

# PROJECT BST README

## INSTRUCTIONS

#binary\_search\_tree.py - is the binary search tree file being tested.

# bst.tstl - tstl file

#randomtester.py - random action tester

# Reference [https://github.com/nryoung/algorithms/tree/master/algorithms/data\\_structures-binary\\_search\\_tree.py](https://github.com/nryoung/algorithms/tree/master/algorithms/data_structures-binary_search_tree.py)

# Some of the proerties being checked:

- After insert or delete, BST property of all nodes to the left of root has smaller key value than root and all nodes towards the right of the root has higher key value than root is checked.
- Only unique key values exist in the tree after insertion.
- Deleting an empty tree returns size of tree as 0.
- Inserting another element in the tree and checking if the tree size has increased by 1.
- Deleting a key element in the tree and checking if the key does not exist in the tree anymore.

# Run commands -

- tstl bst.tstl

- python randomtester.py