Outline for October 29, 2020

Reading: §8   **Assignments:** Homework 2, due October 30, 2020

1. I have to change my office hours tomorrow. I am moving them to 3:30pm–4:30pm.

2. 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

3. Lists and strings [*datecvt.py*]

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

5. 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

6. List methods

    (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)`

7. 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`