# CSC3231 Coursework

## Video Link

<https://youtu.be/3TAawQOaN3I>

## Multi-Textured Surface

A screenshot of a video game

Description automatically generated

The surface of the planet is a mesh of multiple diverse colours, including green, pink, purple, black, and beige. This varied color scheme contributes to a textured terrain. The presence of elevations and depressions in the area enhances the overall texture of the planet's surface.

## Oscillating Spheres

A screenshot of a video game

Description automatically generated

There are spheres all over the planet that oscillate from a fixed point. In the picture above, the yellow, and red spheres are both oscillating left and right with respect to the x-axis. Nevertheless, these two spheres differ. Aside from the red sphere having a larger amplitude in its oscillation, it also follows a cosine function, while the yellow sphere follows a sine function. Not depicted in the picture above, there is also another sphere in this planet that oscillates up and down with respect to the y-axis.

## Parent-Child Hierarchy

A screenshot of a video game

Description automatically generated

The grey cuboid and the sphere are both circling the green cuboid. The grey cuboid and the sphere are the children while the green cuboid is the parent. The children objects are rotating with respect to the parent object. The two children objects are rotating about different axis planes.

## Spinning Capsules

A screenshot of a video game

Description automatically generated

These capsules are rotating with respect to their own central point.

## Trees

A screenshot of a video game

Description automatically generated

The presence of scattered trees contributes to the textured nature of the planet's surface.

## External Sources

* Outdoor Ground Textures – <https://assetstore.unity.com/packages/2d/textures-materials/floors/outdoor-ground-textures-12555>
* Conifers – <https://assetstore.unity.com/packages/3d/vegetation/trees/conifers-botd-142076>
* Grass and Flowers Pack 1 – <https://assetstore.unity.com/packages/2d/textures-materials/nature/grass-and-flowers-pack-1-17100>