

COSC 342: Assignment 1 Blender Modelling  
Ollie Whiteman – 7406810

The bottle itself is a cylinder that has been modified at the top using the loop cut and slide tool to divide it into different zones before extruding them either in or out. For the curve at the top I had to loop cut and slide quite a few zones with small decreases in size and then use the smooth tool that we learnt in the lab to give it a nice smooth curve. When initially creating the bottle I didn't have a ruler to get the dimensions of the real life bottle so I had to just eyeball it a little bit, but then I came in later with a ruler to get the dimensions and edited the cylinder to reflect the measurements. Once I was happy with the bottle, I duplicated it to make a slightly smaller bottle that I could put inside the original bottle and use a difference modifier and make it hollow. The top of the bottle caused problems for this technique so I cut the top off the bottle (after the curve) on the duplicate and extended it a little bit so the bottle wouldn't be too thick and performed a difference modifier making the body of the bottle hollow. For the top I just used a cylinder to the width of the measured diameter of the bottle neck. The glass material is just the glass BSDF surface material. In the final render the glass looks a little dark, I looked online for solutions to this but was unable to find anything that changed it significantly, other than this I am pretty happy with the bottle.

The cork was also just a simple cylinder which I scaled to 1.3cm at the top and 1.1 at the bottom as they were the measurements I got from the bottles in the lab. The material is very similar to the ground material in the first lab, I just changed the colour to more of a brown colour and the scale of the voronoi texture. I was pretty happy with the result as a simple representation of a cork material but it is easy to see how basic/fake it is from up close. If I were able to learn a way to actually add the bumps and holes of a real cork to this, it would look really good.

The liquid is a duplicate of the bottom section of the bottle then extruded in to give it a top, I then extruded up to give the three bottles varying levels of liquid. The material is the glass BSDF surface with IOR of 1.35, I also added a volume absorption of 0.4 so that it would absorb a little bit of the light to make it a little more realistic. I then just changed each of the colours to make each liquid unique. The liquid isn't the most realistic thing in the scene but it does the job for the model.

My scene is a little basic, two white planes providing a backdrop to the three bottles. I positioned the bottles pretty simply going across the camera, with one of the bottles a little bit closer. I went for a spotlight in the scene as opposed to the sun in the bottle.blend just to give it more interesting shadows in the final render.

I had a few issues with rendering, the main one being these white spots appearing that I later learned are called fireflies. Despite looking for fixes, I was unable to get rid of all of them and they are still present in the final render. Some answers online said to increase the filter glossy setting and transmission bounces in the light paths section of the render settings. While they and adjusting lighting helped a little bit, I couldn't find anything that drastically changed the final render. Other than that I think the models turned out quite well and look good.