Data Structure and Algorithm
Quiz-06 (Fall 2023)

Name: _____ **Roll No:** _____ **Date:** _____

Instructor: Dr. Tanweer Bukhari **Section: D5** **Marks:** 15 **Time:** 20 minutes

Task 1: Adelson-Velsky and Landis(AVL) Tree

Insert 25, 110, 30, 61, -15, 43, and 90 into an empty Adelson-Velsky and Landis (AVL) Tree and write down the results of Inorder, Preorder, and Postorder Traversals.

Solution:
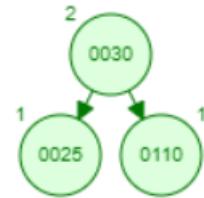
Insert 25
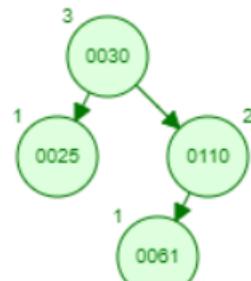
Insert 110
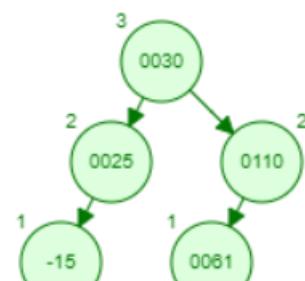
Insert 30
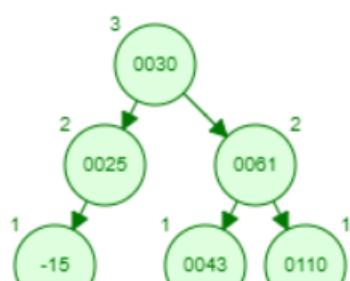
Insert 61
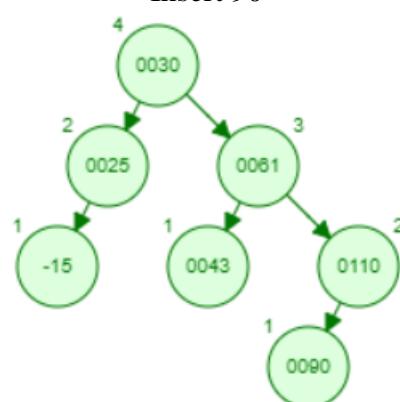
Insert -15

Insert 43

Insert 90

In-order traversal: -15, 25, 30, 43, 61, 90, 110
Post-order traversal: -15, 25, 43, 90, 110, 61, 30
Pre-order traversal: 30, 25, -15, 61, 43, 110, 90

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Task 1: Adelson-Velsky and Landis(AVL) Tree
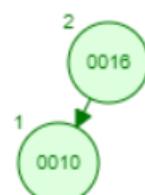
Insert 16, 10, 30, 61, -15, 43, and 90 into an empty Adelson-Velsky and Landis (AVL) Tree and write down the results of Inorder, Preorder, and Postorder Traversals.

Solution:
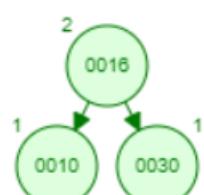
Insert 16
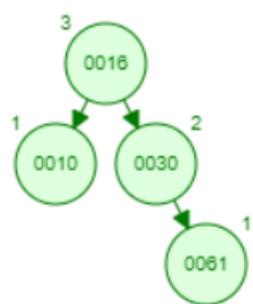
Insert 10
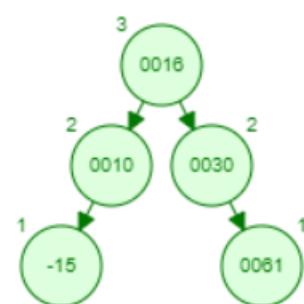
Insert 30
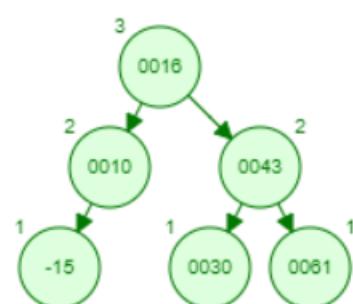
Insert 61
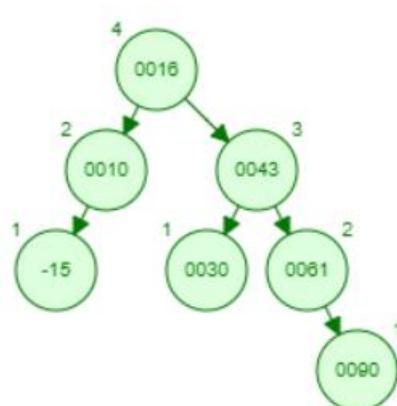
Insert -15

