BINARY SEARCH TREE

is a node-based binary tree data structure.

- The left subtree of a node contains nodes with keys less than the node's key and the right subtree with keys greater than node's key.
- The left and right subtree each must also be a binary search tree and there must be no duplicate nodes.

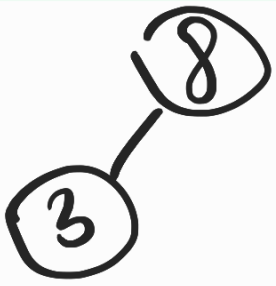
INSERTION

- While doing insertion in BST the new key is always inserted at leaf.
- We start searching a key from root till we hit a leaf node.
- Once a leaf node is found,

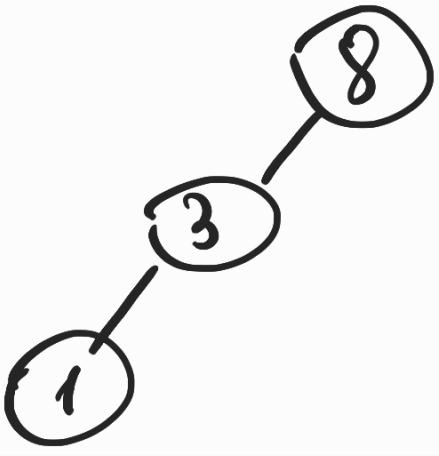
the new node is added as a child of the leaf node

INSERT(8)

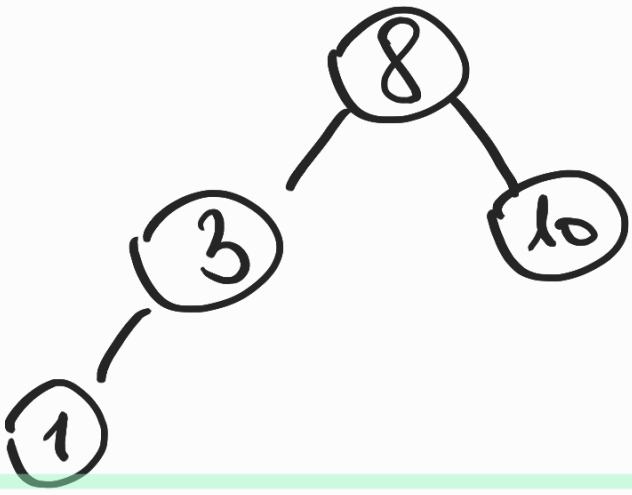
INSERT (3)



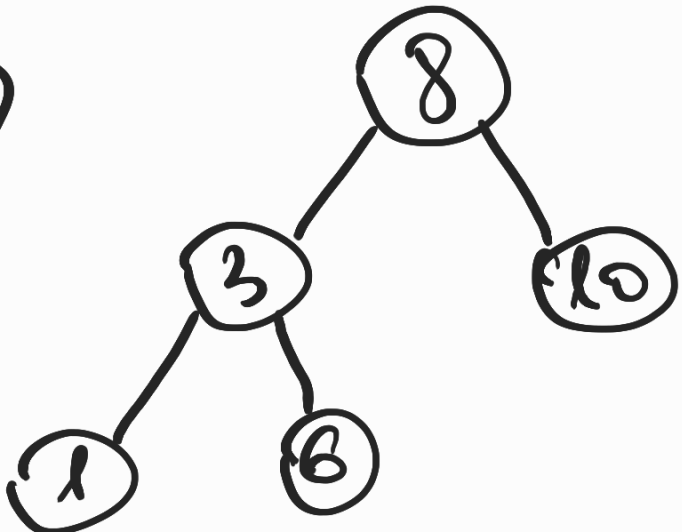
INSERT(1)



INSERT(10)



INSERT(6)



SEARCHING

To search a given key in BST, we first compare it with root.

If the key is present at root, we return root. If key is greater than root's key, we recur for right subtree of root node.