

Today's topics: binary search trees, continued; AVL trees.

Textbook sections 19.0–19.4.

Next class: Textbook Chapter 5. Reminder: Read material *before and after* class.

1. List the members of your group below. Underline your name.
  
2. Consider the binary tree produced by the the insertion of the following keys, in the order listed, into an empty binary search tree. (Refer to the previous class exercise.)

42, 64, 47, 89, 29, 56, 69, 81, 74, 26

Depict the tree resulting from the deletion of each of the following keys from that tree.

26, 81, 64, 42

[additional space for answering the earlier question]

3. Depict the *AVL tree* resulting from the insertion of the following keys, in the order listed, into an empty tree.

8, 5, 21, 3, 9, 7, 1, 2, 11, 14

Show all intermediate steps. In particular, depict the state of the tree immediately following each insertion, before and after any necessary balancing operations. Identify the type of each balancing operation used and the root of the subtree to which it is applied.

[additional space for answering the earlier question]

4. Depict the AVL tree resulting from the deletion of each of the following keys, in order, from the last tree of Question 3.

14, 7, 8, 1