National University of Computer and Emerging Sciences

Lab Manual

for

Data Structure

Course Instructor	Ms. Zareen Alamgir
Lab Instructor(s)	Ms. Mamoona Akbar Ms. Ammara
Section	DS BCS-3C
Semester	FALL 2022

Department of Computer Science
FAST-NU, Lahore, Pakistan

Lab Manual 10

Objectives:

After performing this lab, students shall be able to revise:

- ✔ AVL

Problem 1

In this lab, you have to create a template based AVL in which they have one data member Node *root and have following member function insert,delete, search, print (inorder,preorder and postorder), destructor, copy constructor.

Note: Make AVL tree in such a way that can handle duplicates.

Also perform some more functionalities

Input a tree and find out if its an AVL or not(remember AVL is a balanced BST such that Balanced factor of each node is -1,0,1

write a recursive function to find the maximum element

write a recursive function to find the second and third maximum element

write iterative inorder function.