CMT107 : Visual Computing - Lab Sheet 3

3D Object and Scene Representation

Download the file VC03.7z from the Learning Central and extract it. Do the following:

- Run VC03.java. You will see the framework of a sphere, but both poles of it are empty.
- Check the class SSphere which extends class SObject and models a sphere. Add code at the specified locations to define the South Pole point coordinates, normal direction, and triangle vertex indices in North and South Pole regions. Run the program again, and you will see the framework of a full sphere.
- Modify VC03.java at the specified locations to construct a scene as shown below. In the function init(), create a teapot using the STeapot class provided. In the function display(), add code to transform (including scale, rotate) the sphere to appropriate location, and then and transformation, binding and drawing code to put the teapot to appropriate place. Run the program again to see whether you have correctly drawn the scene.