Lab Evaluation 2

Duration: 50 mins **Marks: 15**

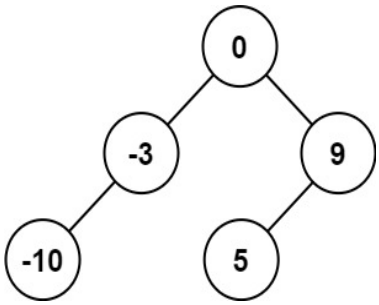
Note: Use of inbuilt libraries is not allowed.

SET A (ODD System No)

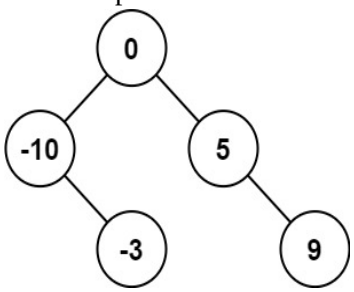
Given an integer array nums where the elements are sorted in ascending order, convert it to a height-balanced binary search tree.

A height-balanced binary tree is a binary tree in which the depth of the two subtrees of every node never differs by more than one.

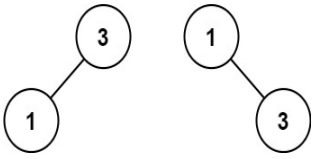
Example 1:
Input: nums = [-10,-3,0,5,9]



Output: [0,-3,9,-10,null,5]
Explanation: [0,-10,5,null,-3,null,9] is also accepted:



Example 2:
Input: nums = [1,3]
Output: [3,1]
Explanation: [1,null,3] and [3,1] are both height-balanced BSTs.

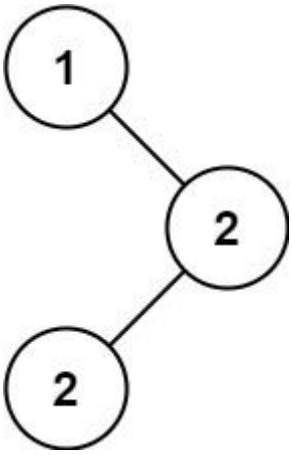


SET B(EVEN System NO)

Given the root of a binary search tree (BST) with duplicates, return *all the mode(s) (i.e., the most frequently occurring element) in it*.

If the tree has more than one mode, return them in any order.

Example 1:



Input: root = [1,null,2,2]
Output: [2]

Example 2:

Input: root = [0]
Output: [0]