Outline for October 13, 2022

Reading: §4, 6

Assignments: Homework 2, due October 20, 2022

1. In more detail: passing values to functions [args.py]
   (a) Formal parameters in subject definition
   (b) Actual parameters (arguments)
   (c) Matching arguments to formal parameters
   (d) Local variables

2. String methods: 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

3. 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

4. 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

5. 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

6. 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

7. 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

8. Lists and strings [datecvt.py]

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

10. Example of sets [sets.py]
11. What you can do with lists
   (a) Check membership: `in, not in`
   (b) `+`: concatenation
   (c) `*`: repetition
   (d) `list[a:b]`: slice list from `a` to `b - 1`
   (e) `del list[i]`: delete element `list[i]`; `i` can be a slice
   (f) Add elements to, remove elements: `L.append(x), L.extend(ls), L.insert(i, x), L.pop(), L.remove(x)`
   (g) Element ordering: `L.reverse(), L.sort()`
   (h) Other: `L.count(x), L.index(x)`

12. Searching a list
   (a) Example use: linear search `[linsearch.py]`