18.5 Summary

- Binary search trees are simple, but they are subject to imbalance which leads to crappy runtime. 2-3 Trees (B Trees) are balanced, but painful to implement.
- LLRB insertion is simple to implement (deletion is a bit harder to implement, we won't go over the specifics in this course).
  - Use three basic operations to maintain the balanced structure, namely rotateLeft, rotateRight, and color flip.
- LLRBs maintain correspondence with 2-3 trees, Standard Red-Black trees maintain correspondence with 2-3-4 trees.
  - Java's TreeMap is a red-black tree that corresponds to 2-3-4 trees.
  - 2-3-4 trees allow glue links on either side (see Red-Black Tree).
  - More complex implementation, but faster.

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