**GAM531/DPS931**

**Lab Two**

**Linear Transformation**

**Solar System**

Follow these steps:

* Download and watch the video clip that shows the final result of what you are supposed to do. The video clip is located in BB->Labs->Lab2
* This is a very simple model of the sun, the earth and the moon.
* **Notes:**
  + In order to make it simple, replace the three circles with simple squares
  + Be careful about the direction of rotations, translations and scales. You must exactly follow the same pattern.

**The following is optional:**

Perform the following if you are looking for more challenge:

1. Create the Jupiter planet that has four moons and add it to the existing solar system. The distance of the Jupiter from the sun is more than the distance of the earth from the sun.
2. Represent the sun with a pentagon and the earth with square and the Jupiter with triangle and all moons with circles. To do this, you will need to push all the vertices into VRAM, first. Then you can connect them in different styles.

**Hint:**

glDrawArrays(mode, first\_vertex to start connecting, number of vertices that needs to be connected). For instance:

glDrawArrays(GL\_QUADS, 5, 4); // Creates 4 connections starting from vertex number 5 using QUAD as mode: 5-6 6-7 7-8 8-9

The vertices are numbered in the same order that is defined in the array, i.e. first coordinates corresponds to vertex number 0, second coordinates corresponds to vertex number 1, etc.