Deadline: 22nd Nov 2022

Recover Binary Search Tree

You are given the `root` of a binary search tree (BST), where the values of exactly two nodes of the tree were swapped by mistake. *Recover the tree without changing its structure*.

Examples:

```
Input: root = [1,3, null, null,2]
Output: [3,1, null, null,2]
Explanation: 3 cannot be a left child of 1 because 3 > 1. Swapping 1 and 3 makes the BST valid.
```

Lowest Common Ancestor of a Binary Search Tree

Given a binary search tree (BST), find the lowest common ancestor (LCA) node of two given nodes in the BST.

According to the definition of LCA on Wikipedia: “The lowest common ancestor is defined between two nodes `p` and `q` as the lowest node in `T` that has both `p` and `q` as descendants (where we allow a node to be a descendant of itself).”

Examples:

```
Input: root = [6,2,8,0,4,7,9,null,null,3,5], p = 2, q = 8
Output: 6
Explanation: The LCA of nodes 2 and 8 is 6.
```