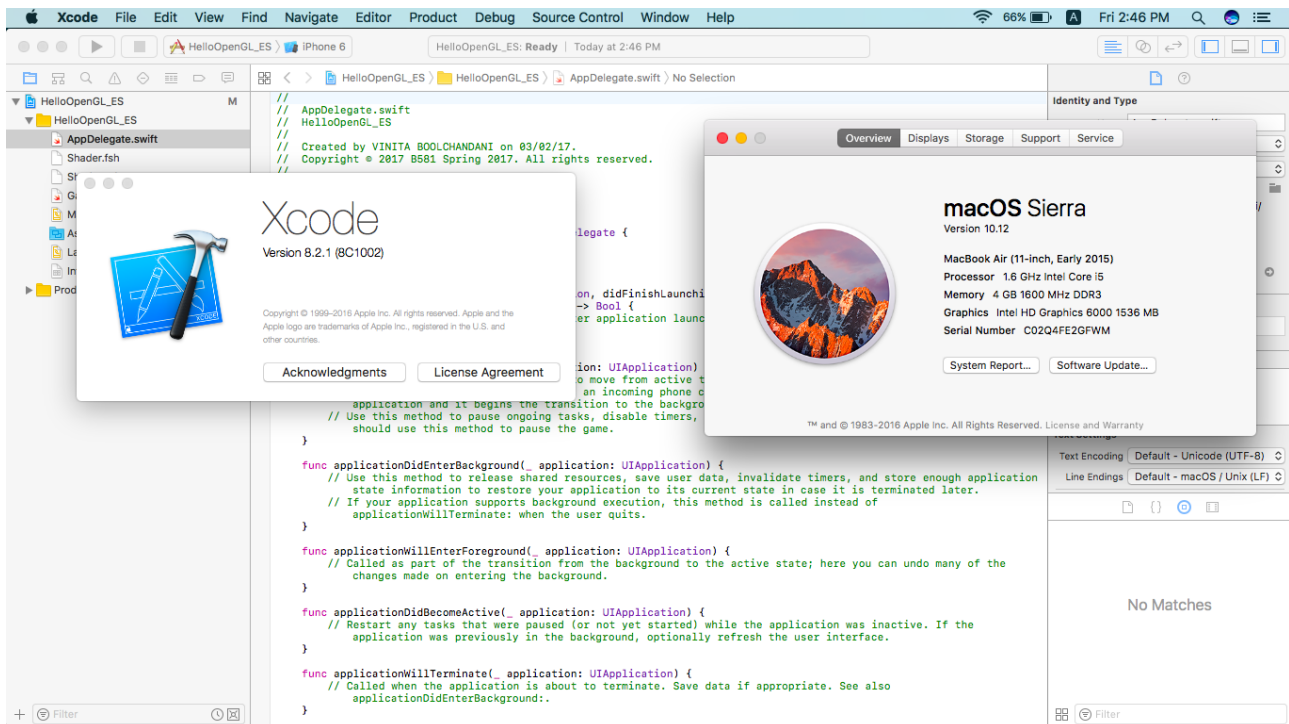Advanced Computer Graphics (B581)
Vinita Boolchandani (vinitab@iu.edu)
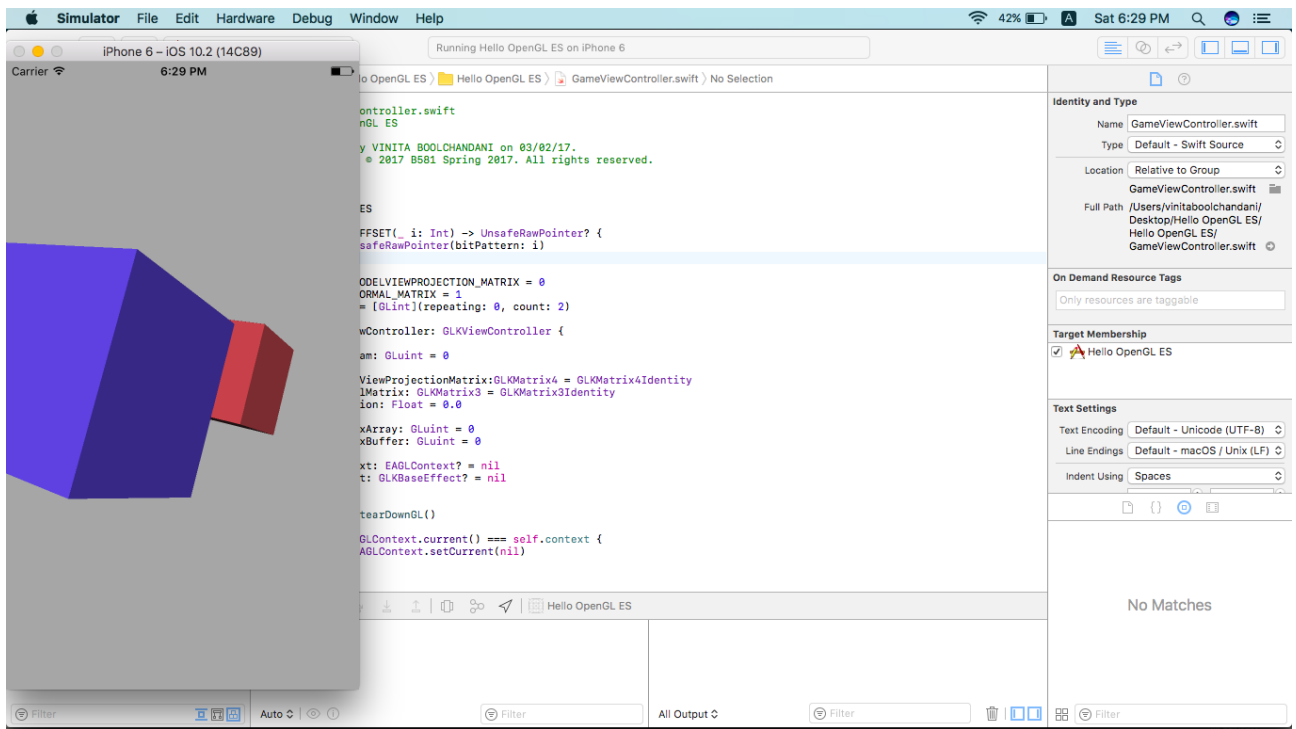February 5, 2017

