**Programming Project Report**

Clayton Warstler

010971514

**Problem Statement:**

The goal of this programming project is to develop a graphics program that displays an object flying along a user generated path on the screen. There are three parts to this project. We needed to create a flight path for the UFO, a polygon shape for the UFO, and animate the shape moving across the screen. The flight path for my program is just lines going across the screen. The UFO is a triangle that points the direction it is traveling. The inputs for this program are both mouse clicks and keyboard inputs. The output is a window with lines on it that has a triangle fly around the screen.

**Design:**

I started by building out the framework for the UFO. I used a new function to hold everything the UFO would need. It includes a variable for both progress as it floats between nodes, and a node variable so it can know which one it needs to go to. I then get the coordinates for each node and the direction and angle for the node. In the mouse callback function, I had to add in an if statement that would set node 0 to be whatever the first click is, instead of in the middle.

**Implementation:**

I started with the building2 sample code. I removed most of the functions and kept display, init, and main. I then changed display almost completely removing what was there. I also created a new function to be called that would create the triangle and moved it along the way.

**Testing:**

No testing was required.

**Conclusions:**

The overall result of this assignment was a success. The program creates lines when the user clicks and if the user presses ‘u’, the program creates a triangle that moves along the lines. All in all, I think this assignment took me about 6 hours to complete, with most of the time coming from debugging.