

Solution @(04/08/2023)

```
// A class to store a binary tree node
class Node
{
    int key;
    Node left = null, right = null;

    Node(int key) {
        this.key = key;
    }
}

class Main
{
    // Recursive function to check if two given binary trees are identical or not
    public static boolean isIdentical(Node x, Node y)
    {
        // if both trees are empty, return true
        if (x == null && y == null) {
            return true;
        }

        // if both trees are non-empty and the value of their root node matches,
        // recur for their left and right subtree
        return (x != null && y != null) && (x.key == y.key) &&
            isIdentical(x.left, y.left) &&
            isIdentical(x.right, y.right);
    }
}
```

```

public static void main(String[] args)
{
    // construct the first tree
    Node x = new Node(15);
    x.left = new Node(10);
    x.right = new Node(20);
    x.left.left = new Node(8);
    x.left.right = new Node(12);
    x.right.left = new Node(16);
    x.right.right = new Node(25);

    // construct the second tree
    Node y = new Node(15);
    y.left = new Node(10);
    y.right = new Node(20);
    y.left.left = new Node(8);
    y.left.right = new Node(12);
    y.right.left = new Node(16);
    y.right.right = new Node(25);

    if (isIdentical(x, y)) {
        System.out.println("The given binary trees are identical");
    }
    else {
        System.out.println("The given binary trees are not identical");
    }
}
}

```

OR

```

class Solution {
    //When both the binary trees are null, then both the binary trees are same,
    return true.
    public boolean isSameTree(TreeNode p, TreeNode q) {
        if (p == null && q == null)
            return true;
        //If one binary tree is null and the other is not null, then the two binary trees
        are different, return false.
        if (p == null || q == null)
            return false;
        //If the root nodes of both the binary trees has different values then the trees
        are different, return false.
        if (p.val != q.val)
            return false;
        //Now check the same for their left subtree and right subtree, if both return true
        then the binary trees are same else they are different.
        return isSameTree(p.left, q.left) && isSameTree(p.right, q.right);
    }
}

```

Given an array of integers `nums` and an integer `target`, return indices of the two numbers such that they add up to `target`.

```

public class Solution {
    public int[] twoSum(int[] numbers, int target) {
        HashMap<Integer,Integer> indexMap = new HashMap<Integer,Integer>();
        for(int i = 0; i < numbers.length; i++){
            Integer requiredNum = (Integer)(target - numbers[i]);
            if(indexMap.containsKey(requiredNum)){
                int toReturn[] = {indexMap.get(requiredNum), i};
                return toReturn;
            }

            indexMap.put(numbers[i], i);
        }
        return null;
    }
}

```