Homework 9:
Final Project, Phase 2:
Specifications
Out Tuesday, 4/15/14
Due Tuesday, 4/22/14 @ midnight
10 points

Programming Logic and Design
ITEC 1150
Spring Semester, 2014
Eric V. Level, Instructor

This is **Phase 2** of your Final Homework Project. For your chosen project as specified in Phase 1, you will create two simple preliminary designs.

In the **first design**, you will analyze your project and write pseudo-code for its "top-level" functionality. Within it, you'll identify possible functions, and then draw a structure chart that reflects both of these designs.

In the **second design**, you'll "find the objects" for your project, writing a list of the central concepts that occur in your project domain. For each such object, you'll then identify its attributes (fields) and possible methods.

First design = "Functional analysis and design":

Write top-level pseudocode for your project. Your steps should be numbered, and here (unlike the main scenario of a use case) it is OK to use Python control structures like if-else, for, and while to describe what is happening.

Then underline phrases in your pseudocode that are your candidates for turning into functions within your application. For each such candidate function, design its Python header:
`def funname(arg1,arg2):`… Do this by choosing a descriptive name for the function, as well as names for each of the function arguments (if any; a function might not have any arguments).

Finally, draw a structure chart showing the calling structure for your program, with the top-level pseudocode represented by a "`main()`" box, and your identified (underlined) functions shown as separate boxes below this.

Thus, your design document here has three parts: (a) Top-level pseudocode with underlined function candidates; (b) List of function headers for each of these candidates, and (c) Structure chart showing top and second level functions.

Second design = "Domain object discovery":

Identify the candidate classes for your project. One way of doing this is to underline the nouns and noun phrases in your specification - either in paragraph or use case form.

Follow Steps 1 and 2 on p. 302 of our Lambert textbook. List each such class you discover, making sure each has a descriptive name that reflects the domain (project) vocabulary. (You won't have many classes: two or three is usually enough.) Then write what objects of the class will represent, and list the attributes/fields of the objects that you think are needed.

Thus, your design document here also has three parts: (a) A list of named classes; (b) The purpose of each such class, and (c) The named attributes for that class.

Turn in paper copies of both of these design documents. I again suggest you create electronic documents for each of your specifications, but these are only for your own records - and for presenting during the Final Project Presentation at the end of the course. As in Phase 1, **there is no Dropbox for this Homework Assignment!** I'll give each design a preliminary grade, then give you a second chance to fix and problems with each, resubmitting for a final grade for this Phase 2.