Outline for February 22, 2012

Reading: §20

1. Dictionary
   a. Collection of key-value pairs
   b. What a "mapping" is
   c. Mutable
2. Creating dictionaries
   a. Using `d = {}`
   b. Using `d = dict()`
3. Methods for dictionaries
   a. `k in D`: True if dictionary `D` has key `k`; else False
   b. `D.keys()`: list of keys in `D`
   c. `D.values()`: list of values in `D`
   d. `D.items()`: list of tuples (key, value) in `D`
   e. `D.get(k, d)`: if key `k` in `D`, return associated value; else return `d`
   f. `del D[k]`: delete tuple with key `k` from `D`
   g. `D.clear()`: delete all entries in `D`
4. Example: memos
   a. Recursive Fibonacci [*rfibmemo.py*]
5. Sorting the dictionary
   a. `sorted` sorts based on keys
6. Example: word frequency count
   a. Unsorted [*wfc-1.py*]
   b. Sorted alphabetically [*wfc-2.py*]
   c. Sorted alphabetically, but dictionary order [*wfc-2a.py*]
   d. Sorted by frequency [*wfc-3.py*]
   e. Sorted by frequency first, the alphabetically [*wfc-4.py*]