National University
of Computer & Emerging Sciences

Student Name: _____   Roll No: _____
Program: BS (AI)   Quiz#01
Semester: Fall 2023   Marks: 10
Time Allowed: 20 minutes   Date: September 4, 2023
Course: CS2001 - Data Structures   Instructor: Waqas Ali

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1. Suppose that an **array based list** of sorted integers exists in memory. Write a function (named sortedInsert) that inserts a value in the list at its **proper position**, such that after inserting the value, the list is still sorted. The list can either be in ascending or descending order, **your function must work for both types**. You can write a separate function to determine whether the list is sorted in ascending or descending order. Consider the array list class is **already present**. [**CLO1**]

   For Example:

1	4	6	11		

   If we want to insert 8 in to the above list, the **correct position** of 8 is between 6 and 11.

   Note: You are not allowed to sort the list after insertion, you have to insert the value in its proper position.