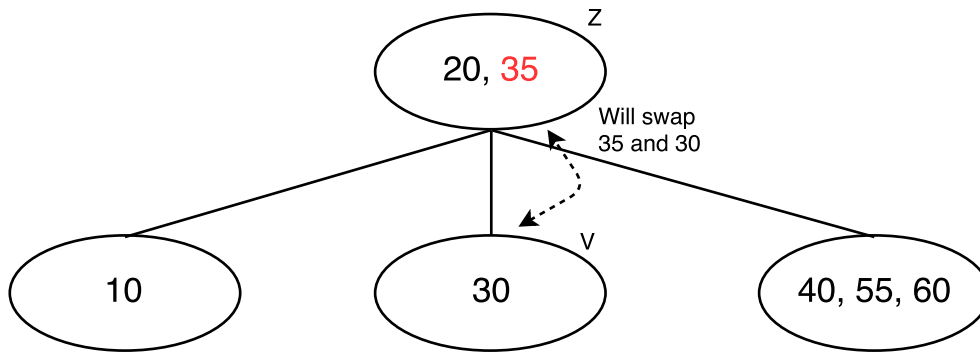


#8 Remove node 35

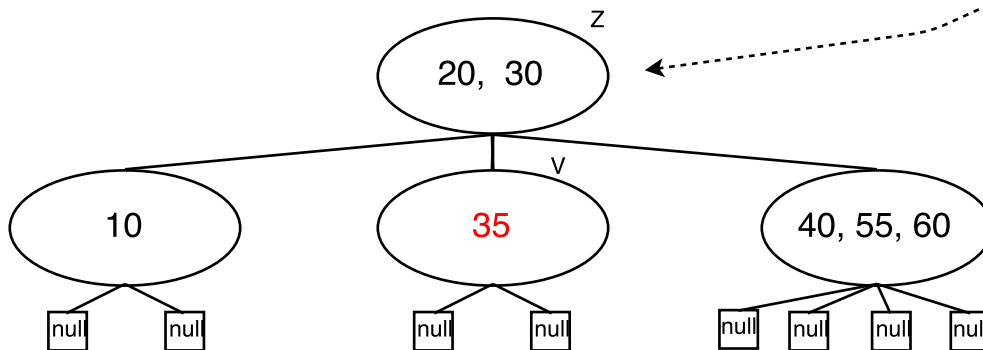


Entry 35 is found in a node with only internal children so let:

Z = Node of entry to be removed
V = right most internal node rooted at the ith child of Z

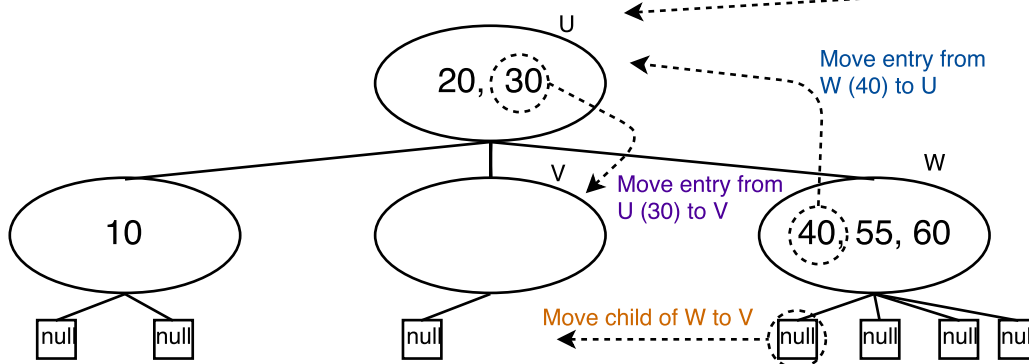
We will swap entry at node Z with last entry of V

Tree after swap



Now the entry to be deleted is at a node with only internal children so we can delete entry 35

Tree after removal



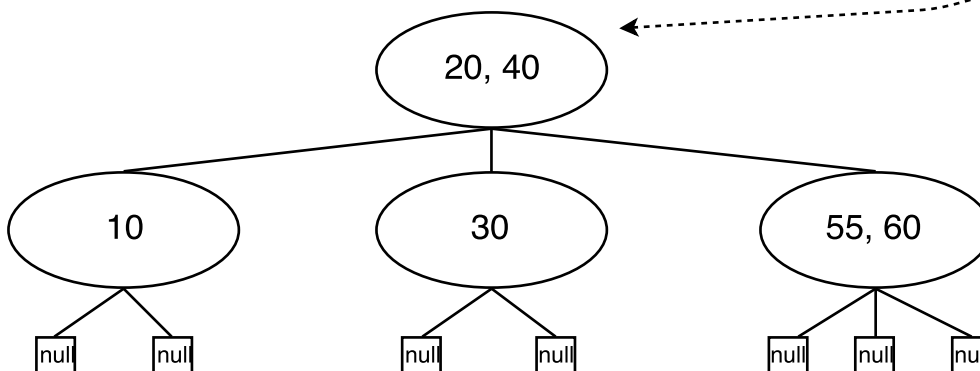
Size property has been violated (V is a 1 node) so let

V = node with underflow
U = parent of V
W = sibling of V

W is a 4 node so we can fix underflow with a transfer

- Move child of W to V
- Move an entry of W to U
- Move an entry from U to V

Tree after Transfer



Tree is now balanced