Advanced Data Structures And Algorithms-Tutorial 4
Indian Institute of Information Technology, Allahabad (Prayagraj)

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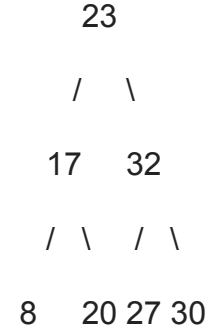
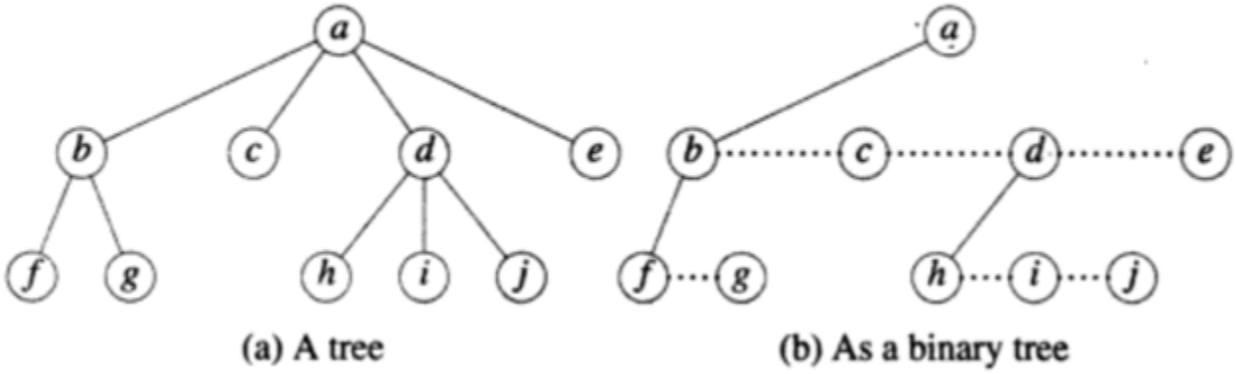
Problem-1) Write an efficient algorithm to check if two binary tree are equal or not.Two binary trees are identical if they have identical structure and their contents are also the same

Problem 2.)A binary tree is given. Check whether it is a BST or not. Consider the following for example which is not a BST:



Generalize the solution for any tree and estimate the time complexity of the algorithm. The code is not expected-just give the solution/algorithm.

Problem 3- .Convert a general tree into a binary tree using following scheme (see the figure):



The leftmost child is made as the left child and all the nodes of that level become the right child and its children in sequence (Source: Sartaj Sahni, go through the book for more details if required). What is the time complexity of the conversion algorithm?

Problem 4 . How many binary trees can be generated for a given input (n nodes, Briefly explain using example)?