

Student *NetID*: _____ Name: _____ Grader Name: _____
(netID == 3 letters, 3or 4 digits: e.g. JET861 Please write clearly; make it easy to read)

EECS 351-1 Grading Sheet: Project A Win 2018

J. Tumblin 1/18/2017

_____ **10% All file-naming correct + clear illustrated PDF report** with name, netID, title, goals, help, user-guide, ≥ 4 results pictures, and sketch of your program's scene-graph (transform tree)

_____ **5% User instructions:** From the program's on-screen display, even new users can quickly and easily identify and use all your program's features and options without your help.

_____ **10% At least two different 3D parts that YOU designed**, 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 fcn's, e.g. drawHexa(), drawRobot(), drawBicycle(), ...)

_____ **10% Smoothly-varying per-vertex colors:** All 3D parts vary their colors between vertices: different color attributes at each vertex, and use of 'varying' variables in shaders (e.g. proper use of 'stride' and 'offset' as described in Chapter 5 and demonstrated in starter code).

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

_____ **10% Two or more clearly-different kinds of objects.** Each *kind* will draw each of its rigid 3D parts with different matrix transforms (thus they move differently), & a differently-shaped scene-graph (thus their joints connect differently). Each different *kind* of object should move at different rates, independently and continuously.

_____ **20% Two or more sequential, moving joints** within each of these 2 different *kinds* of objects (with every joint at a different on-screen location. (Only 1 joint location? \rightarrow half-credit)

_____ **10% Always-Smooth On-screen Movements:** All animation and all user-controls cause SMOOTH on-screen changes (locations, poses, sizes etc.). 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 2%: add better-looking webpage controls & features (buttons, menus; try dat.gui?)

_____ up to 2%: automatic object **color-change** : smoothly, dramatically & visibly over time,

_____ up to 2%: object/part **shapes** change smoothly dramatically & visibly over time,

(e.g. upper-arm segment changes length and/or width; lower arm segment tapers/bulges..)

_____ up to 2%: Report includes accurate 'Scene Graph' diagram for each kind of object

===== **TOTAL POINTS/100**

(24% of final grade)