

Homework #3 - Filling Polygons

README.txt: Be sure to include each piece of the README as required from project #2. If you need, refer to that pdf for a more complete list of required components.

In this project you will fill polygons using the Edge Table and Active Edge Table technique. These methods are capable of filling concave and self-intersecting polygons which makes them very robust. For the purposes of this project you will need to do the following:

1. Allow multiple 2D polygons to be displayed on the screen.
2. Include a method of creating polygons via use of the mouse. For my implementation I have done the following: When the user clicks with the left mouse I insert that point as the next vertex of a polygon. As the user continues to click, this forms more vertices of the polygons (and thus the edges). When the user right clicks, it ends the current polygon, which should connect the last and first points as an edge.

To receive a few points of extra credit, implement these tools:

1. 'r' - Remove the last element drawn on the screen. In essence, undo the last polygon. This option should work repeatedly.
2. 'c' - Clear all polygons from the screen
3. Enable rubberbanding in the project. In other words, as you are still creating the polygon, allow the next edge (refer to the demo if necessary) to follow the mouse (use passive motion). This is more difficult than in the line drawing project to display cleanly and intuitively. I recommend finishing the other pieces before working on the rubberbanding.