Module Two Milestone - Project Proposal

CS-330-T5527 Computer Graphics and Visualization

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A close-up of a marbled surface

Description automatically generated with medium confidenceMy proposed three-dimensional rendering will be a scene that uses a plane for the counter-top, along with the cutting board, a sphere for the lemon and an apple, a coffee cup which will be built with a cylinder representing the cup with a torus for the handle. A spoon and fork which will be made up of multiple shapes, along with a cell phone. The shapes I will be using for the silverware will be a tapered cylinder and sphere. The cell phone will be built with a box shape that has length, depth, and width.

A wooden cutting board on a marbled counter

Description automatically generated with medium confidenceA picture containing tableware, fruit, serveware, apple

Description automatically generatedFig 1. Countertop plane.

Fig 2. Cutting board plane. Fig 3. Cup, silverware, and fruit with phone.

* Counter-Top: I plan to create a plane with a rectangular shape to represent the counter-top. The dimensions will be to scale so that the items will look like they belong on the cutting board.
* Cutting board: Similar to the counter-top, I will create another plane shape and position it on the counter-top to represent the cutting board, adjusting its dimension and position to appear realistic.
* Lemon and Apple: For the lemon and apple, I will use spheres with different sizes to represent their shapes. Creating the radius and position of the spheres to match the placement of the fruit on the cutting board.
* Coffee Cup: To build the coffee cup, I will start by creating a cylinder shape to represent the main body of the cup. Then, build a torus shape to serve as the cup's handle. Position it accordingly to attach it to the cylinder.
* Spoon and Fork: I plan to build the spoon and fork using a combination of tapered cylinders and spheres. Using tapered cylinders to represent the handles of both utensils. For the spoon's bowl, a sphere shape, and for the fork's prongs, I will choose to use smaller tapered cylinders or possibly triangular shapes. Building the various shapes to create the desired appearance.
* Cell Phone: To build the cell phone, I will code a box shape using rectangular planes. I will adjust the dimensions of the planes to define the length, width, and depth of the phone. Finally, positioning the planes and assembling them into a rectangular box representing a cell phone.

A wooden cutting board with utensils and fruits

Description automatically generated with low confidence

Fig 4. The scene from another perspective.

The Three-dimensional objects will allow the viewer to look at the scene from all sides and be able to view from overhead as well as at the countertop level. I do not understand yet about the lighting effect but will learn more about that aspect soon.