297. Serialize and Deserialize Binary Tree

Hard 1757 87 Favorite Share

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.

Example:

```
You may serialize the following tree:

    1
   / \
  2   3
     / \
    4   5

as "[1,2,3,null,null,4,5]"
```

Clarification: The above 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.

Note: Do not use class member/global/static variables to store states. Your serialize and deserialize algorithms should be stateless.

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Seen this question in a real interview before? Yes No

Contributor 

Companies

C#

```
/**
 * Definition
node.
 * public clas
 *     public
 *     public
 *     public
 *     public
val = x; }
 * }
 */
public class C

    // Encodes
single string.
    public str
serialize(Tree

    }

    // Decodes
to tree.
    public Tre
deserialize(st

    }
}

// Your Codec
instantiated a
// Codec codec
//
codec.deserial
e(root));
```

Console