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OpenGL Project Proposal

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Shapes and Image Selection



This scene contains a desk with a laptop, glasses on top of a stack of books, with a pencil, mug, and a vase with a single flower in it. Showing how I can design and develop these objects, from the complex vase with the flower, to the simple shape of a pencil, will be a great opportunity to develop my computer graphic analysis and development skills. While some 2D images are simple, some are more complex, and I think this range of object will be a challenging but exciting venture to explore the works of computer graphics, practice working with the OpenGL API, and further my skills as a programmer.

The laptop will require two separate boxes, with planes of different shades to represent the keyboard and touchpad. The mug will need 3 shapes, a cylinder for the general shape, a full torus for the lip while a half torus is used for the handle; and a plane for the bottom of the mug and/or a plane to show the inner contents of the mug.

The glasses will be a challenging use of varying full and half toruses, and a circular/oval plane to represent the lenses. The pencil will need a cone for the point, along with multiple cylinders for the: wood, metal eraser holder, and the eraser itself. Meanwhile the books will only require a box for the general shape, and possibly a half cylinder to represent the book spines.

The vase with the flower will be the most complex, as it will require advanced tweaking of a cylinder for the shape of the vase, with a torus for the lip that the flower will come out of. The flower itself will require an elongated thin cylinder for the stem, and then a multitude of curved planes, or tapered cylinders with open top faces to represent the petals. It’ll be interesting to see how I can manipulate the shapes in order to make the general shape needed to convey the vase is holding a flower in the 3D replicated scene.