

CC4 Laboratory Activity #9
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Topics Covered: AVL Trees

Estimated Completion Time: 3 meetings (6 hours)

Objectives:

1. To appreciate and understand how AVL trees are represented using arrays.
2. To be able to simulate insertion and deletion of elements/nodes from an AVL tree with the corresponding rebalancing algorithms.

Problem: Create a running program that simulates how AVL trees are represented using arrays by:

- a. Asking the user to input any series of integers in an array.
- b. Writing the appropriate algorithm to build an AVL tree out of the given inputs.
- c. Displaying the array representation of the AVL tree.
- d. Allowing the user to Insert and Delete elements/nodes using the appropriate insertion and deletion algorithms discussed in class.
- e. Displaying the resulting changes in the AVL tree after each insertion and deletion.