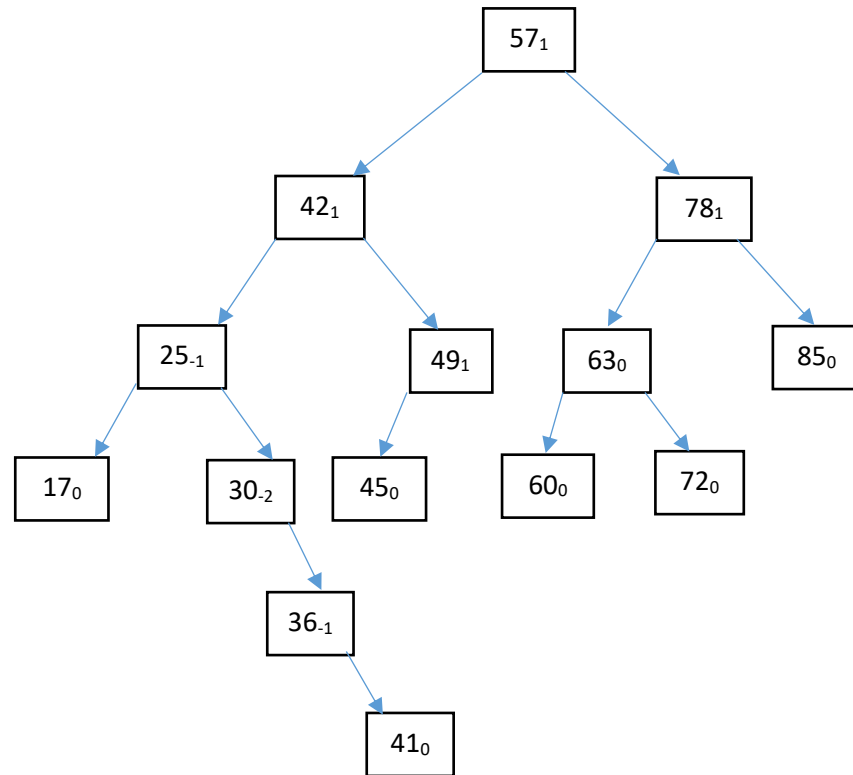
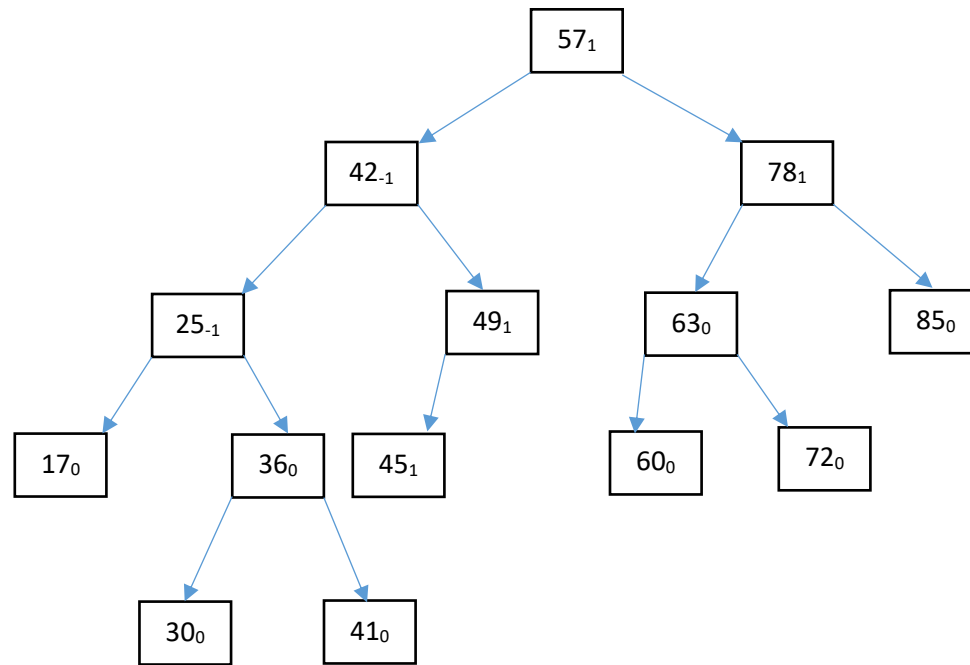
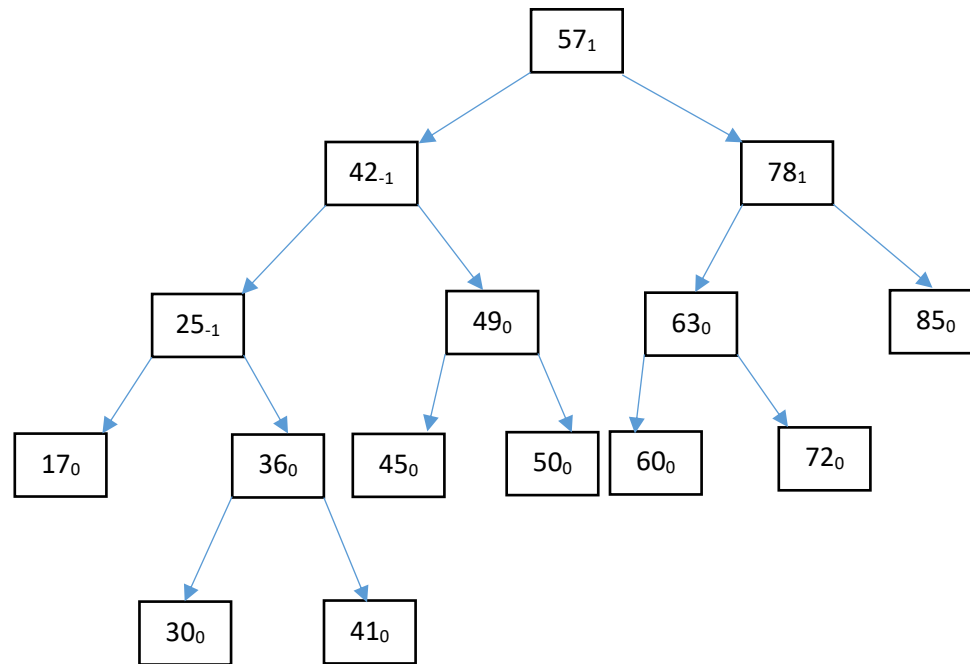


- Problem 3



1. When we add node 41 the tree will be as presented above
2. But as we evaluate the balance factor we find out that node 30₋₂ have balance factor of -2 and RR imbalance case
3. So we do rotation for the three nodes 30₋₂ 36₋₁ 41₀ Right rotation
4. Then tree will be as following





1. As it shown in the previous tree when we add node 50₁
2. The balance factor of node 49₀ is equal to 0 so no need to any rotations