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]