CS 455 - Fall 2017
Program #1

OpenGL with Shaders

Dr. Egbert
Due Tuesday September 12
(100 Points)

The purpose of this project is to help you learn the basics of modern OpenGL.

You will need to get OpenGL up and running, then draw a triangle (or some other object) to the screen.

The newest versions of OpenGL are all shader based, meaning that all objects are drawn based on shaders that are created for them. This form of graphics is less intuitive than early versions of OpenGL, but is much more suited for modern GPUs. However, there is a fair amount of overhead associated with getting OpenGL to run.

There is an OpenGL package called "Glitter" that takes care of a lot of the overhead in getting an OpenGL program to run. Glitter packages up all of the libraries, helper code, etc. into one location to simplify running OpenGL. We have created a github repository that contains the Glitter code you will need for your program. It can be found here:

https://github.com/NathanZabriskie/Glitter

In addition, there are step-by-step instructions on loading and using Glitter in your OpenGL code. You need to install Glitter (as instructed in that repository) then edit main.cpp to add your code.

There are two places in main.cpp where you will write your code. They are clearly marked in the file. You will first need to set up your vertex array, then you will need to render your object.

After adding your code, you will need to compile and run the program. For program 1, we supply the shader for you so you don't have to worry about it.