ECS 175 - Computer Graphics
Assignment 1

Due 04/15/2013

Render\(^1\) the *Mandelbrot Set*. Additionally give your program the following features:

- *Use colors.* Map the number of function iterations to different colors. Provide at least two different color map settings.

- *Provide zoom functionality.* Example: Provide a key that scales the displayed function range to allow users to inspect details.

- *Provide translation functionality.* Example: Use arrow keys to translate the current view of the field.

- *Mark interesting regions.* Mark at least three interesting regions of the set by drawing outlines to ‘guide’ user exploration. Use different outline shapes.

\[ \text{Figure 1: Example rendering of a Mandelbrot Set containing five outlines.} \]

**As always:** Google is your friend, but do not copy & paste code.

**Hint:** A fragment shader can accelerate your computations (5 extra credit).

\(^1\)See, for example, Demo 1 at http://idav.ucdavis.edu/~obermaier/cg.html