

# 297. Serialize and Deserialize Binary Tree

## Difficulty : Hard

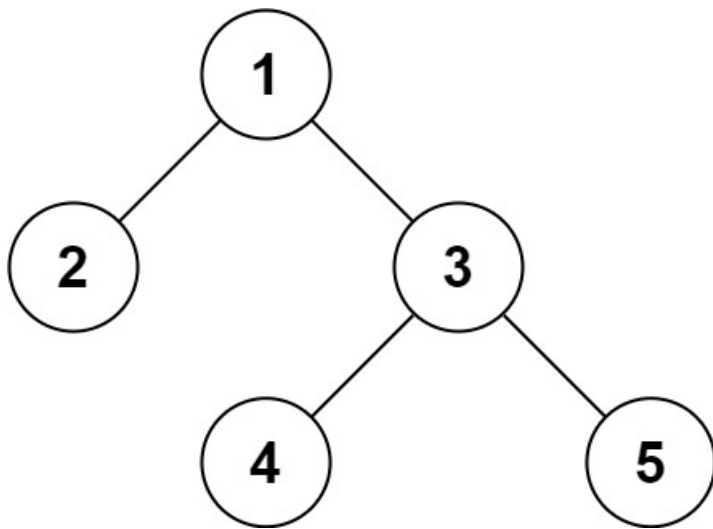
<https://leetcode.com/problems/serialize-and-deserialize-binary-tree>

Serialization is the process of converting a data structure or object into a sequence of bits so that it can be stored in a file or memory buffer, or transmitted across a network connection link to be reconstructed later in the same or another computer environment.

Design an algorithm to serialize and deserialize a binary tree. There is no restriction on how your serialization/deserialization algorithm should work. You just need to ensure that a binary tree can be serialized to a string and this string can be deserialized to the original tree structure.

**Clarification:** The input/output format is the same as [how LeetCode serializes a binary tree](#). You do not necessarily need to follow this format, so please be creative and come up with different approaches yourself.

**Example 1:**



**Input:** root = [1,2,3,null,null,4,5]

**Output:** [1,2,3,null,null,4,5]

**Example 2:**

**Input:** root = []

**Output:** []

**Constraints:**

- The number of nodes in the tree is in the range  $[0, 10^4]$ .
- $-1000 \leq \text{Node.val} \leq 1000$