

Today: AVL trees; red-black-trees. § 19.4,19.5.

Next class: AA-trees. § 19.6-.

1. List the members of your group below. Underline your name.

2. Recall from the previous class, 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

Depict the final tree.

3. Depict the AVL tree resulting from the deletion of each of the following keys, in order, from the last tree of Question 2.

14, 7, 8, 1

[additional space for answering the earlier question]

4. Depict the red-black tree resulting from the sequential insertion of $1, 2, 3, \dots, 10, 20, 19, \dots, 11$ into an empty tree, using bottom-up insertion. All intermediate trees need not be depicted, but it is advisable to depict at least a few.

5. Repeat Question 4 for *top-down insertion*.