

# 930. All Possible Full Binary Trees

## Difficulty : Medium

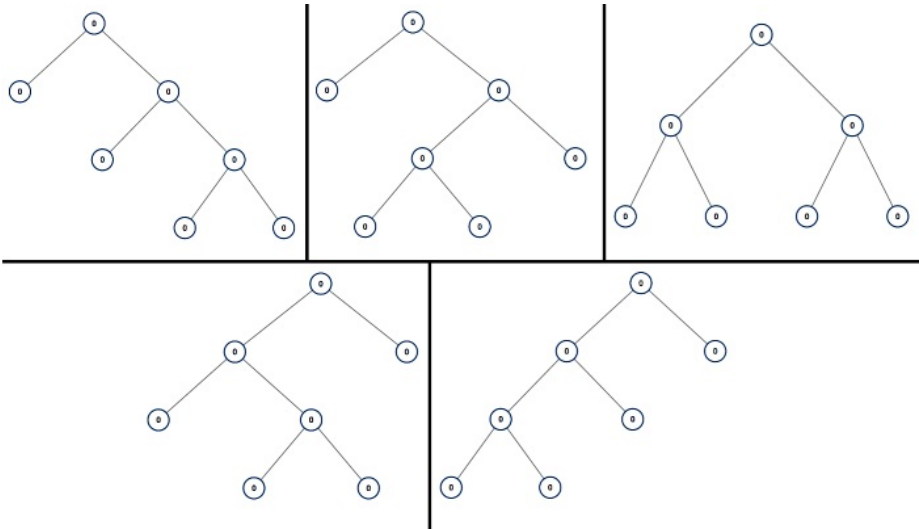
<https://leetcode.com/problems/all-possible-full-binary-trees>

Given an integer  $n$ , return a list of all possible **full binary trees** with  $n$  nodes. Each node of each tree in the answer must have `Node.val == 0`.

Each element of the answer is the root node of one possible tree. You may return the final list of trees in **any order**.

A **full binary tree** is a binary tree where each node has exactly 0 or 2 children.

### Example 1:



**Input:**  $n = 7$   
**Output:** `[[0,0,0,null,null,0,0,null,null,0,0],[0,0,0,null,null,0,0,0,0],[0,0,0,0,0,0,0],[0,0,0,0,0,null,null,null,0,0],[0,0,0,0,0,null,null,0,0]]`

### Example 2:

**Input:**  $n = 3$   
**Output:** `[[0,0,0]]`

### Constraints:

- $1 \leq n \leq 20$