

CS 378 - Game Technology - Homework #2

This homework is worth **10%** of your grade

Due Date: Feb 1st. 2007

In this homework you will implement your own scene graph hierarchy to maintain and display the solar system. We have 9 planets and the sun in our solar system. The planets can be represented as spheres rotating at different rates around the sun. Some planets (such as the Earth) have moons that rotate around the planets as the planets rotate around the sun.

You should design a scene graph node that can hold an object's spatial relationship to its parent. For example, the moon's parent is the Earth and the Earth's parent is the sun.

Here are the required components of this homework:

- The planets should rotate at different rates around the sun.
- A given planet should rotate at a constant speed around the sun. In other words, you should measure the time between the times you draw frames and update your scene graph accordingly.
- The planets must be texture mapped.

Here are some features that you can implement to have extra credit. Again, each extra feature earns you **1%**:

- Make the sun a light source that illuminates the planets.
- Elliptical orbits for planets.

The submission instructions are on the web page.