**HW1 Brag Sheet:**  
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Interactions:

* When prompted: 'y' to "give the squirrel the acorn," 'n' not to.
* After answering prompt, 'o' for orthogonal, 'p' for perspective.

Accomplishments and Challenges:

* When I first started making this drawing, there weren’t any reference points, and the code was repetitive. I fixed this later by adding reference points and creating more helper functions. I tried condensing the lines of code necessary in a lot of ways, but it’s still a mixed bag.
* Doing the math for the ellipses and cylinder was tough because of the trigonometry involved. I expect to face similar challenges in the future, but I think it will become easier with practice.
* Data types and pointers involved with text and passing arrays were a bit weird, but easier once you figured it out.
* If I could go back and start the project again, I would have included more features and a more efficient coding structure. We learned what we needed for this project up until the deadline. We were meant to implement the features as we learned them, but if we had known everything before it was assigned, I believe we all would have done it bit differently/better.

List of features:

* Background: Light blue sky, green grass polygon with “texture” where the grass meets the sky using a GL\_TRIANGLE\_FAN.
* Light grey squirrel drawn using multiple 2D primitives.
* Prompt asking user if they want to give the squirrel the acorn? (y/n) – Acorn moves to squirrel’s hand if they say ‘y’ – stroke text changes to “Happy Squirrel”. If they say ‘n’ – acorn stays on the ground and text changes to “Sad Squirrel.”
* Once the user answers the above question – they can click on the display window and use ‘p’ to switch to perspective (frustum) view and ‘o’ to switch back to orthogonal view. It says which view it is currently in the console window.
* A dog drawn with a 3D cylinder and 2D primitives appears when you switch to frustrum view because its on the -2.0 z-plane. A text bubble also appears with “BARK! BARK!” Switching to frustum view will also make the text in the sky say “Scared Squirrel!”

References:

* For translate and rotate (before it was learned from the textbook) – I used a post on stackoverflow on how to do it. <https://stackoverflow.com/questions/48236120/how-to-use-gltranslatef-glscalef-glrotatef-in-opengl>

No code was copied.

* Used <http://www.rgbtool.com/>

for various RGB codes.