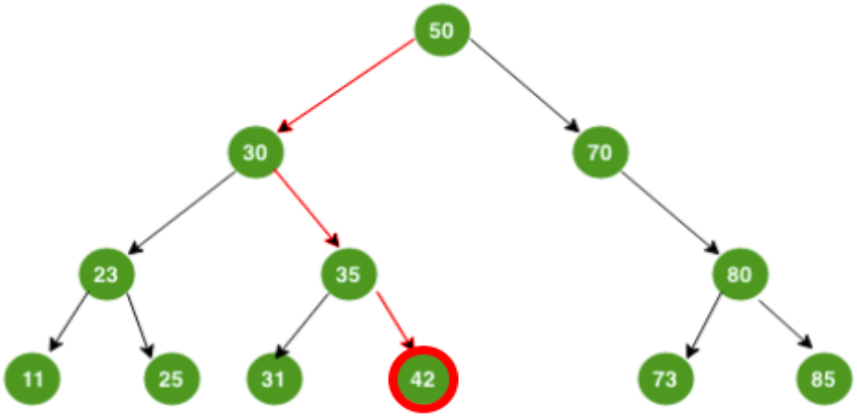
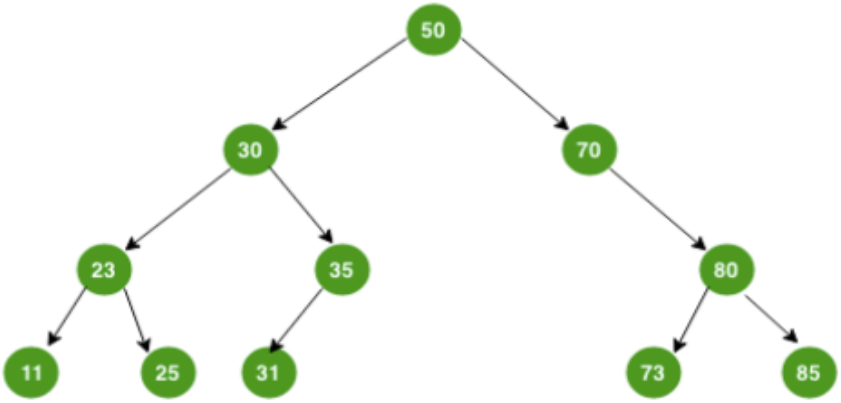
1. Delete the node with value 42.

Step 1: First we search the tree for the node with value 42.

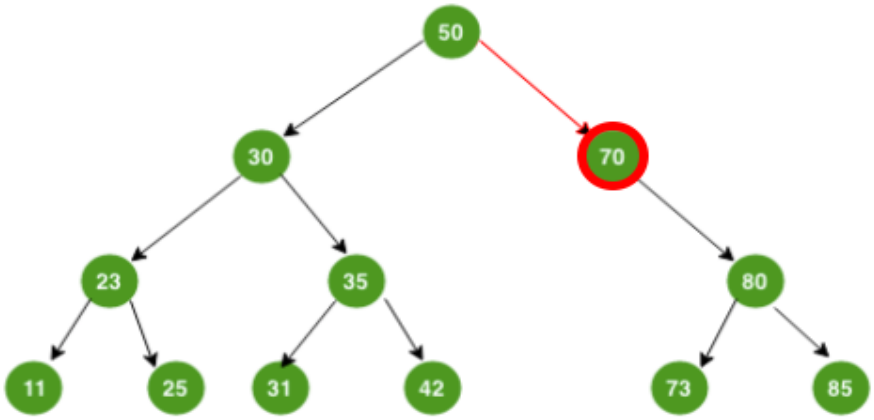


Step 2: Determine the type of the node, in our case it is a leaf node, therefore we simply delete it.

