CSI 32 LECTURE NOTES (Ojakian)

Topic 3: Class Basics

OUTLINE

READ: pages 32, 38, 40, 49, 54, 58, 170, 171, 172, and all of chapter 6.

1. Classes: built-in and user-defined
2. Working with one class at a time

---

1. Built-in Classes
   (a) Every datatype is a class (in Python)
   (b) Immutable classes: Int, Str, etc.
   (c) Mutable classes: Lists, Sets, Dictionaries, etc.
      i. Note `split` and `join`
   (d) Contructor/Initializer
2. User-defined Classes
   (a) Terminology: class, instance, instance variables, methods, attributes, constructor (and initializer).
   Example: Do simple example.
   (b) Problem: To do in class (*not at home!*)
   ***PROBLEM* 1.** *Do Exercise 6.4* **without using the computer**.
   (c)
   PROBLEM 2. *Create a class Profile, which is like a simple Facebook profile. Besides some expected public data you are aware of, include the following data that Facebook uses to track you: You should have a method to add a visited webpage and there is a method to return the most visited webpage from among the last 5 visits (first do for the most visited with no worry about restricting to the last 5).*
   (d) Example: Point Class (ch. 6)
      i. Optional Arguments
      ii. __str__ and other over-riding methods (see ch. 6).
   (e)
   ***PROBLEM* 3.** *Create a class SimpleRectangle. To initialize it, you pass in two arguments: length and width (which should default to something, if no input is given). It should be able to do the following:*
      i. You can get its length and width.
      ii. You can get its area and perimter.
      iii. Implement __str__
      iv. Implement one of the other over-riding methods: You choose what it does!