National University

Of Computer & Emerging Sciences Peshawar Campus

CL-2001– Data Structures Lab

OUTLINE

Course Code	CL-2001
Course title	Data Structures Lab
Credit hours	1
Prerequisite	OOP
Assessment With weights	Lab Task: 30 Assignment: 10 Quiz: 10 Final: 50

Lab No & Duration	Topics
Lab#01: (3hrs)	1. Pointers. 2. Pointers with Arrays and string. 3. Passing pointers to a function. 4. Returning pointer from a function.
Lab#02: (3hrs)	1. Pointer to Function 2. DMA
Lab#03: (3hrs)	1. Abstract Data Type
Lab#04: (3hrs)	1. Linked List(insertion) 2. Linked List(deletion) 3. Linked List(searching) 4. Linked List (Traversal)
Lab#05: (3hrs)	1. Doubly Linked List 2. Circular Linked List

Lab#06: (3hrs)	1. Stack ADT 2. Stack Linked list 3. Infix 4. Prefix 5. Postfix
Lab#07: (3hrs)	1. Queue Operations 2. Circular Linked list 3. Priority Queue
Lab#08: (3hrs)	1. Queue Operations 2. Circular Linked list 3. Priority Queue
Lab#09: (3hrs)	1. Binary Search Tree (BST)
Lab#10: (3hrs)	1. Binary Search Tree BST 2. Insertion in BST 3. Deletion in BST 4. Searching in BST 5. Traversal (in-order, post-order, pre-order)
Lab#11: (3hrs)	1. AVL 2. Insertion in AVL 3. Deletion in AVL
Lab#12: (3hrs)	1. Binary Heap 2. Max, Min Heap 3. Heapify 4. Heap Sort
Lab#13: (3hrs)	1. Hashing 2. Chaining 3. Linear, Quadratic Probing
Lab#14: (3hrs)	1. Graph 2. Adjacency Matrix 3. Adjacency List
Lab#16: (3hrs)	1. Breath First Search

	2. Depth First Search