Homework 1 - OpenGL Basics

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1 Introduction

This document descibes the architecture and design for the first assignment with OpenGL. The objective with this assignment was to create a triangle that oscillates between colored and non-colored.

There is a single major stakeholder:

1. The professor

2 Design Goals

The priorities for the design that follows are:

- The design should minimize complexity
- The design should be conceptually easy to understand
- the design should be easy to modify

3 System Behavior

The use case view is the prime motivator for the System Behavior. This is because the program is simple with no complex components.

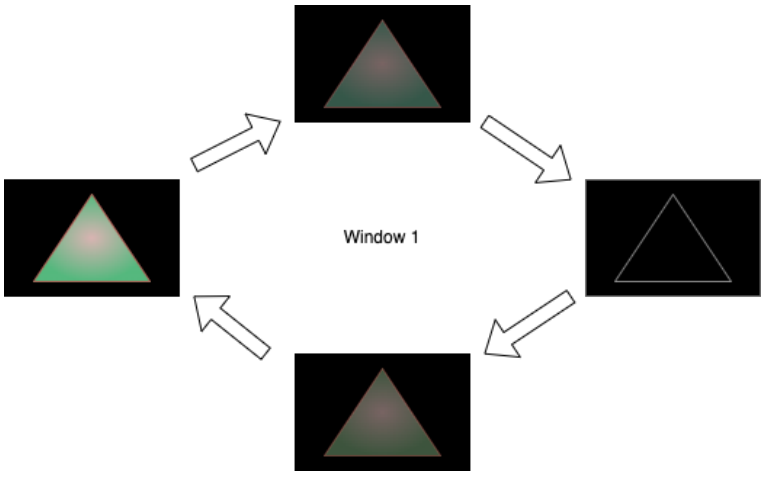

Figure 1: System Behavior for Window 1.

In Figure 1, the right triangle has a white outline and black fill to demonstrate that the triangle exists, but lacks color. When the program is run however, the triangle loses color until it is not visible anymore.

4 Logical View

In this section, the system will be described from a Mid-Level Design View, followed by a High-Level Operational view.

4.1 Mid-Level Design

4.2 High-Level Operational View

5 Process View

How many threads are running? 2? one for each window?

There is a single thread managing the program.

Upon building the program, the triangle is drawn each frame at a slightly different RGB value.

6 Development View

2 threads?

1 thread with the console

1 thread with the openGL rendered triangle

7 Physical View

TBD

8 Use Case View

The user has option to press escape and close window 1

then press any key to close window 2

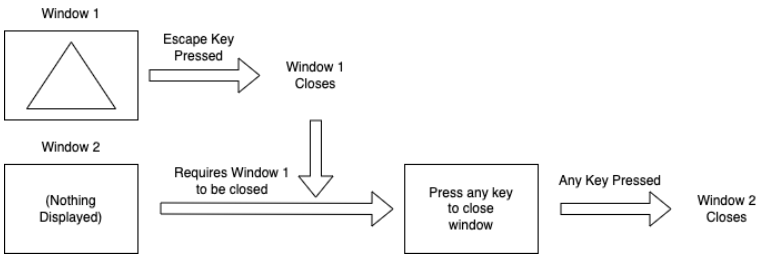

Figure 2: A diagram demonstrating the Use Case Scenario.