# LCA

## Time Complexity

In this algorithm, every nodes will be visited once. If time complexity of visiting a single node is O(1) the total complexity is O(1) * n(Total number of nodes). So, this algorithm has time complexity of O(n).

## Memory

As this is a recursive algorithm, tree height is very important factor to calculate space complexity. For every node, a recursive call will occur. This means, in worst case at most n call can be happen at same time (when all nodes will be in a single line). So tree height can equals to n but not all the time. So we can say space complexity O(h) but it can be same as O(n) at the worst scenario.