

LAB ASSIGNMENT 3
DATA STRUCTURES AND ALGORITHMS– II (SEM – IV)
DEPARTMENT OF COMPUTER ENGINEERING AND IT
COLLEGE OF ENGINEERING PUNE

Implement ADT AVL Tree using a linked list of nodes of structure having Balance_Factor, Student Name, left pointer, right pointer, and parent pointers pointing to left sub-trees, right sub tree and parent of the node respectively. Perform series of insertions of Student Names like : Tushar, Amit, Danish, Vineet, Kamal, Chandrakant, Vijay, Zinia, Anil,...(include 50 such random names)

Write following functions:

initAVL() // to initialize the tree.

insertNode() // recursive/ non-recursive function to add a new node to the AVL tree.

removeNode() // to remove a node from a tree.

traverse() // write any of the traversal method to display month name, parent and balance_factor of each node.

destroyTree() // to delete all nodes of the tree

Write a menu driven program to invoke all above functions. (10 Marks).