A.

- Target Platform : iOS
- Development Platform : MacOS Sierra (10.12)
- Use of Personal Computer

B.

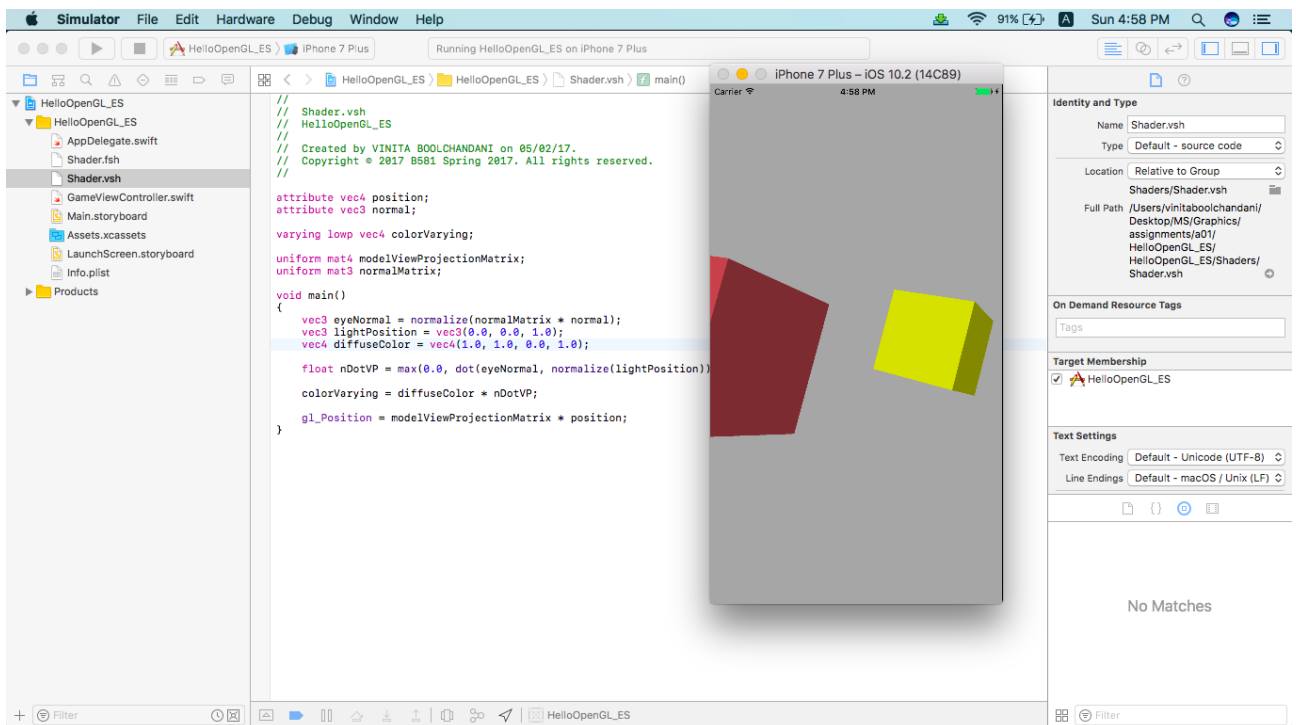- Screenshot of the development environment and desktop OS versions.

