Test 2 will be Thursday, Nov. 12, 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:

Chapter 6. Functions
- Modular programming: motivation (divide-and-conquer, simplify program by using utility functions, code reuse)
- Function definition: return type, function name, parameter list (formal parameters), body, return statement
- Parameter passing: pass-by-value vs. pass-by-reference
- Run-time stack: call-frame (containing return address, formal parameters, local variables) pushed on the run-time stack when function called, parameter passing, call-frame popped off of run-time stack when function returns
- Function prototypes
- Local and global variables: lifetime and scope
- Static local variables
- Default arguments
- Overloading functions
- Stubs and drivers

Chapter 7. Arrays
- Array concept: collection of same type elements, memory requirements
- Accessing array elements via indexing/subscripts
- C++ no bounds checking, maintaining a “count of elements”
- Array declaration with initialization
- Array processing: filling an array with data, calculating the sum/average of all elements, finding the highest/lowest value in the array, comparing arrays
- Parallel arrays
- Arrays as arguments to functions
- Two (or higher) Dimensional arrays

Chapter 8. Searching and Sorting Arrays
- linear/sequential search and binary search
- performance of linear vs. binary search
- simple sorts: general framework (two nested loops with outer-loop keeping trace of the dividing line between the sorted and unsorted parts, and the inner-loop extending the sorted part by one element)
- bubble sort
- selection sort