**Q1. Balanced Binary Tree**

Link:<https://leetcode.com/problems/balanced-binary-tree/>

Given a binary tree, determine if it is height-balanced.

For this problem, a height-balanced binary tree is defined as:“a binary tree in which the left and right subtrees of every node differ in height by no more than 1.”

|  |  |
| --- | --- |
| **Example 1**  Given the following tree [3,9,20,null,null,15,7]:  Return : true | **Example 2**  Given the following tree [1,2,2,3,3,null,null,4,4]:  Return : false |
| **Diagram-01** | **Diagram-02** |

**Q2. Binary Tree Zigzag Level Order Traversal**

Link: https://leetcode.com/problems/binary-tree-zigzag-level-order-traversal/

Given a binary tree, return the zigzag level order traversal of its nodes' values. (ie, from left to right, then right to left for the next level and alternate between).

For Example:

Input: [3, 9, 20, null, null, 15, 7] (refer binary tree ‘**Diagram-01’**)

Output: [[3], [20, 9], [15, 7]]

**Q3. Construct Binary Tree from Preorder and Inorder Traversal**

Link: <https://leetcode.com/problems/construct-binary-tree-from-preorder-and-inorder-traversal/>

Given preorder and inorder traversal of a tree, construct the binary tree.

Note: You may assume that duplicates do not exist in the tree.

For Example, given below Inputs, Output - refer binary tree ‘**Diagram-01’**

Preorder: [3, 9, 20, 15, 7]

Inorder: [9, 3, 15, 20, 7]