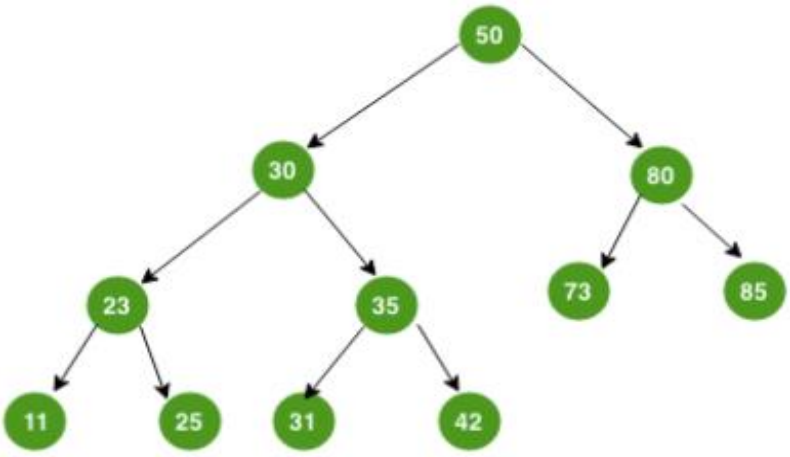


2. Delete the node with value 70.

Step 1: First we search the tree for the node with value 70.

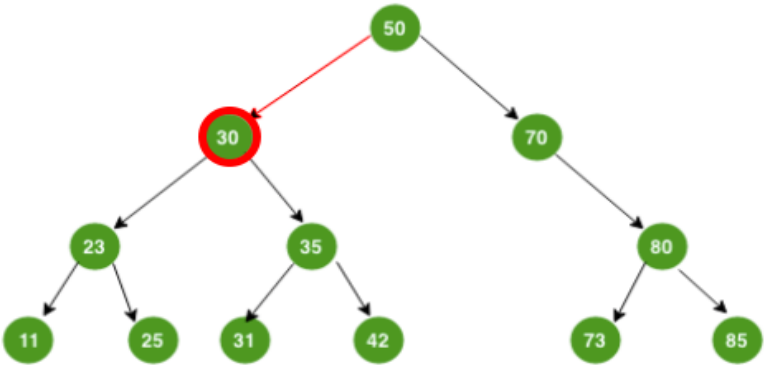


Step 2: Determine the type of the node, in our case it is a node with a right sub-tree and an empty left sub-tree, we delete the node, and link the parent of the node with the right-subtree.



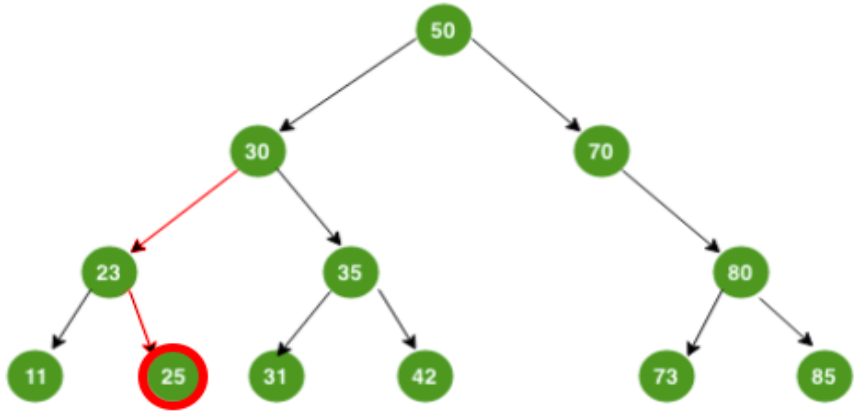
3. Delete the node with value 30.

Step 1: First we search the tree for the node with value 30.



Step 2: Determine the type of the node, in our case it is a node with a right sub-tree and a left sub-tree. To solve this, we can reduce it to Case 2 (a node with an empty left sub-tree) or Case 3 (a node with an empty right sub-tree). We going to reduce it to case 3 in our case and find the predecessor of 30.

Step 3: Predecessor of 30, The predecessor of 30 is the node with the greatest key smaller than 30. So we go to the left sub-tree and look for the max-right leaf. Which is 25.



Step 4: Switch the nodes and then delete the node with value 30.