HTML5 Canvas

CS 329E - Fall 2013
What is the Canvas?

- HTML5 Element
- Displays graphics - shapes, pictures, videos, etc.
- Can be animated or interactive with Javascript
Examples

Cloth:  http://andrew-hoyer.com/andrewhoyer/experiments/cloth/
Water:  http://www.mrdoob.com/#/115/Water_HTML5

21 Examples:  
http://net.tutsplus.com/articles/web-roundups/21-ridiculously-impressive-html5-canvas-experiments/
Let’s Get Started - The HTML

```html
<html>
<head>  
  <title> Canvas Example </title>  
</head>
<body>  
  <canvas id = "canvas" width = "640" height = "480" >  
    Get a better browser.  
  </canvas>
</body>
</html>
```
Now The Javascript: A Simple Square

```javascript
var canvas = document.getElementById("canvas");
var ctx = canvas.getContext("2d");

ctx.fillStyle = "red";
ctx.fillRect(50, 50, 150, 150); // x, y, width, height
```
The Canvas
Example Code: [here](#)

- Rectangle
- Text
- Paths & Lines
- Circles
- Colors
- Images

- Animation
- User Interaction
- Particle System
- Saves and Transforms
- Video
- Multiple Canvases
Going 3D With WebGL

- 3D graphics using OpenGL in your browser
  - hardware accelerated
  - supported by Chrome and Firefox (and Safari/Opera)

- Examples:
  - Google Maps
  - http://www.chromeexperiments.com/webgl/
  - My Example - main script