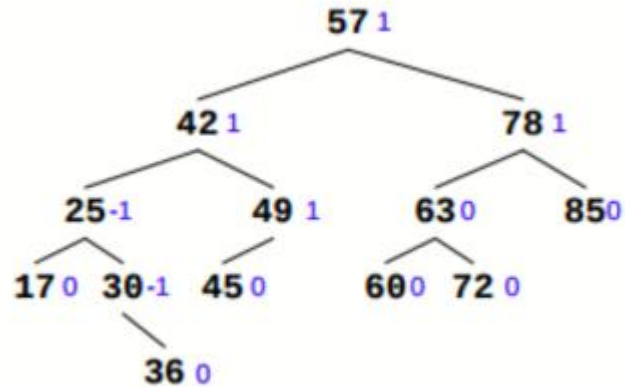Student: Nermeen Mohamed Sayed
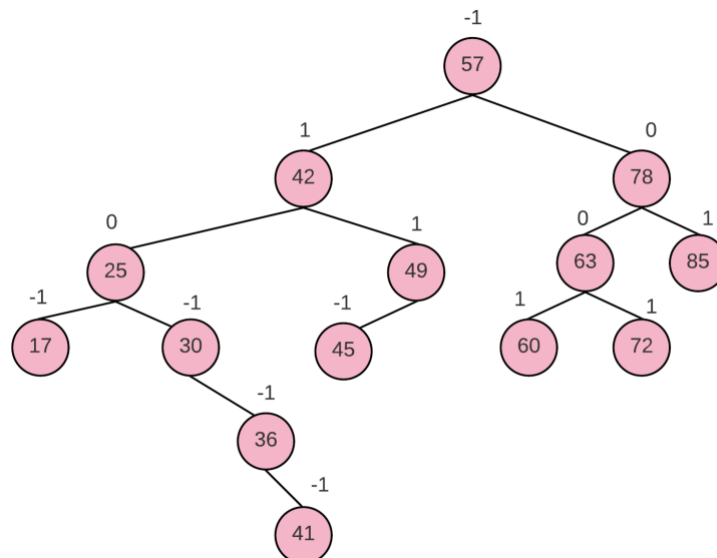
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Section 3: Problem 3
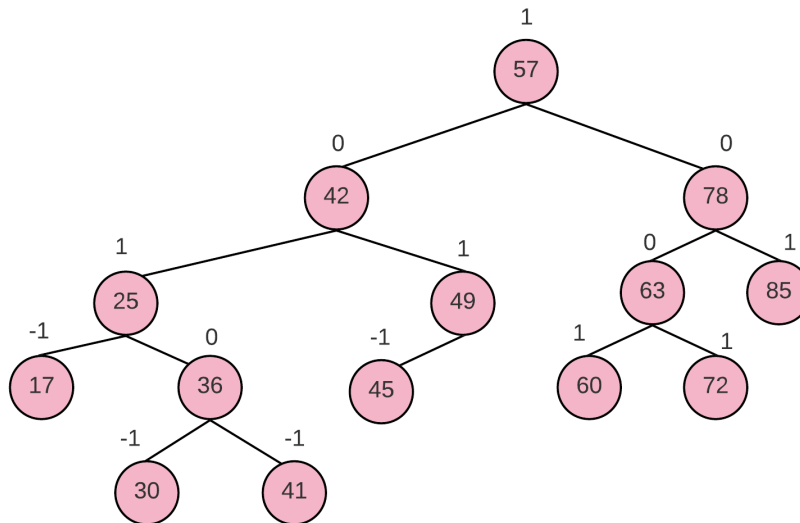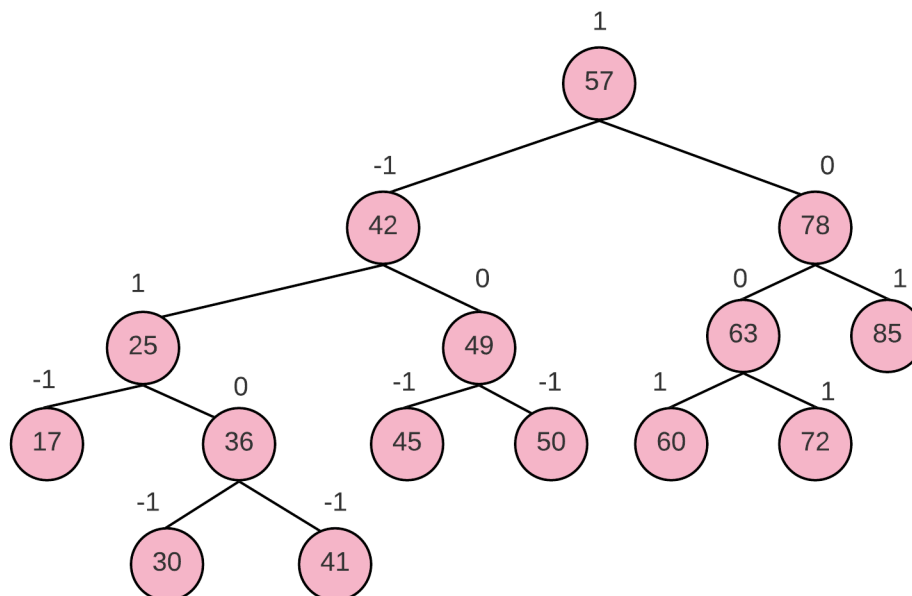
What will happen when adding 41, 50 to this tree?

1) At first we will insert the first element which is 41 so we will search in the tree for the suitable place for 41 and find that the suitable place is under node 36 so we will insert 41 under node 36 as follows

Then we will check the balance of the tree and we found that the tree is unbalanced around node 30 so we will make left single rotation around node 30 so the tree will be balanced and will look like this

2) Second step we will insert new element which is 50 so we will search in the tree for the suitable place for 50 and found that the suitable place is under node 49 at the left so we will insert 50 under node 49 as follows

By checking the balance of the tree after adding 50 we found that the balance didn't effected so the final tree will look like this