## Data Structure Lab Syllabus (2<sup>nd</sup> Year)

## Asst.Lecturer: Zainab Mahmood Fadhil

N0.	Experiment Name	Objective
1	Linked List Implementation of ADT- Singly Linked List	To write a program to implement the single linked list.
2	Stack ADT using Array	To Implement a Stack Abstract Data Types
		using Array data structure.
3	Evaluate postfix Expression	To implement evaluation postfix algorithm
4	Stack ADT using Linked List	To Implement a Stack and Queue Abstract
		Data Types using Linked List Data structure
		C++ programs to implement the following
		using a linked list.
5	Queue ADT using Array	To Implement a Queue Abstract Data
		Types using Array data structure.
6	Deque ADT using Linked List	To Implement a Deque Abstract Data
		Types using doubl Linked List Data
		structure
7	PRIORITY QUEUE USING HEAP	To implement priority queue using Heap.
8	Binary Search Tree	Write a C++ program to perform the
	,	following operations:
		a) Insert an element into a binary search
		tree.

		<ul> <li>b) Delete an element from a binary search tree.</li> <li>c) Search for a key element in a binary search tree.</li> </ul>
9	Hash table ADT	Write a C++ program to implement all the functions of a dictionary (ADT) using hashing.
10	Marge Sort and Heap Sort	Write C++ programs for implementing the following sorting methods:
11	binary search	implement binary search