- Screenshot of successful compilation

C.

- Changing colour of one of the cubes to yellow(mixing red and green)

Changes for this were done in shader.vsh and are as follows,
vec4 diffuseColor = vec4(1.0, 1.0, 0.0, 1.0);

- Displaying one of the two cubes by commenting the following line of code,
  // glDrawArrays(GLenum(GL_TRIANGLES), 0, 36)
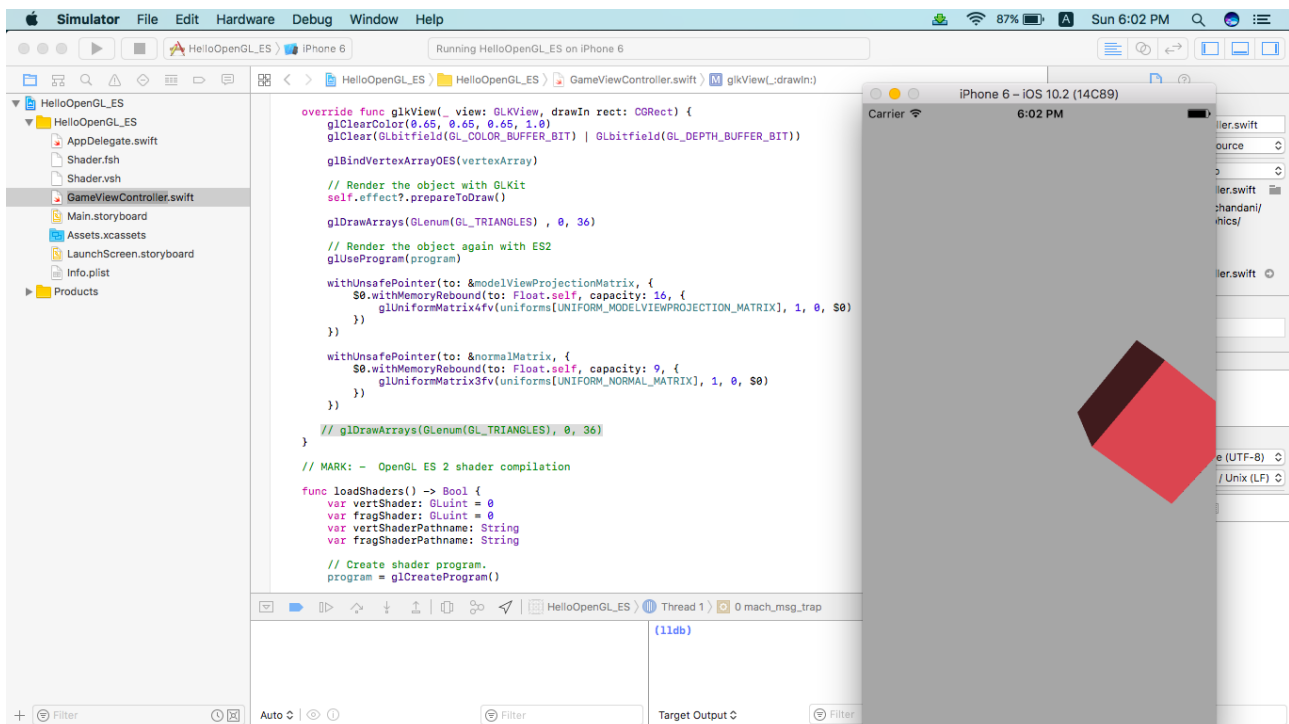
Commenting the above line of code will stop the rendering of second cube.

