Test 2 will be Thursday, April 1, in class. It will be closed book and notes, except for one 8.5" x 11" sheet of paper (front and back) with notes. Review topics for Test 2 are:

NOTE: Because of Test 2, I’m moving HW #5’s due date you April 10th

**Chapter 17. Lists**
- array vs. linked list tradeoffs
- position-based list vs. sorted list APIs
- singly, linked list implementation
- doubly, linked list implementation
- reduction of special cases via header/trailer nodes (or circularly linked list)

**Chapter 18. Stacks and Queues**
- Stack ADT operations
- array vs. linked stack implementations and performance tradeoffs
- Stack usage - When would you use a stack?
- Queue ADT operations
- circular array vs. linked queue implementations and performance tradeoffs
- queue usage - When would you use a FIFO queue?
- deq ADT operations
- priority queue ADT operations
- binary heap implementation of priority queue
- performance of binary heap operations
- heap sort performance

**Chapter 19. Recursion**
- General idea of recursion, call-frames and run-time stack implementation, recursion tree
- Examples of recursion: binary search, merge sort, quick sort fibonacci and their performance
- Recursive Exhaustive Search via backtracking: coin-change problem
- Improvements using backtracking with pruning or dynamic programming