Outline for May 8, 2014

Reading: *text*, §8   **Assignment due:** Homework #2, due May 9, 2014 (Note extension)

1. String module `import string`
   a. String constants: `string.ascii_letters`, `string.digits`, `string.punctuation`, `string.whitespace`
2. Looping over strings: `for i in str`
3. Format strings — see "Printing" handout
   a. Format escapes: `%d`, `%e`, `%f`, `%s`
   b. Format fields: `%3d`, `%06d`, `%-6d`, `%6.2f`
   c. Formatted strings: `"$%f"`% (1.39) prints $1.39
4. Example [*strarray.py*]
5. The `format` method — see "Printing" handout
   a. Form: S.`format(...)`
   b. Place holders: `{0}`, . . . , {n}
   c. Format specification: `{0:.3f}`, `{3:>8}`
6. String methods
   a. Rule: methods that change, add, or delete characters do *not* alter the string to which they are applied; they return a new string that is a copy of the old string, suitably modified
7. String methods: type of characters in string (return `True` or `False`) [*strtype.py*]
   a. S.`isalpha()` — `True` if only alphabetics (letters) in S
   b. S.`isalnum()` — `True` if only alphanumerics (letters or digits) in S
   c. S.`isdigit()` — `True` if only digits in S
   d. S.`isspace()` — `True` if only white space (blanks, tabs, newlines) in S
   e. S.`isupper()` — `True` if all letters in S are upper case
   f. S.`islower()` — `True` if all letters in S are lower case
8. String methods: changing case of letters in string (return result of applying method) [*strchcase.py*]
   a. S.`capitalize()` — If the first character of S is a letter, capitalize it
   b. S.`title()` — Capitalize each word in S
   c. S.`lower()` — Change all upper case letters in S to lower case
   d. S.`upper()` — Change all lower case letters in S to upper case
   e. S.`swapcase()` — Change all upper case letters in S to lower case and *vice versa*
9. String methods: stripping blanks from strings (return result of applying method) [*strstrip.py*]
   a. S.`lstrip()` — Delete all leading white spaces from S
   b. S.`rstrip()` — Delete all trailing white spaces from S
   c. S.`strip()` — Delete all leading and trailing white spaces from S
10. String methods: find characters and substrings (return position or cause exception) [*strfind.py*]
    a. S.`find`(s) — Return the index of the first occurrence of s in S; -1 if s not in S
    b. S.`index`(s) — Return the index of the first occurrence of s in S; `ValueError` exception if s not in S
    c. S.`rfind`(s) — Return the index of the last occurrence of s in S; -1 if s not in S
    d. S.`rindex`(s) — Return the index of the last occurrence of s in S; `ValueError` exception if s not in S
11. String methods: miscellaneous [*strmisc.py*]
    a. S.`count`(s) — Return the number of times s occurs in S
    b. S.`startswith`(s) — `True` if S starts with s
    c. S.`endswith`(s) — `True` if S ends with s
    d. S.`replace`(s,t) — Replace all occurrences of s with t in S
12. Lists
    a. Sequence of values (ints, floats, strings, other lists, etc.)
    b. Denoted by square brackets `[ ]` with values separated by commas

    c. Lists are mutable

    d. How to create a list

13. Program to print words in a line [*lines.py*]