CSCI 4250/5250 Project 2

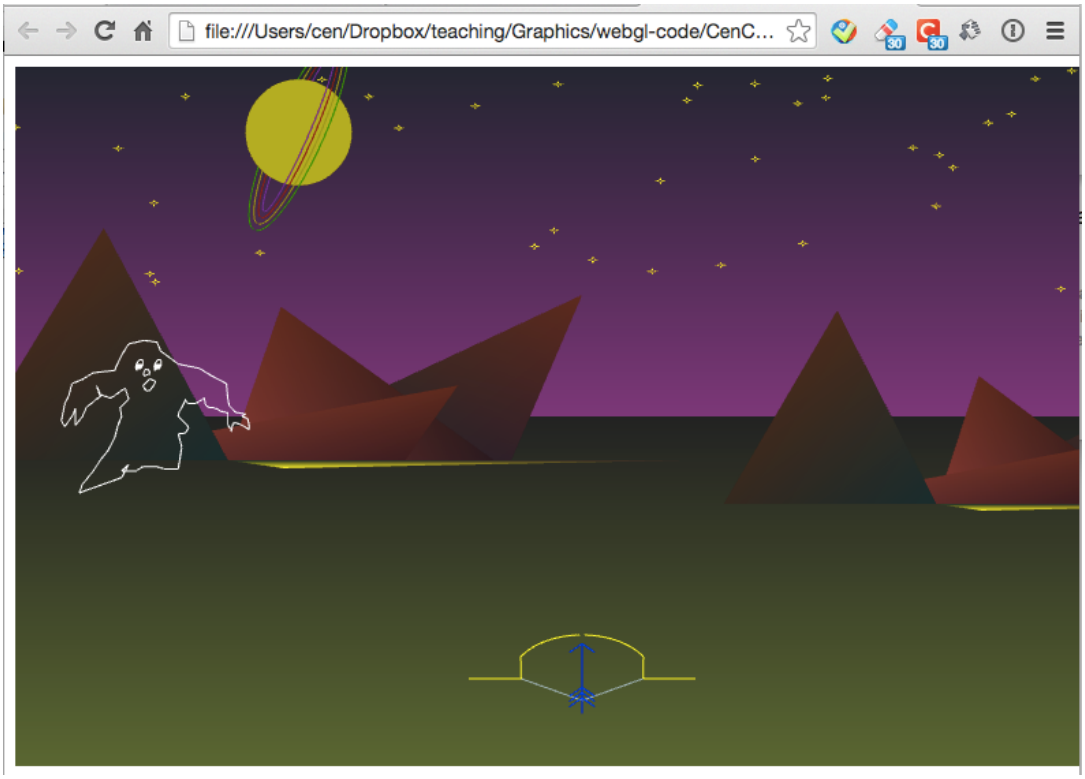
This project is designed to practice using 2D transformations on objects:

- Use modelview matrix to form the composite transformation matrix
  - Use push and pop operations to save and restore the modelview matrices
- Use translate(), rotate(), scale4() functions as appropriate to draw various shapes

This program is in preparation for the next project where a game involving animation and interactivity are to be completed. It is important that this project is completed.

Write a program to produce a scene as shown. The scene is composed of:

- A canvas of width and height in the golden ratio (ratio = width/height = 1.618)
- A "ground" and "sky". There are stars in the sky. Make sure the stars are actually drawn in the form of a star, i.e., not just a point, and then scaled and translated to appear at random locations in the sky
  - There should be at least 20 stars randomly scattered in the upper 1/3 of the sky.
  - The random locations of the stars should be pre-computed, recorded, and used for placing the stars.
- There are "objects" on the ground – mountains, trees, etc.
- A ghost is placed at the left side of the scene;
- A bow and an arrow, created as two separate objects are placed in the lower center of the scene;
- The planet drawn from homework 5 is placed in the upper left side
- You are required to design/draw at least one additional object for the scene, i.e.,flower, tree, pumpkin, spider. Once the new object is designed, draw it 3 times by placing it in three different locations in the scene**.**



The code to draw the ghost can be downloaded from the course web site. You will need to design and draw the scene. Use web tools to find the color values for the objects in your scene.

Name your program **halloween.html and halloween.js.**

Instruction to turn in the program

Turn in the following to the Dropbox for "Project 2" on D2L:

1. halloween.js and halloween.html
2. a screenshot of your scene

Here are two examples to stir up your imagination about what other objects you may design yourself: