

Week 6

Binary Search Tree

Preliminary: Class lecture

Workshop: Constructing the binary search tree data structure

Materials:

- BST.py
- BST.pdf (the lecture note)

- 1) Study the definition of class node.
 - The Binary Search Tree begins with only “root = None”.
 - Class node defines the fundamental element of the binary search tree
- 2) Develop your own codes for the rest of the operations, which are
 - Finding the node whose key matches the specified value.
 - Finding the node with minimum key and finding the node with maximum key
 - Finding the successor node of the a given node
 - Inserting a new node into the binary search tree
 - Deleting a specified node from the binary search tree

For each operation developed, create a few test codes to verify that the operation functions correctly.

- 3) How may you check the created binary tree for whether it has the “binary search tree” property?