Insert 43

Insert 90

In-order traversal: -15, 10, 16, 30, 43, 61, 90
Post-order traversal: -15, 10, 30, 90, 61, 43, 16
Pre-order traversal: 16, 10, -15, 43, 30, 61, 90
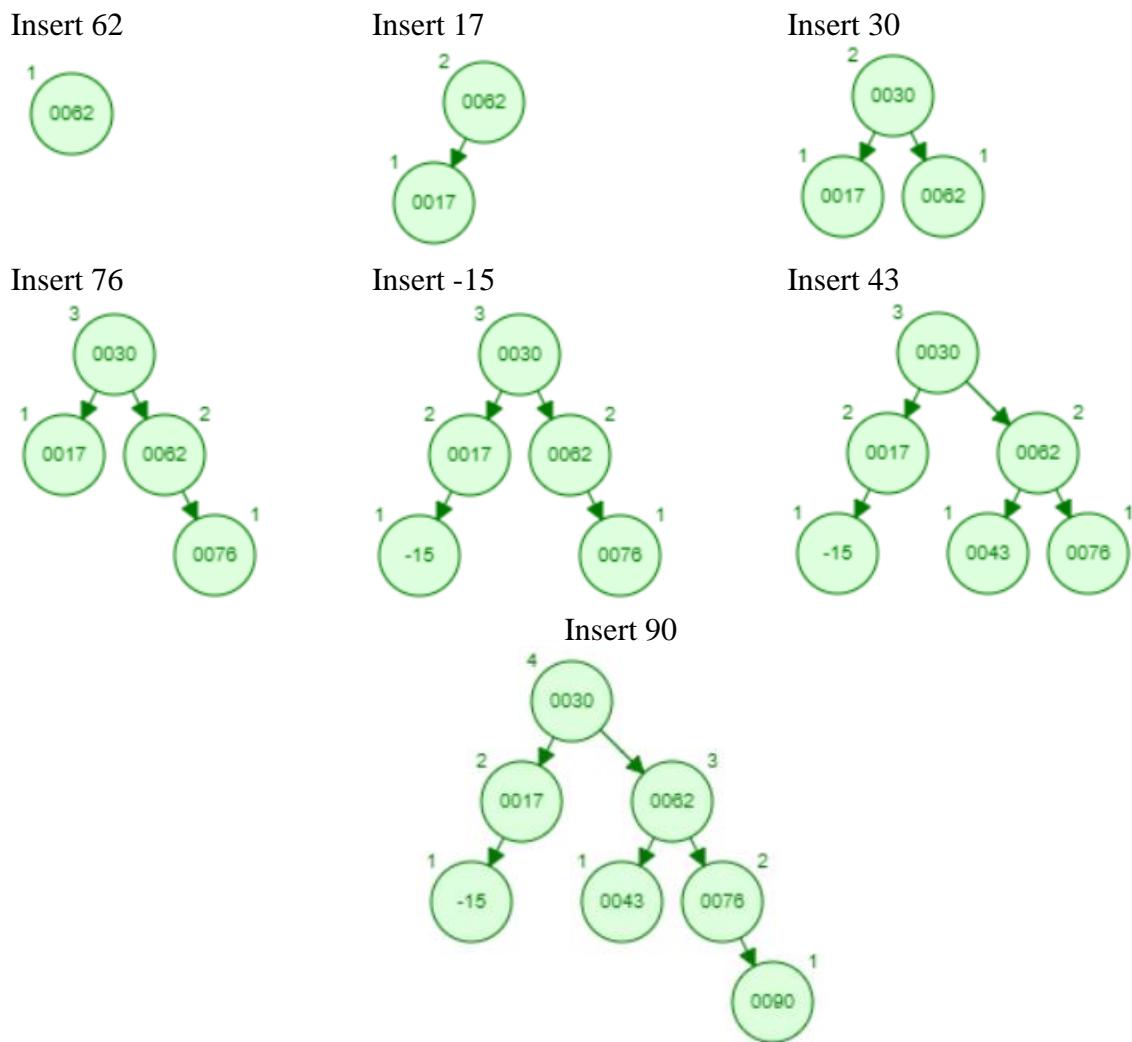
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Name: _____	**Roll No:** _____	**Date:** _____
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Task 1: Adelson-Velsky and Landis(AVL) Tree

Insert 62, 17, 30, 76, -15, 43, and 90 into an empty Adelson-Velsky and Landis (AVL) Tree and write down the results of Inorder, Preorder, and Postorder Traversals.

