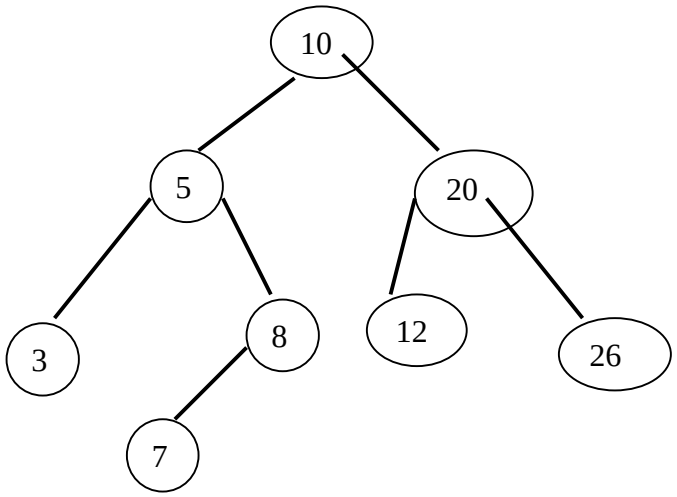
COP4530 – Data Structures, Algorithms and Generic Programming
Recitation: 6
Date: 7th and 10th October, 2011

Lab topic:

1. Midterm review
2. Take Quiz 7

Binary Search Trees



1. Consider the BST above. Draw the tree after we delete the node containing 8. Draw the tree after we delete 20 from the original tree.
2. Give the order in which inorder, preorder, level-order and postorder traversals visit the nodes of the tree.
3. In case of a BST does the search complexity depend on the tree structure? Does it depend on the order or inserting the elements? How?

Using Integration to get good lower bounds

1. Use integration to estimate the sum of the first N positive integers.
2. Use integration to estimate the sum of the squares of the first N positive integers.

Revision:

1. Asymptotic analyses. The meaning of notations (Big O and Theta) pictorially.
2. Simple recursive function evaluation. Using recursion to solve problems.
3. Stack and Queue basic functions.
4. Trees : Height of a tree, Number of nodes at a certain level.
5. Use of iterators and for_each statement