Outline for May 15, 2014

Reading: *text*, §18   **Assignment due:** Homework #3, due May 21, 2014

1. Work through the homework assignment
2. Recursion
   a. Nested lists: is an item in a list? [*isinlist.py*]
   b. Palindromes [*palindrome.py*]
3. Thinking recursively [*recfun.py*]
   a. First: think of the recursive case (write the problem in terms of something involving a smaller instance of the problem)
   b. Next: think of base case (when to stop)
   c. Example: Find the length of a string
   d. Example: Does the string only have alphabetic characters in it?
   e. Example: Find the maximum element of a list
   f. Example: Construct a string from a list of strings
   g. Example: Reverse a string
4. Searching a list
   a. Example use: linear search [*linsearch.py*]
   b. Example use: recursive linear search [*rlinsearch.py*]
5. Speed: compare iterative and recursive Fibonacci programs [*timefibs.py*]