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**Final Project: Reflection**

As I developed my 3D scene I went with the original proposal of the items laying atop of a small table. The original table was a wide plane with a elongated cube making the rectangular notebook on the far-right side of the plane. The other two shapes I had to choose from were Pyramid, sphere, and torus. I decided to add a Pyramid to the far-left side of the plane since I was familiar with the math needed to calculate the vectors. I then decided to add a cylinder in the direct center of the plane to show case all four of the objects.

The lighting effect used is a combination of ambient, diffuse, and spectacular lighting known as Phong lighting. This combination allows for the scene to have very bright and vibrant areas while contrasting with very dark and eerie areas. I also enable the light to orbit 360 degrees around the scene to show how the lighting effects the different shapes based on the light’s orbital position. This effect enhances the overall effect of the light since it contains aspects for casting shadows on overhead objects as well as making the reflection bounce off the textures when the light hits the object directly.

To navigate the 3D scene the user is able to use the WASD keys on the keyboard to shift the sliding the camera’s focus on the scene left, right, or zoom in and out. The user is also able to use the mouse to rotate the camera around the scene.

I organized the program by adding multiple comments to the code. Almost every line of code has a comment for the line or at least the section for its intended function. All of the code is reusable to the extent of the actual vertices that make up the shapes, but any user can take the base of the code and add their own vertices and images for their intended function.