**1-4: Project Review**

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A picture containing office supplies, letter, design

Description automatically generated

Photo Choice

**Major Objects from the Image Chosen to Translate into Simple Shapes**

From the image above, I have translated five major objects into simple objects:

1. **Pencils-**A cylinder shape can represent the main body of the pencil. This cylinder should be elongated and tapered towards one end to resemble the shape of a pencil. A cone shape can be attached to the tapered end of the cylinder to form the pointed tip of the pencil on the sharpened pencil. The cone represents the sharp point of the pencil. On the opposite end of the cylinder, a shorter cylinder can be used to represent the metal part of the eraser, and another even shorter cylinder can represent the eraser at the end of the pencil.
2. **Pen/ Pen Cap-**The main body of the pen can be represented by a cylinder shape. This cylinder should be elongated and tapered towards one end to resemble the shape of a pencil. A cone shape can be attached to the tapered end of the cylinder to form the pointed tip of the pen. The cone represents the sharp point of the pen. On the opposite end of the cylinder, a shorter length and slightly smaller width cylinder can represent the end of the pen. This process is almost identical to the pencil. The main body of the pen cap can be represented by a cylindrical shape, accurately capturing its size and proportions. The cylindrical shape forms the foundation of the cap. For the clip, a small cube shape can be attached to the side of the cylindrical body, representing its functionality. The cube representing the clip should extend outward from the cap, mimicking its purpose.
3. **Coffee cup-** The main body of the coffee mug can be represented by a cylindrical shape, resembling the curved structure of the mug. The cylinder serves as the foundation of the mug's body. A cube shape can be attached to the side of the cylinder to incorporate a squared handle. The cube should be positioned in a way that extends outward and provides a flat, squared surface for the handle. To incorporate the coaster, a cylinder shape can be utilized to represent the main body of the coaster. The dimensions of the cylinder can be adjusted to match the desired size and thickness of the coaster.
4. **Notebook-**The main body of the notebook can be represented by a cube shape, resembling the overall size and thickness of a typical notebook. The cube serves as the foundation of the model. Cylindrical shapes can be positioned along one edge of the cube, simulating the spiral binding mechanism to incorporate the spiral binders. These cylinders mimic the coiled wires that hold the pages together in a real notebook.
5. **Glasses-**The main frame of the glasses can be represented by a cube shape, adjusted to the desired size and style. This cube serves as the foundation of the glasses. Cylindrical shapes can be used for the temples or arms that extend over the ears. These cylinders should be positioned and adjusted to match the curvature and length of the temples. Rectangular planes can be placed within the frame to create the lenses. These planes should be adjusted in size and position to match the desired shape and size of the lenses.

**An object that would need multiple shapes to re-create it**.

All the objects I chose need multiple shapes to re-create them. However, I have chosen the pencil. The pencil with the sharpened end would need a cylinder and cone to re-create it, as described above, but a sphere could also be added. A cylinder shape can serve as the pencil's main body, elongated and tapering towards one end to resemble its typical shape. To create an even more accurate re-creation, the unsharpened portion of the tip of the pencil, a cone shape can be attached to the tapered end of the cylinder, and on top of that, a smaller cone shape can be attached to almost the end of the cone, representing the sharp point of the pencil. On the opposite end of the cylinder, a shorter cylinder can be used to depict the eraser's metal part, and a flattened sphere can represent the eraser itself at the end of the pencil.

**Objects to Omit**

In a simplified 3D re-creation of a 2D image, it is common and often necessary to omit certain objects or details to maintain simplicity and manage the complexity of the model. A simplified re-creation aims to capture the essence or overall concept of the image rather than replicating every element with complete accuracy. When simplifying a 2D image into a 3D model, it's important to prioritize the most prominent and recognizable objects or features while omitting minor or less significant elements. By doing so, the model can still convey the general idea or theme of the original image while being manageable in terms of complexity and resources.

Therefore, to simplify the image in a 3d recreation, I would omit the pinecone, greenery, mouse, cardboard under the notebook, and keyboard. The most prominent and recognizable objects are the pen, notebook, coffee mug, pencils, and glasses. The cardboard under the notebook, pinecone, greenery, mouse, and keyboard don't necessarily add to the general idea or theme of the original image.

**Objects to Combine Using a Single Shape**

In a 3D re-creation, combining multiple shapes to represent objects accurately is common. While creating some objects using a single shape is possible, most objects require a combination of shapes to capture their complexity and details. Using a combination of shapes makes it possible to capture real-world objects' unique characteristics, proportions, and functionalities more accurately and visually appealingly. Consequently, I would not combine any objects using a single shape.