- I was able to draw a pyramid in place of cube with the following matrix for vertices

-0.5, 0.5, -0.5,   0.0, 1.0, 0.0,
0.5, 0.5, 0.0,   0.0, 1.0, 0.0,
0.0, 0.0, 0.5,   0.0, 1.0, 0.0,

0.0, -0.5, 0.0,   -1.0, -1.0, 0.0,
-0.5, 0.5, -0.5,   -1.0, -1.0, 0.0,
0.0, 0.0, 0.5,   -1.0, -1.0, 0.0,

0.5, 0.5, 0.0,   1.0, -1.0, 0.0,
0.0, -0.5, 0.0,   1.0, -1.0, 0.0,
0.0, 0.0, 0.5,   1.0, -1.0, 0.0,

-0.5, 0.5, -0.5,   0.0, 0.0, 1.0,
0.5, 0.5, 0.0,   0.0, 0.0, 1.0,
0.0, -0.5, 0.0,   0.0, 0.0, 1.0,

HelloOpenGL_ES iPhone 6   Running HelloOpenGL_ES on iPhone 6

HelloOpenGL_ES HelloOpenGL_ES GameViewController.swift No Selection

iPhone 6 – iOS 10.2 (14C89)

Carrier 🔋   12:36 PM

▼ HelloOpenGL_ES
  ▼ HelloOpenGL_ES
      AppDelegate.swift
      Shader.fsh
      Shader.vsh
      GameViewController.swift
      Main.storyboard
      Assets.xcassets
      LaunchScreen.storyboard
      Info.plist
  ▶ Products

```
    -0.5, -0.5, -0.5,       0.0, -1.0, 0.0,
    0.5, -0.5, -0.5,        0.0, -1.0, 0.0,
    -0.5, -0.5, 0.5,        0.0, -1.0, 0.0,
    -0.5, -0.5, 0.5,        0.0, -1.0, 0.0,
    0.5, -0.5, -0.5,        0.0, -1.0, 0.0,
    0.5, -0.5, 0.5,         0.0, -1.0, 0.0,

    0.5, 0.5, 0.5,          0.0, 0.0, 1.0,
    -0.5, 0.5, 0.5,         0.0, 0.0, 1.0,
    0.5, -0.5, 0.5,         0.0, 0.0, 1.0,
    0.5, -0.5, 0.5,         0.0, 0.0, 1.0,
    -0.5, 0.5, 0.5,         0.0, 0.0, 1.0,
    -0.5, -0.5, 0.5,        0.0, 0.0, 1.0,

    0.5, -0.5, -0.5,        0.0, 0.0, -1.0,
    -0.5, -0.5, -0.5,       0.0, 0.0, -1.0,
    0.5, 0.5, -0.5,         0.0, 0.0, -1.0,
    0.5, 0.5, -0.5,         0.0, 0.0, -1.0,
    -0.5, -0.5, -0.5,       0.0, 0.0, -1.0,
    -0.5, 0.5, -0.5,        0.0, 0.0, -1.0*/

    -0.5, 0.5, -0.5,        0.0, 1.0, 0.0,
    0.5, 0.5, 0.0,          0.0, 1.0, 0.0,
    0.0, 0.0, 0.5,          0.0, 1.0, 0.0,

    0.0, -0.5, 0.0,         -1.0, -1.0, 0.0,
    -0.5, 0.5, -0.5,        -1.0, -1.0, 0.0,
    0.0, 0.0, 0.5,          -1.0, -1.0, 0.0,

    0.5, 0.5, 0.0,          1.0, -1.0, 0.0,
    0.0, -0.5, 0.0,         1.0, -1.0, 0.0,
    0.0, 0.0, 0.5,          1.0, -1.0, 0.0,

    -0.5, 0.5, -0.5,        0.0, 0.0, 1.0,
    0.5, 0.5, 0.0,          0.0, 0.0, 1.0,
    0.0, -0.5, 0.0,         0.0, 0.0, 1.0,
]
```

HelloOpenGL_ES Thread 1 0 0x11dd6277e

(lldb)

Auto   Filter   Target Output   Filter

Filter