



Sukkur IBA University Kandhkot Campus

Lab Task - I Fall 2022

Course: Data Structures

Date: September 14, 2022

Instructor: Syed Muzamil Hussain Shah

Class: BS (CS) – III

Time: 2 hour

General Instructions:

You will implement LinkedList from scratch with some basic functionalities in this lab task. if you could not complete this task in lab ses

Question 01 Linked List Code

[CLO 1, GA1]

Create a Generic Linked List class and add the following:

1. Add private Node class with self-referencing node class variable, data variable(Generic type), and a 2 argumentative constructor.
2. define head and tail global variables of node class in the LinkedList class.
3. Add constructor in LinkedList class initialize head and tail.
4. Add addFirst(AnyType data) method.
5. Add addLast(AnyType data) method
6. Add PrintAll() method
7. Add Main() method

You can implement the following methods now or you can take it HW

8. Add getSize() method that total number of nodes.
9. Add a clear() method that deletes all nodes of the linked list.
10. Add isEmpty() method that returns true if there node in the linked list and false if there is at least one node.
11. Add FindNode(AnyType data) it returns the position of the node in the linked list.
12. Add removeAt(int index), which removes the node of a given index.