Outline for January 30, 2019

Reading: §8

Assignments: February 8, 2019 at 11:55pm

1. Lists [datecvt.py]
   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
2. Program to print words in a line [lines.py]
3. 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
4. Objects, references, aliasing
   a. For strings, one copy: assume a = "banana"
      i. After b = a or b = a[:]; then a is b is True
   b. For lists, multiple copies: assume A = [ 1, 2, 3 ]
      i. After B = A then A is B is True
      ii. After B = A[:], then A is B is False
5. Lists as parameters: can change list elements in function and they are changed in caller [args2.py]
   a. Add elements to, remove elements: L.append(x), L.extend(ls), L.insert(i, x), L.pop(), L.remove(x)
   b. Element ordering: L.reverse(), L.sort()
   c. Other: L.count(x), L.index(x)
6. Tuples
   a. Used to group data
   b. Like lists, but immutable
7. Recursion
   a. n factorial [nfact.py]