## CS 696 Functional Design & Programming Spring Semester, 2015 Assignment 4

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Assignment 4 Several Problems Due Nov 4 23:59

Problem 1. Implement the Tick-tack-toe game as described at: <a href="http://timothypratley.blogspot.com/2015/11/curious-about-clojurescript-but-not.html">http://timothypratley.blogspot.com/2015/11/curious-about-clojurescript-but-not.html</a> in Clojure-Script to run in a web browser.

Due Nov 18. 23.59

Zip up your project and turn it in in the course portal.

Problem 2. Implement a graphic drawing program using Reagent, ClojureScript, and big ratom. The program displays a drawing area, a palette to select a drawing mode, and undo button in a web browser. The drawing program needs to support drawing lines, circles and rectangles. The palette allows the user to select a line, a circle of a rectangle. When the user selects a line the program is in line mode. Then when the user clicks in the drawing area that location becomes the starting point of a line. As the user moves the mouse a line is drawn from the starting point to the mouse cursor. When user clicks the mouse a second time the line is finished. The location of the second mouse click becomes the end of the line. After the second mouse click nothing is drawn on the screen until the user clicks again. When drawing A circle the first click determines the location of the center of the circle. The second click determines the radius or size of the circle. When drawing hey rectangle the first click determines the location of the corner of the rectangle. The second mouse click determines location of the opposite corner of the rectangle. The drawing area of the program retains all figures drawn on it until the user clears the screen or undoes operations. Undo should undo drawing of figures and selecting the drawing mode. A single undo will undo the drawing of one figure or one mode selection. For the drawing area use the svg (Scalar Vector Graphics) tag of HTML.

## Grading

Item	Points
Drawing lines, circles, rectangles	15
Retaining multiple figures in drawing area	15
Undo	15
Using big ratom	15
Code Quality	10
Provide schema for big ratom	5

Problem 3. TBA