

Pre-lab Worksheet

CS163 Lab Session #7 – Binary Search Trees

Each group member should collaborate on this worksheet. All online students should participate!

The goal of these worksheets is to help prepare you for the next step in programming!

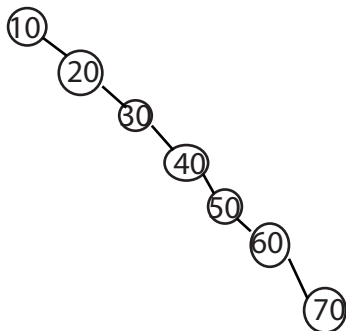
Building the Data Structures

____1. Since the data structure uses non-linear linked lists, we will continue using nodes. Assume that we will be storing a journal entry in each tree's node, create the node structure for a BST:

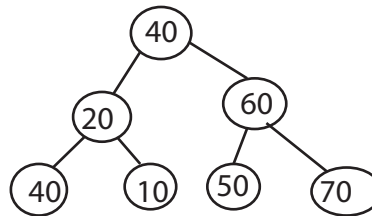
____2. Next, what would happen to the shape of a BST if the data was entered in sorted order?

____3. Take this data (10, 20, 30, 40, 50, 60, 70) and experiment with entering it in – in two different orders and examine the various tree shapes that result. Draw two trees here:

10 20 30 40 50 60 70



40 20 30 10 60 50 70



____4. What order did you find to be optimal for creating a full tree:

____5. What are the special cases for inserting a node into a BST recursively?