Solution:

Insert 62


Insert 17

Insert 30

Insert 76

Insert -15

Insert 43

Insert 90

In-order traversal: -15, 17, 30, 43, 62, 76, 90
Post-order traversal: -15, 17, 43, 90, 76, 62, 30
Pre-order traversal: 30, 17, -15, 62, 43, 76, 90

Name: _____ **Roll No:** _____ **Date:** _____

Instructor: Dr. Tanweer Bukhari   **Section: D5**   **Marks:** 15   **Time:** 20 minutes

Task 1: Adelson-Velsky and Landis(AVL) Tree
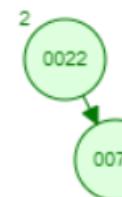
Insert 22, 71, 33, 55, -15, 43, and 90 into an empty Adelson-Velsky and Landis(AVL) Tree and write down the results of Inorder, Preorder, and Postorder Traversals.

Solution:
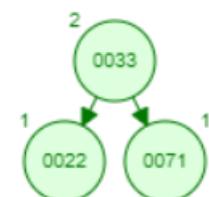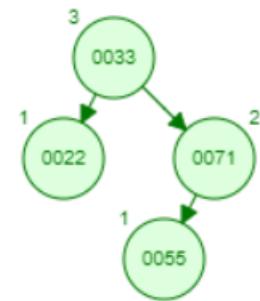
Insert 22

Insert 71
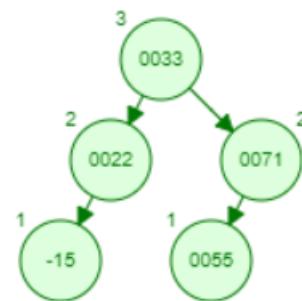
Insert 33
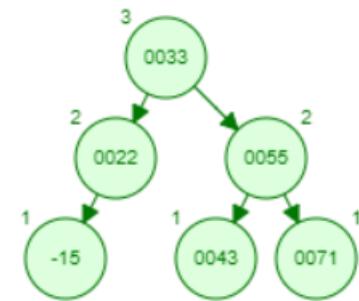
Insert 55
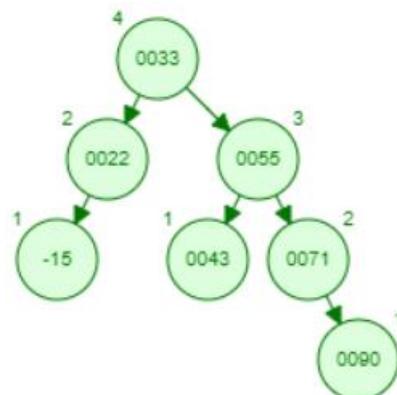
Insert -15

Insert 43

Insert 90

In-order traversal: -15, 22, 33, 43, 55, 71, 90
Post-order traversal: -15, 22, 43, 90, 71, 55, 33
Pre-order traversal: 33, 22, -15, 55, 43, 71, 90

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Task 1: Adelson-Velsky and Landis(AVL) Tree
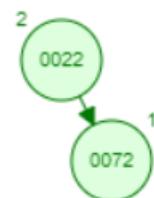
Insert 22, 72, 44, 55, -115, 33, and 90 into an empty Adelson-Velsky and Landis (AVL) Tree and write down the results of Inorder, Preorder, and Postorder Traversals.
Solution:
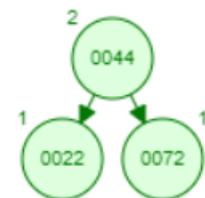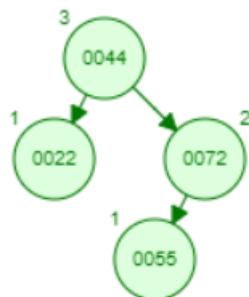
Insert 22

Insert 72
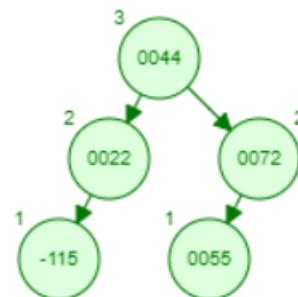
Insert 44
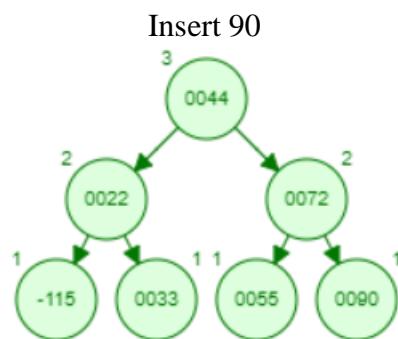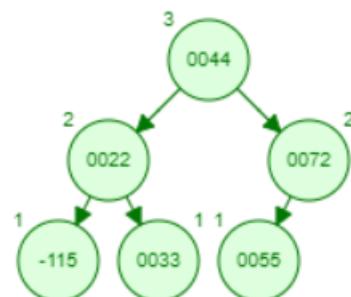
Insert 55

Insert -115

Insert 33

Insert 90

Inorder traversal: -115, 22, 33, 44, 55, 72, 90
Postorder traversal: -115, 33, 22, 55, 90, 72, 44
Preorder traversal: 44, 22, -115, 33, 72, 55, 90

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