CGC3 Fall 2022 - Assignment 0

0 credit, no deadline, won't be graded

In this assignment, you will set up OpenGL on your machine, draw a simple triangle on a window and capture the screenshot to a ppm file. There is some existing code provided for your reference. You can also choose to develop your own project without using the provided code, as long as it draws and captures screenshots.

For c++ coder, there is an assignment0.cpp file provided, which uses OpenGL, GLFW and GLAD. For setting up OpenGL, you can check
learnopengl.com/Getting-started/Creating-a-window
For python coder, there is an assignment0.py provided. You need to install PyOpenGL and glfw packages.

If your project is set up correctly, the provided code should just run. You don't need to add extra code. The provided code does two things:

1. It draws a beige color triangle on a blue background on a 512x512 screen, see figure below.
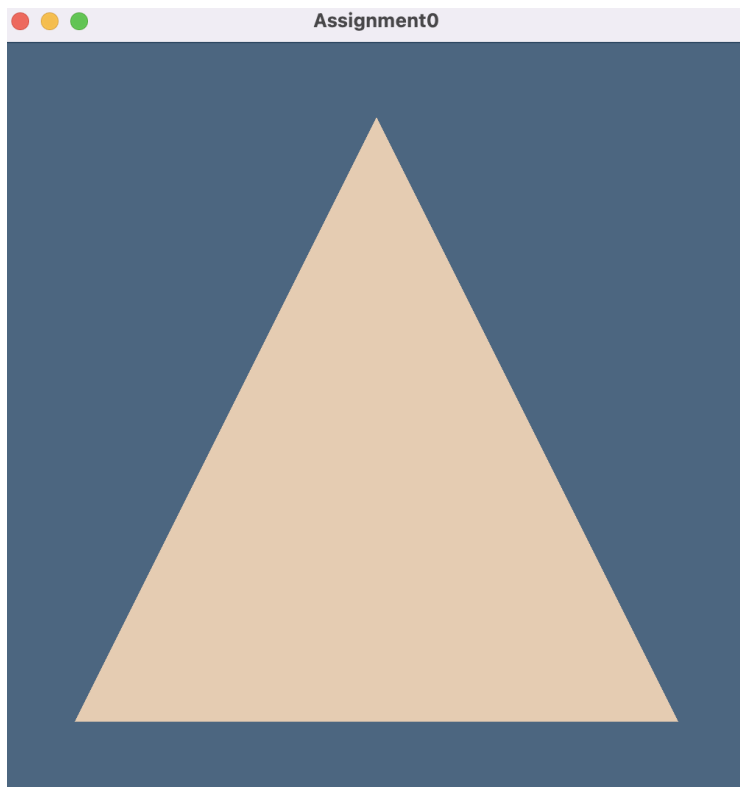
2. The code also handles keyboard input. If you press the key "p", it will capture a screenshot of what is rendered on the screen and save it to a ppm image file. The ppm image is named as "Assignment0-ss[].ppm" where [] is an integer index, and should be under the same folder of your code or the compiled binary executable. One ppm example is provided. Please make sure that the captured ppm image looks exactly as the OpenGL rendering in the window.
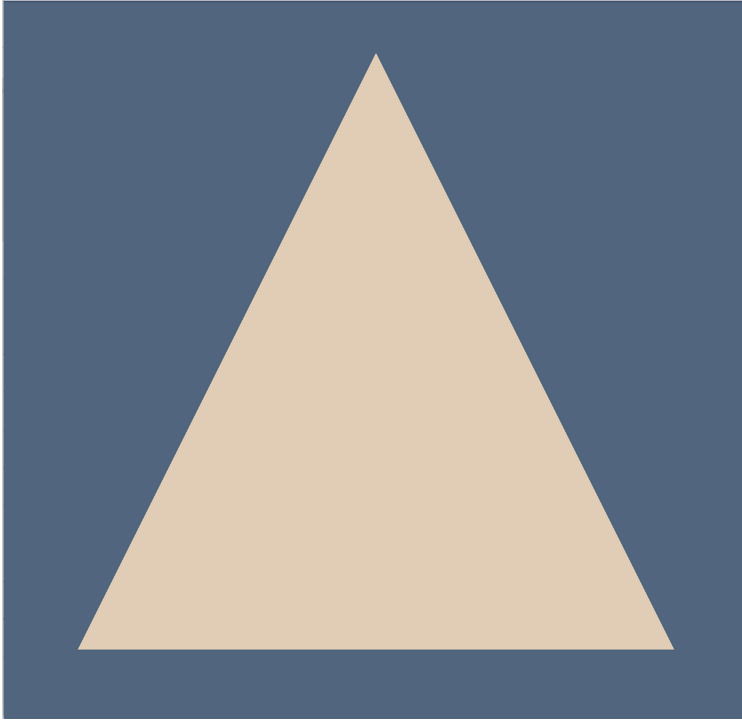
Note that the reference code is provided for you to have an easy start, and they are only tested on one system. If there is any issue on the machine you use, you are responsible to tune it or ask TAs for help. Alternatively you can also develop your own OpenGL code doing the two things: 1.draw a triangle, 2. capture screenshot in ppm format.