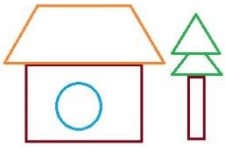
CS 488 – Fall 2013

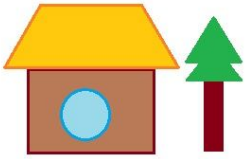
Project 1 – Scan conversion & polygon fill

Due Date: Thursday, 9/26/13 11:59pm

Slide 1



Slide 2



Slide 3

Summary:

The goal of this project is to produce several different objects (name, rectangle, triangle, trapezoid, and circle) using **ONLY** the **GL_POINTS** function in OpenGL.

Each slide is a separate drawing. For the first slide you should generate your name. If your full name is too long, you can just produce your first name. For slide 2 you should produce a house consisting of a trapezoid, a rectangle and a circle and a tree consisting of a triangle, a trapezoid and a rectangle. These objects should not be filled-in. For slide 3 you should fill-in the house and the tree, as shown above. Feel free to fill your objects with the color of your choice. Once the slides are created, your program should allow the user to toggle sequentially among the three images using the 'D' key to toggle forward (if not at the end), and the 'A' key to go back (if not at the beginning).

The entire window size is set to (800, 800). You can define the position and the size of all the objects yourself, but the structure of the scene should be pleasant. You may want to center your name and the scene.

Compilation/Programming-Style

The program must be written using C/C++ using the GLUT library. You can program using any operating system (Windows, Linux and Mac), and you can use any IDE (Visual Studio, Eclipse, Xcode and so on). However, your final product must compile on the CS Computer Labs computers in room 2254 SEL. You can use your

CS account on these machines to confirm that this requirement is fulfilled. Programming style is essential; you should document your code so that I can understand the important steps/algorithms in your code. Use block comments to clarify a section of code and line comments to explain a technical detail on the implementation. You should also format and organize your code in a readable fashion. Without documentation or ReadMe file, you will lose 10% of your final grade as penalty.

Submission

You will submit your project on Piazza. Please submit only ONE archive file (zip or tar) which includes the source code, possible header files, ReadMe file.

ReadMe

You MUST include a readme file which summarized what you did. In this file you should also specify the algorithm(s) you used and document any other information that is relevant to my understanding your algorithm. The algorithms you explain in the readme file should coordinate with your comments within the program.

Grading

This programming assignment is worth 3% of the final grade (3 points). The maximum value possible for an assignment will be reduced if handed-in late. If the assignment is turned in up to 24 hours late this maximum value is reduced by a 50% penalty (1.5 points). If an assignment is turned in up to 48 hours late this maximum value will be reduced by a 100% penalty (0 points); this also means that a program not 100% correct can receive a value less than zero but not less than -3 points on this assignment. An assignment turned in more than 48 hours late or not turned in at all will result in student losing an additional 100% loss (that means you get a -3 points on this assignment).

Grading is based on the stated requirements including comments, readme and programming style. You can get 0.5 point for your name in Slide 1, 0.25 point for each object in Slide 2 (1.5 points totally), and 1 point for filling in Slide 3. A 100% working program handed-in on time does not necessarily receive full credit. A non-working program handed-in on time does not necessarily receive 0 points. Failing to provide sufficient cogent comments and/or a poor programming style will result in a penalization. No extra credit will be given for features that were not required in the first project.