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CS293 Q 1: Lab 4: Consider an AVL tree. It is a self-balancing binary search tree in which the difference of heights of the left and right subtrees (or the balance factor) of any node is at most one. If at any time during insertion or deletion, the balance factor becomes more than one, rebalancing is done via restore.

Question Consider you have initialized an AVL tree. Given the properties and operations associated with AVL trees, evaluate the following statements:

Every AVL tree is a binary search tree, but not every binary search tree is an AVL tree.

All right-skewed binary search trees are AVL trees.

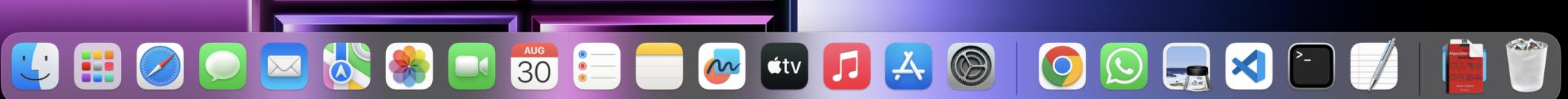
AVL trees prioritize having as few nodes as possible over being balanced.

If a node in an AVL tree has a node such that $(\text{height left subtree} - \text{height right subtree})$ is 2 or -2, the tree is still considered balanced.

Answer

Note: please be careful before submitting the answer. You will not be able to change the answers.

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CS293 Q 1: Lab 4: Consider an AVL tree. It is a self-balancing binary search tree in which the difference of heights of the left and right subtrees (or the balance factor) of any node is at most one. If at any time during insertion or deletion, the balance factor becomes more than one, rebalancing is done via restore.

Question Consider you have initialized an AVL tree. Given the properties and operations associated with AVL trees, evaluate the following statements:

You have answered the following:

✓ Every AVL tree is a binary search tree, but not every binary search tree is an AVL tree. (You are correct)

✗ All right-skewed binary search trees are AVL trees. (You are correct)

✗ AVL trees prioritize having as few nodes as possible over being balanced. (You are correct)

✗ If a node in an AVL tree has a node such that (height left subtree - height right subtree) is 2 or -2, the tree is still considered balanced. (You are correct)

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