each column for a 2D array.

The output should look like this

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 4 | 6 | 8 | 9 | 10 |
| 6 | 9 | 65 | 54 | 22 |
| 22 | 1 | 4 | 5 | 8 |

Maximum element in each row is:

Row1: 10

Row2: 65

Row3: 22

Maximum element in each column is:

Column1: 22

Column2:9

Column3:65

Column4:54

Column5:22