

## AVL tree

- a. Given AVL Tree in Figure 1. **Simulate nodes in the tree** by using the given insert operations\*  
**+25, +10, +78, +90, +89**

*\*Please state each violation that might happen during the operation and explain the solution to solve the violation.*

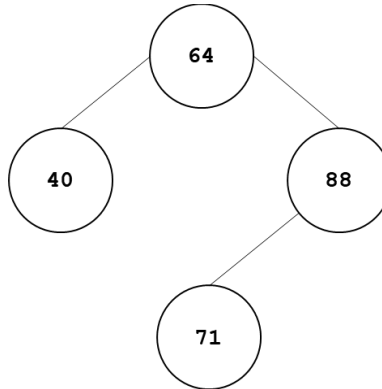


Figure 1. AVL Tree for Insert Operations

- b. Given AVL Tree in Figure 2. **Simulate nodes in the tree** by using the given delete operations\*  
**-52, -79, -37, -55, -44**. Delete (-) using **predecessor** (most significant value of the left subtree).

*\*Please state each violation that might happen during the operation and explain the solution to solve the violation.*

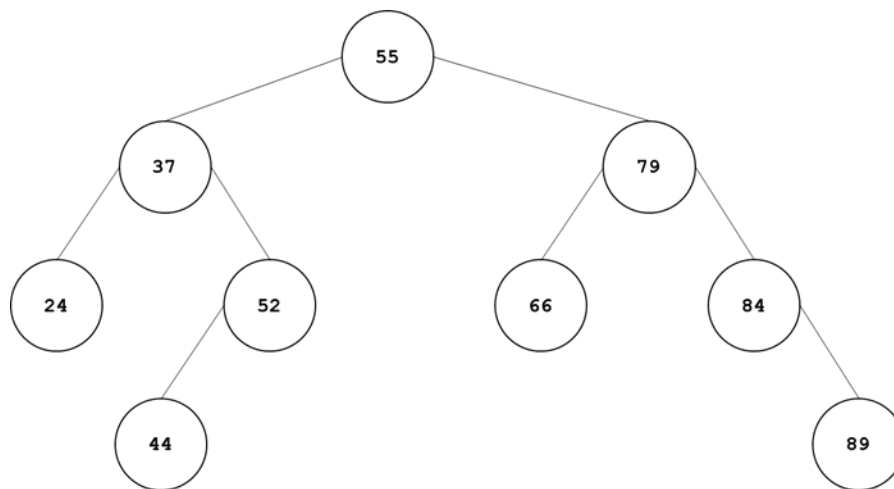


Figure 2. AVL Tree for Delete Operations