Week 6
Binary Search Tree

Preliminary: Class lecture

Workshop: Constructing the binary search tree data structure

Materials:

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

1) Study the definition of class BST and class node.
    - Class BST contains only root pointer
    - Class node defines the fundamental element of the binary search tree

2) Study the code in ExampleBST.py. This code constructs a binary tree from the list of nodes x.

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

4) 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.