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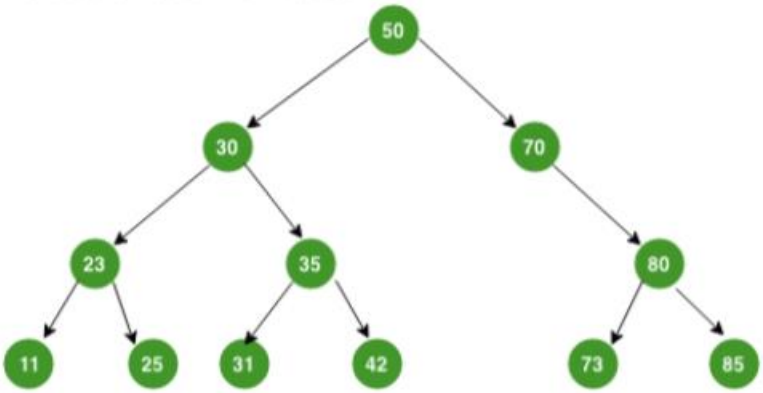
Section 3: Problem 1:

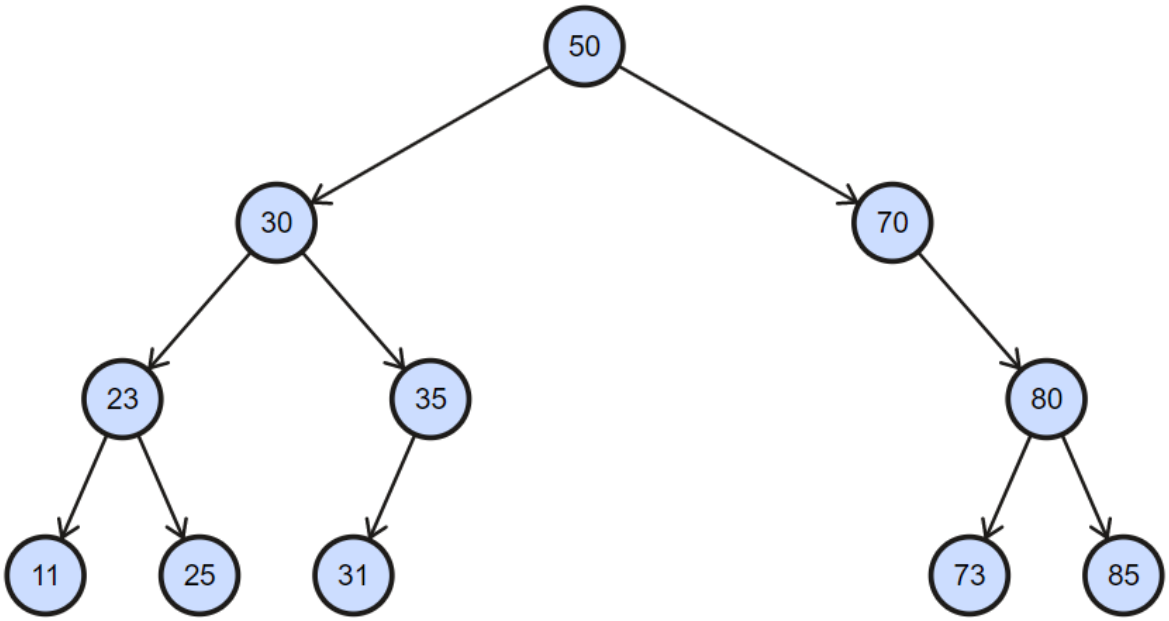


1- Delete node with value 42

Explanation:

Since the target has no children, we delete the node by setting the pointer to of the node with value 35 (parent node) pointing to the target node to null.

Drawing:

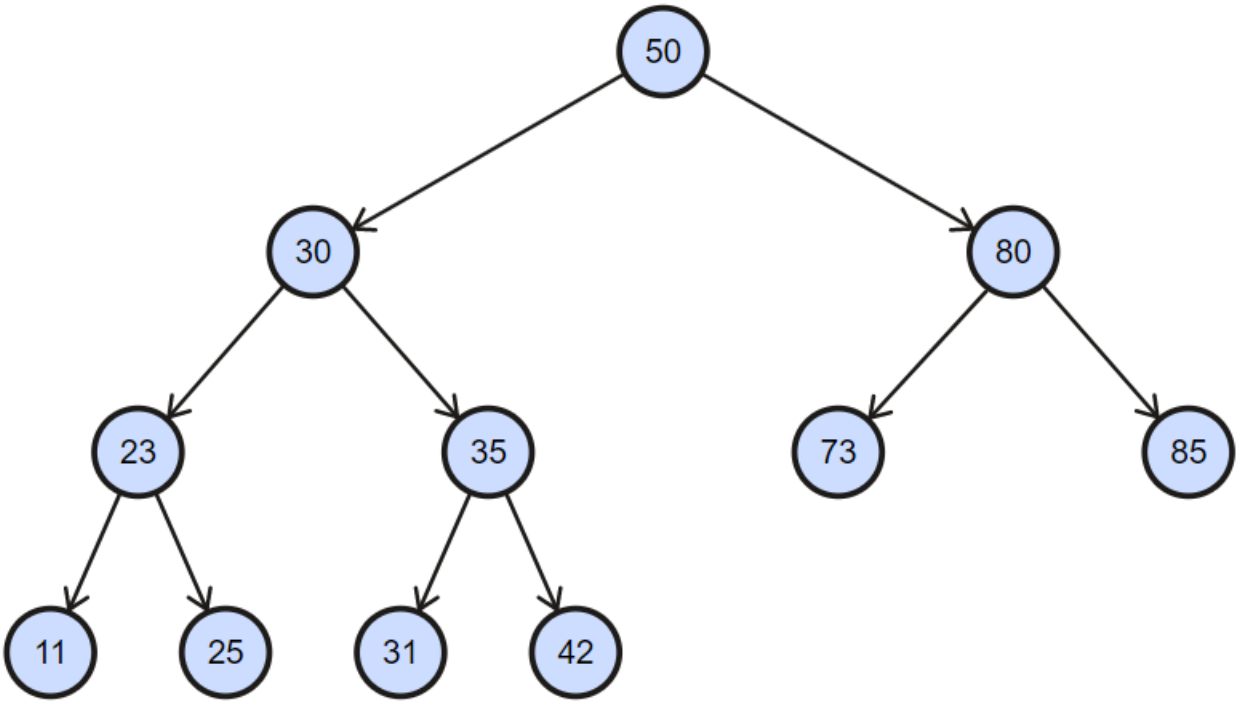


2- Delete node with value 70

Explanation:

As the target had one child, we connected node with value 50 (parent node) to the child by setting the pointer to point at node with value 80 (child node), then erased node with value 70.

Drawing:



3- Delete node with value 30

Explanation:

Since the target node has two children, we searched for the node which has the minimum value in the right of the target node, we replaced the value of the target node and the node with minimum value, and then we removed the duplicate node with the same value. (Deletion by copying)

Drawing: