# 37. 序列化二叉树

[NowCoder](https://www.nowcoder.com/practice/cf7e25aa97c04cc1a68c8f040e71fb84?tpId=13&tqId=11214&tPage=1&rp=1&ru=/ta/coding-interviews&qru=/ta/coding-interviews/question-ranking&from=cyc_github)

## 题目描述

请实现两个函数，分别用来序列化和反序列化二叉树。

## 解题思路

private String deserializeStr;

public String Serialize(TreeNode root) {
 if (root == null)
 return "#";
 return root.val + " " + Serialize(root.left) + " " + Serialize(root.right);
}

public TreeNode Deserialize(String str) {
 deserializeStr = str;
 return Deserialize();
}

private TreeNode Deserialize() {
 if (deserializeStr.length() == 0)
 return null;
 int index = deserializeStr.indexOf(" ");
 String node = index == -1 ? deserializeStr : deserializeStr.substring(0, index);
 deserializeStr = index == -1 ? "" : deserializeStr.substring(index + 1);
 if (node.equals("#"))
 return null;
 int val = Integer.valueOf(node);
 TreeNode t = new TreeNode(val);
 t.left = Deserialize();
 t.right = Deserialize();
 return t;
}