Computer Graphics 2010/ 2011 **Verónica Orvalho, Bruno Oliveira**

Lab 01 **Deadline: 26.03.2012 at 24h00**

Topics: Loading of 3D models, Rendering of primitives with OpenGL, 1st persona and 3rd person camera, geometric transofrmations.

Deliverable: Asteroids Simulation or Similar
(feel free to replace the asteoroids by any other object)

1. Load 3D models (using your own OBJ parser,). It is not necessary to load the textures or normals. Illumination not included.

2. Render 3D models.

3. Move the ship around the 3D scene. (implement 1st person and 3rd person camera)

4. You must use linear equation systems. The ship is controlled by the user.

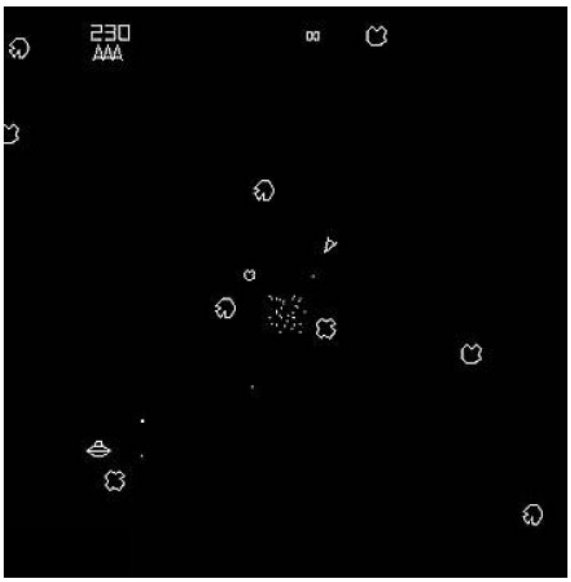
5. Move the asteroids on random path. You must use geometric transformations and include rotation, translation and scale. The asteroids are moved automatically.

6. Allow switching between cameras (1st person, 3rd person, fixed point camera).

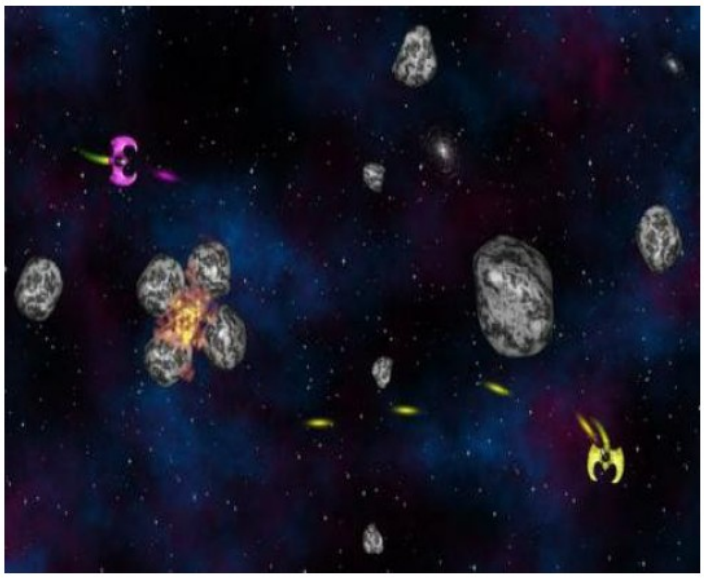
7. Implement a dynamic camera.

8. Implement a transition between the cameras.

The content can be displayed in 2D, 2.5D or 3D
Use the framework provided in class.
You can use more advance features like fractals to generate the scene



asteroids 2D



asteroids 3D