COSC342- Assignment 1

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Due to doing the assignment at home I judged the dimensions of the pen off sketches I did of the pen in class that were roughly to scale. I started out by making a cylinder the size of the pen with the lid on. By using the “Loop cut and slide” along with extruding and scaling different sections I made the basic shape of the pen with the lid on. I then took the section that would be the lid and made it into a separate object that I placed in another layer making it easier to work with just the main body.

Working with the main body I made a duplicate of it, scaled it out slightly and again put it in a new layer, making the basic outline of the rubber grip. To make the holes in the grip I used Boolean modifiers on spheres that I made intersect with the grips basic shape judging by eye as to how much to cut out. For the texture of the grip I researched online for various examples of how other people made rubber looking objects in blender, however a lot of them that I found were for the old version so I took bits and pieces of what I found and what I could figure out how to implement into the new version to attempt a rubber look that seemed relatively realistic.

For the head/tip of the pen I extruded from the top of the main body until I believed it to be high enough without it being too high for the lid to go on and then separated it into another object and layer. To give it shape I again used “Loop cut and slide” along with extruding and scaling to get the correct shape. The very tip I made as a separate object so that it was easier to give it a different texture to the rest of the head. I tried to make the head a more reflective looking material as it’s supposed to be a shiny plastic and for the tip I gave it a more light absorbent look, after which I then joined the two objects together to make it easier to handle.

After having a closer look at the lid I noticed that it actually had two different textures one being the same shiny plastic as the head of the pen and another being a matt plastic with the two being split in a curved “S” shape. Initially I struggled to figure out how to split the lid into the two textures because I was using a Bezier curve that I extruded and was attempting to use a Boolean modifier on, which wasn’t working. By doing some research and realized I needed to make it into a mesh, after which I made two copies of the lid in the same position but on different layers and then did a Boolean intersect on one and a union on the other which left me with the two halves of the lid which I put into a single layer that I changed the texture of fittingly and then joined the two objects together.

For the label I youtubed some tutorials on wrapping text around a curve which led me to making the text then turning it into a mesh and then using the “Remesh” modifier so that it fit better to the marker body, I then used the “Shrinkwrap” modifier and messed around with some settings until I got it to wrap around the body correctly which I then extruded slightly so that it was more visible. I used two bezier curves that I joined together to make the curved shape under the label and then following the same process as the text wrapped it to the body.

When I got into the labs to submit my assignment I noticed that it was rendering the label on the pens differently to what my home machine was as you can see by comparing the image I submitted and the rendered image in the blender file and by this point it was too late to modify it. I hope this is taken into consideration in the marking.