CSC 473
Programming Assignment 1 part 2

Due Friday April 26th, at 5:00am

Overview:
In this assignment you will implement the shading and shadow casting for your ray tracer along with reflections (on reflective surfaces), supporting only spheres and planes in terms of intersections, however your code must support camera transforms, geometric transforms and multiple objects. Specifically:

-compute the shading for opaque non-reflective objects using two different shading models (you will need to implement the Phong model and your choice of an alternative shading model (e.g. Cook-Torrance)). Use the light and material properties specified in the pov file. Please specify in your readme.txt how to switch between the two different shading methods (I suggest doing something easy such as a command line parameter)

-compute shading for objects with any non-zero reflection term by recursively tracing rays in the scene (to a up to a recursion depth of 6) (e.g. simple_reflect.pov)

-compute the shadows for all objects

-compute correct images for transformed geometry (e.g. valentine2.pov)

-compute correct images for camera not looking down –z axis (e.g. simp_cam.pov files)

What you should hand in:

-Your code, include all files necessary to compile and run your ray tracer

-A readme file with any information about what is working or not working with your implementation and clear instructions on how to toggle between the two different shading modes)

-renders of specific files (all simp_cam files and simp_reflect files)

You need to handin your code and images generated using handin:
handin zwood csc473p2 <your_files>

Be sure to include all files necessary to compile and run your ray tracer.
