Student's ***NetID***_____Student's Name_____Grader's Name_____

EECS 351-1 Grading Sheet: Project C Win 2015

J. Tumblin 2/28/2015

_____**10% Report & User Instructions :** clear illustrated PDF file report with your name project title, goals, user-guide, code-guide, and example results.

_____**5% Ground-Plane Grid:** Draws all shapes on a properly-oriented ground-plane: +z==UP.

_____**10% ≥3 Solid, Jointed, Continually Flexing Shapes:** At least 3 separate 3D shapes at different ground-plane locations, with continually-changing joint angles. Wireframe is *not* acceptable!

_____**10% Single-Viewport Display fills entire browser window of any shape.** Dragging the window's corner to change height & width always keeps entire browser filled with undistorted image from a perspective camera with 40 degree vertical field-of-view; no blank areas, no shape distortions.

_____**10% 5-DOF Camera Control: (move forward/back & sideways; pan left/right, tilt up/down)** Users can adjust views smoothly. One set of controls positions camera, others rotate it.

_____**10% Obviously different-looking Materials for each separate object**
HINT: use materials parameters listed in PhongMaterialsListing03.txt (on Canvas)

_____**5% One 'headlight' light source attached to the camera.**
(if it works, specular highlights stay in the middle of any shiny sphere as camera moves)

_____**10% One light source at user-adjustable 3D world-space position, and separate, user-adjustable R,G,B values for ambient, diffuse, and specular light amounts.** Light must NOT move when camera moves. Demo: fixed camera, moving light: all specular highlights should move correctly.

_____**15% Phong Materials & Lighting:** Shows ambient, diffuse, specular, emissive terms.
(you may use Phong or Blinn-Phong implementation).

_____**15% Phong Shading:** Per-fragment lighting calculations; interpolated vectors, not just interpolated colors. (On round objects, look for round specular highlights, not hexagonal)

==========

_____2% extra credit: user-selectable Gouraud/Phong shading, selected without any change in any reflectance or lighting parameters. Switching to Gouraud causes faceting in specular highlights.

_____2% extra credit: 3 or more user-selected distance dependencies (ATT) for your light sources:
(must include choice between NONE, 1/dist, and $1/dist^2$, with dist calc'd at each vertex)

_____3% extra credit: geometric shape distortions in shaders, not reproducible by matrix transforms (e.g. twist, sinusoidal waviness, etc) implemented in Vertex Shader.

_____3% extra credit: Advanced shader: implement Cook-Torrance or others(see Lengyel book),

_____3% extra credit: Simple Texture Maps (Chap 5-like; emissive only)

_____3% extra credit per feature: Advanced Texture Maps
(Lengyel-like: use as diffuse, specular, bump, etc)

==========**TOTAL POINTS/100** (24% of final grade)