

Binary Search Trees

Concepts to cover

- inserting node, searching a value in BST
- deleting a node in a BST: <https://leetcode.com/problems/delete-node-in-a-bst/description/>
- checking if a tree is a bst or not
- inorder successor and inorder predecessor in a BST:
<https://www.geeksforgeeks.org/problems/predecessor-and-successor/1>
- LCA of two node in BST - $O(\text{height})$ here:
<https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-search-tree/description/>
- <https://leetcode.com/problems/unique-binary-search-trees/description/>
Number of possible binary trees
- <https://leetcode.com/problems/kth-smallest-element-in-a-bst/description/>
similar to lower bound
- <https://leetcode.com/problems/find-mode-in-binary-search-tree/> preorder or convert to LL

Applications

Sets or Maps ($\log(N)$ complexity)

- add
- erase
- count / find