CS 150: Intro to OOP, Spring 2012
Program 1

Due *via email* by 11:59pm on January 28, 2012

For this assignment, you must work individually in regard to the design and implementation of your project. Please note the distinction made in our academic integrity policy between general course material and work which is submitted for this course. We consider the use of the Python language syntax and the cs1graphics package in the category of general course material, which you may discuss freely. However, you must avoid any discussion of code which is specific to the design of your artwork, submitted for this assignment. You should not receive direct help from others, nor should you share your own source code with others.

You will be producing a series of frames on a Canvas object. You may control the timing of the frames by using the sleep function from the time module, as described in class and in the textbook.

The theme of the drawings should center around your choice of a favorite animal. Obviously, with the rather limited selection of shapes, we expect some of the artwork to be abstract.

Please consider the following list as a mandatory checklist of tools and techniques you must use. Though we reserve the right to grade partly based on artistic merit, the majority of the credit for this assignment will be given based on your meeting the following criteria.

- Your animation must have four or more distinct frames.

- Your first frame should have the background scene which must include a tree.

- Another frame should include the addition of an animal of your choice.

- Later, a second animal should be included in the scene and that animal should partially obscure the tree.

- Eventually, the first animal should be removed from the scene and the second animal should move locations.

- Finally, a last frame should be drawn without either animal.

You may feel free to intersperse additional frames as you wish. Also, please make sure that somewhere in your animation, each of the following techniques are used:

- You should set the title of the Canvas as an appropriate title for your artwork (this might also help us discern the type of animal you chose, in case it is not quite obvious).

- You must use at least one instance from each of the following classes: Circle, Rectangle, Polygon, Segment and Text.

- You must vary the border thickness and colors of some shapes.

- You must vary the interior colors for some of your FillableShape objects, including at least one which has transparent interior.

- Your second animal should be implemented using the class Layer as outlined in the documentation for the cs1graphics module.

For a small amount of extra credit, you may also incorporate some form of event driven programming, using the wait() method described in the text. Some creativity is expected here - just turning the sun red will not get you much extra credit! Also, please be sure to let me know what the event expected is, particularly if I have to click on something or enter text.