**Checkpoint #3, section 1 (Wednesday/Friday class)**

**Make a super basic “editor” for your scene:**

Due at the start of class, 12:00 noon on Wednesday, May 26th.

**What you need to submit:**

* Like CP#2, make a video where you launch your program from Visual Studio, and it is clearly showing your student name and number.
* You’ll have to talk and/or type an explanation of what you’re doing while demonstrating the workings of your code, so briefly go through all the features like:
  + Here’s how you select and change an object
  + Here’s how I move the camera
  + Here’s the scene being saved
  + Here’s showing the scene being loaded

Note: I don’t actually “care” if you use the *exact* keyboard shortcuts here, but during the mid-term & final will give you specific keys to use, including keys that need “modifiers” (shift, control, and alt).

**What you gotta do:**

* Alter the keyboard controls to:
  + Switch form "camera" or "edit" mode   
    (Alt-E = "edit", Alt-C = "camera" - default is "camera" mode)
  + When selected, show a wireframe bounding box around the model
  + The mode should be shown in the title bar (glfwWindowTitle())
  + Information about the model should be shown in the title bar and or the console  
    (If using the console, this should happen *only* when there is a change – it ***should not***be spamming the console with a constant stream of information)

\*\*BONUS 5%: After 5-10 seconds of not touching the keyboard, it goes back to "camera" mode)

* (i.e. draw the wireframe bounding box at the same location and scale as the model)
  + Camera mode moves the camera
  + Edit mode alters the model:
  + Regular (un-modified) keys: translates the model
  + Shift keys: rotates the models (around X, Y, and Z)
  + Shift up & down keys: changes scale
  + Shift 7 & 8: Changes red (down 1% and up 1%)
  + Shift 4 & 5: Changes blue
  + Shift 1 & 2: Changes green

\*\*BONUS 5%: The bounding box should gently “pulsate” in scale (gradually going to around 105% down to 95% and back over time, over a second or so).

\*\*BONUS 5%: The object should have a brightly coloured wireframe version of itself overlaid on top. Typically this is something very noticeable like “hot bright pink”. You do this by drawing the object again, at a slightly larger scale in wireframe. The “bounding box” colour should *not* be the same colour, though – it should also be noticeable (like bright white or bright yellow something).

* The scene details are stored in a file:
  + Model name
  + Placement, scale, orientations
  + Colours
  + Alt-S = saves this file (overwriting)
  + Alt-L = loads this file  
    (The file name can be hard coded, like call it "scene.txt" or "model.txt" or something sensible)