Student ***NetID***:_____ Name:_____ Grader Name:_____
(netID == 3 letters, 3 digits: e.g. jet861 Please write clearly; make it easy to read)

EECS 351-1 Grading Sheet: Project A Win 2016

J. Tumblin 1/15/2016

_____**10% Clear illustrated report** with your name project title, goals, user-guide, at least 4 results pictures, and sketch of the scene-graph of your program (the tree of transforms)

_____ **5% User instructions:** On-screen, or shown when users press F1 or 'help' key of some kind. Instructions alone should enable any user to demonstrate all program features.

_____**10% At least two different student-designed 3D parts** more complex than a rectangle or cube (>12 vertices), each made by drawing from contents of a Vertex Buffer Object (VBO). (HINT: Make your own drawing fcns, *e.g.* drawHexa(), drawRobot(), drawBicycle(), …)

_____**10% Per-vertex colors:** student-designed 3D parts have different colors at each vertex, all held within one vertex buffer object? (e.g. proper use of 'stride' and 'offset' as in Chapter 5).

_____**10% Animation**: On-screen objects move continually (movement requires no user actions).

_____**10% Two or more distinct *kinds* of animated, jointed objects** assembled from 3D parts. Each part drawn with a different sequence of matrix transformations, each object made from a differently-shaped scene-graph. Animate each copy (if more than one) of each kind of object to move differently, independently and continuously.

_____**20% Two or more movable sequential joints** within each of these 2 different *kinds* of objects (with every joint at a different on-screen location. If only 1 joint, only 10% credit)

_____1**0% Smooth Movements on-screen**. Animation and user-control must make smooth, continuous-looking changes to on-screen locations and poses. No large sudden 'jumps'.

_____ **5% Keyboard Interaction:**
On-screen objects move and change in response to various keyboard inputs.

_____ **5% Mouse-Click Interaction:**
On-screen objects move and change due to mouse clicks at different locations. (excludes webpage buttons and mouse-drag interactions: objects must respond to clicks alone)

_____ **5% Mouse-Drag Interaction:**
On-screen objects move and change in response to mouse dragging in the canvas. (mouse-drag does require button down/up, but these don't count as mouse-click interactions)

_____ **EXTRA CREDIT:**
up to 3% : apply more obscure webpage controls & features (buttons, menus, etc.)
up to 3%: object colors change smoothly, dramatically &visibly over time, automatically
up to 3%: object/part shapes change smoothly dramatically &visibly over time,
(e.g. upper-arm segment changes length and/or width;
lower arm segment changes in a different way…)

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