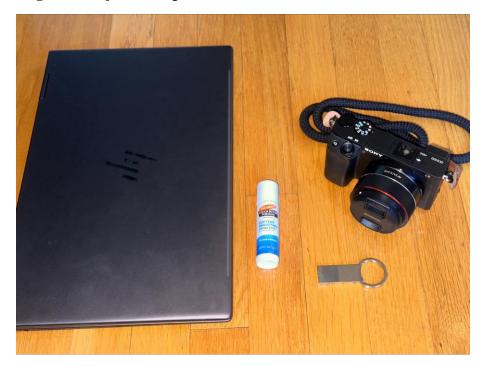Jordan Mitchell

11/6/2024

Professor Rodriguez

<center>Milestone One: Project Proposal</center>

Select a 2D image with objects to replicate in a 3D scene:

Here I've included photos of a scene that I've taken. From left to right, a laptop, lip balm,

a keychain, and a camera. This scene is viable because it includes objects with different levels of

complexity. Some items are simple like the lip balm, where others require compound shapes like the camera. This allows for a demonstration of basic 3D shapes as well as composite modeling.

Discuss which objects will be replicated in 3D. Explain which basic 3D shapes will be used to replicate the 2D objects

- **Laptop**: There are two options here. Primarily, it can be represented by a flattened box, as it reflects the shape and flatness of a real laptop. If I am viewing it from a completely overhead view, a plane with a texture is another option to depict the laptop as it will appear completely flat.

- **Chapstick**: This can be simply represented by a cylinder. If I wanted to make it more complex, I could include a toroid that acted as the twist wheel at the bottom of the stick. The lip balm can also be stood up vertically to add an additional focal point to view it from. The light would hit it from a different angle that shows the depth of the item.

- **Keychain**: This will require a compound shape. It will be comprised of a stretched box and a torus for the keyring, the keychain has a combination of shapes, adding complexity. The item is relatively flat but using 3d shapes rather than a plane for the rectangular segment allows you to best see the shape of the object.

- **Camera**: As the most complex object, I will use a box for the main body, a shortened cylinder for the lens, and additional short cylinders or tori for buttons and dials. This will be the most complex item in the scene due to its level of detail. If I wanted to include even more detail, a second box can be used to represent the handgrip. The angle in the photo allows you to understand the camera's dimensions from a realistic perspective.

Each of these items are good choices because they can easily be replicated using the primitives provided. The different sizes and proportions allow me to showcase simplicity and complexity within the same scene. Having some objects closer to the viewer can make it more exciting to observe from different angles as they stand out more. For example, the lip balm when stood up in combination with proper lighting shows viewers how tall the object is from the perspective in the photo.