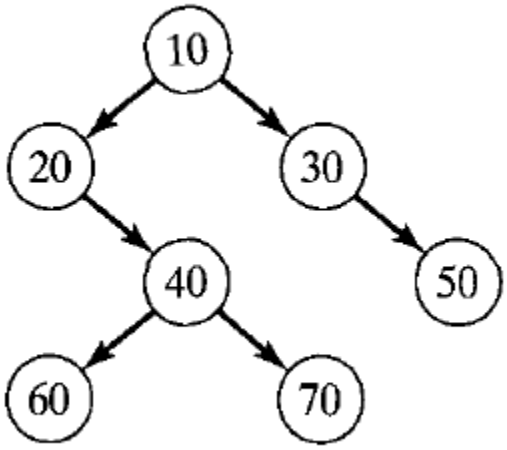
Hyo Lee
Homework Submission 7
02/23/2016

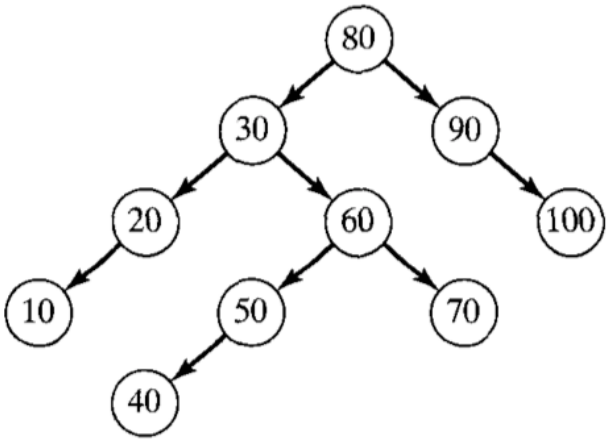
CST 370
Homework (Binary Search Trees)

1. Perform inorder, preorder and postorder traversal on the following binary tree.

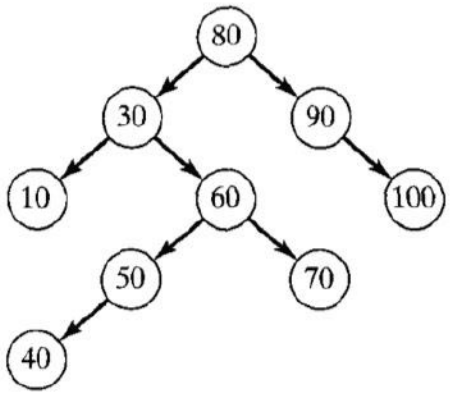


Preorder: 10, 20, 40, 60, 70, 30, 50
Inorder: 20, 60, 40, 70, 10, 30, 50
Postorder: 60, 70, 40, 20, 50, 30, 10

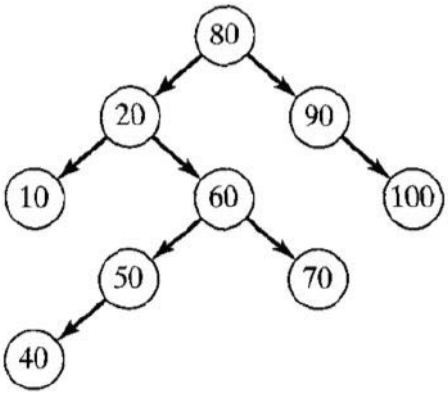
2. Consider the following BST.



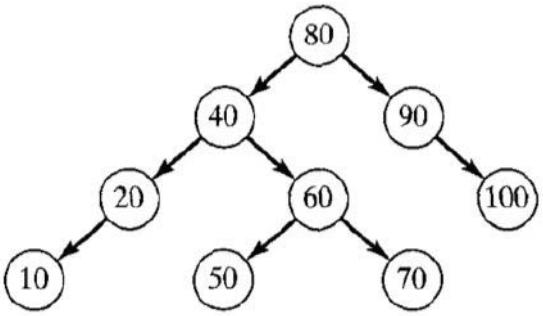
a. Perform an inorder traversal of this BST.
   10, 20, 30, 40, 50, 60, 70, 80, 90, 100
b. Perform a preorder traversal of this BST.
   80, 30, 20, 10, 60, 50, 40, 70, 90, 100
c. Perform a postorder traversal of this BST.
   10, 20, 40, 50, 70, 60, 30, 100, 90, 80
d. Show the BST that results when the node containing 20 is deleted from the given BST.



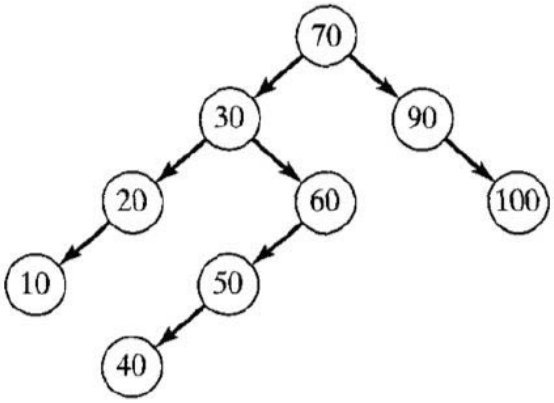
e. show the BST that results when the node containing 30 is deleted from the given BST.



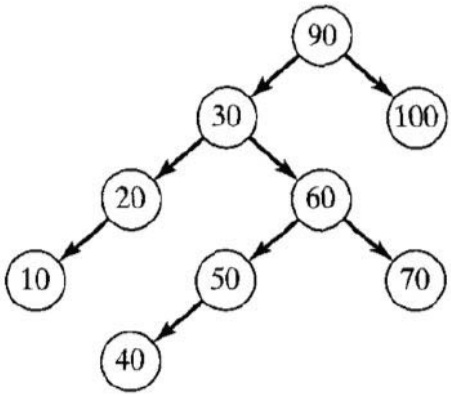
OR



f. Show the BST that results when the root is deleted from the given BST.



OR

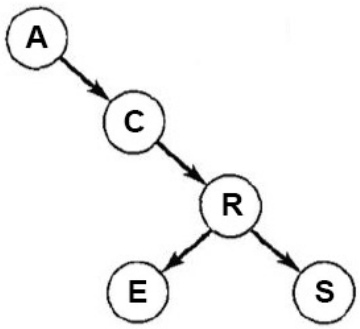


3. Draw the BST that results when the letters are inserted in the order given. Perform inorder, preorder, and postorder traversals of the tree that results and show the sequence of letters that results in each case.

a. A,C,R,E,S

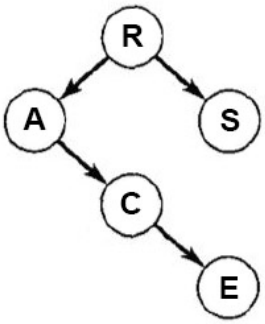
b. R,A,C,E,S

a.



Preorder: A, C, R, E, S
Inorder: A, C, E, R, S
Postorder: E, S, R, C, A

b.



Preorder: R, A, C, E, S
Inorder: A, C, E, R, S
Postorder: E, C, A, S, R