COSC363 Assignment1 Report

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The Scene

This project showcases the galley and three main artworks with additional furnishing items. The first AAO is a 2D Ames Window which is generated by manually writing coordinate positions. The second AAO is an animated model displaying another optical illusion named Moiré patterns. The third AAO is a simple 3D model that a cosmic robot drags the cosmic ring to keep the planets rotate normally.

—AAO1(Ames Window)
-Basic sketch

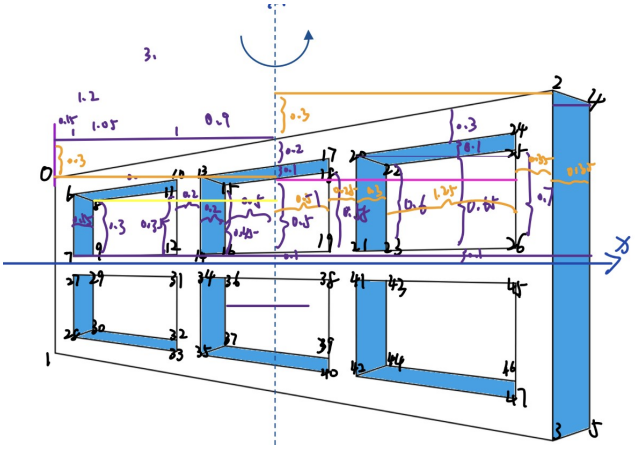
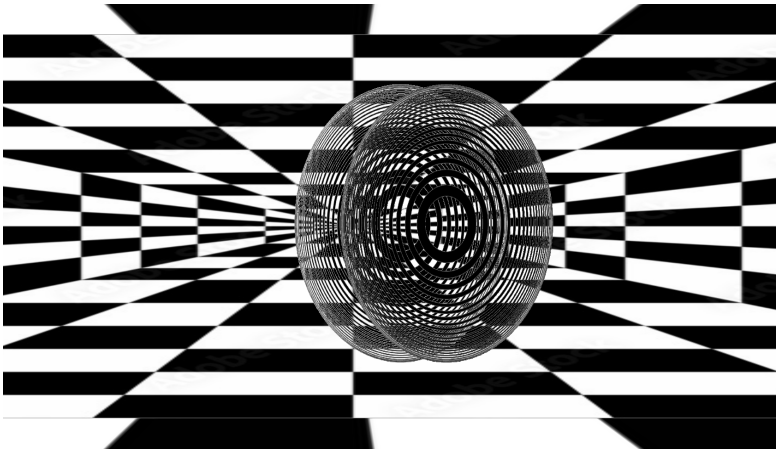


Figure 1:Overview

—AAO2(Moiré patterns)



—AAO3(3D model)
-Draft

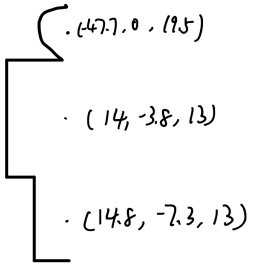
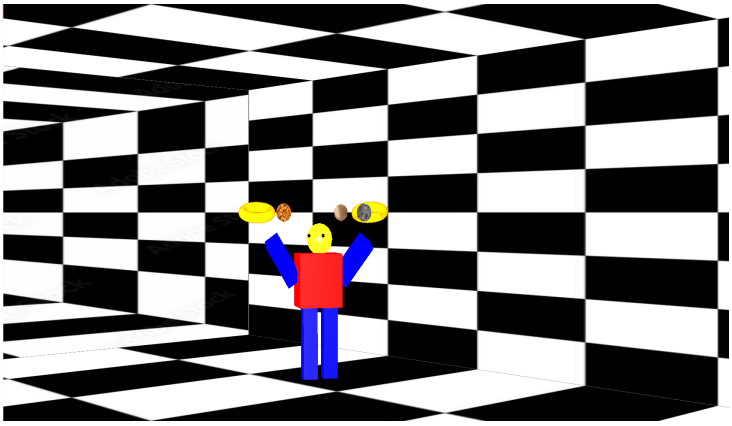


figure 2 Overview



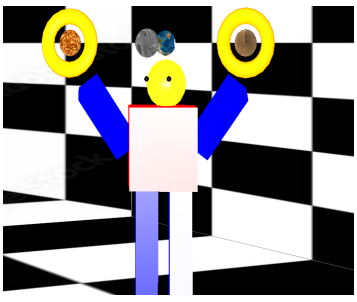
—Sources of textures && Algorithms

Use the following algorithm to ensure that the camera moves with the camera.

```
float XaxisDir = sin(cam_hgt);     //x camera
float ZaxisDir = cos(cam_hgt);     //z camera
    xEye += s * moveCount * XaxisDir;
    zEye += s * moveCount * ZaxisDir;
    moveCount = 0;
    xMove = xEye + XaxisDir * d;
    yMove = 25;
    zMove = zEye + ZaxisDir * d;
gluLookAt(xEye, 0, zEye, xMove, 0, zMove, 0, 1, 0);
```

To prevent the 3D model from passing through the mold, I set the circular rotation to be 2 times the speed of the sphere's movement.

--Spotlight(shown on AAO-3 and AAO-1)



—Control Functions

1. ‘0’ Change the camera to Gallery View.
2. ‘1’ Change the camera to AAO-1 View.
3. ‘2’ Change the camera to AAO-2 View.
4. ‘3’ Change the camera to AAO-3 View.
5. ‘↑’ makes the camera move forward.
6. ‘↓’ makes the camera move backward.
7. ‘←‘ makes the camera turn left.
8. ‘→’ makes the camera turn right.

—Reference

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