

**Today:** red-black-trees, AA-trees; § 19.5–6.

**Next class:** AA-trees paper,<sup>1</sup> disk data structures, B-trees; § 19.7–19.end.

1. List the members of your group below. Underline your name.
  
2. Depict the AA-tree resulting from the sequential insertion, in the listed order, of 1, 2, 3, ..., 10, 20, 19, ..., 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.

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<sup>1</sup>Arne Andersson, “Balanced Search Trees Made Simple,” in *Proceedings of the Workshop on Algorithms and Data Structures* (Montreal, Canada, 1993).

3. Depict the AA-tree resulting from the sequential deletion, in the listed order, of 11, 5, 17, 1 from the final tree of Question 2.