Week 8 Readings

Transforms:

The CSS3 transform property lets you translate, rotate, scale, and/or skew any element on the page.

*Transforms require vendor prefixing for IE9, Android up to 4.4.3, iOS8, and Blackberry 10.

```
-webkit-transform: translate(45px,-45px); /* iOS8, Android
↵4.4.3, BB10 */
-ms-transform: translate(45px,-45px); /* IE9 only */
transform: translate(45px,-45px);
```

Translation:

Translation functions allow you to move elements left, right, up, or down. These functions are similar to the behavior of position: relative; when declaring top and left, moving elements up and down or left and right along the x and y axes. When you employ a translation function, you're moving elements without impacting the flow of the document. Unlike position: relative, which allows you to position an element either against its current position or against a parent or other ancestor, a translated element can only be moved relative to its current position.

Scaling:

The scale(x,y) function scales an element by the defined factors horizontally and then vertically. If only one value is provided, it will be used for both the x and y values, growing or shrinking your element or pseudo-element while maintaining the original aspect ratio. For example, scale(1) would leave the element the same size, scale (2) would double its proportions, scale(0.5) would halve them, and so on. Providing different values will distort the element, as you'd expect:

```
transform: scale(1.5, 0.25);
```

Rotation:

The rotate() function rotates an element around the point of origin by a specified angle value. As with scale, the point of origin is the element's center by default. Generally, angles are declared in degrees, with positive degrees moving clockwise and negative moving counterclockwise. In addition to degrees, values can be provided in grads, radians, or turns, but we'll stick with degrees.

```css
.ad-ad2 h1:hover span {
    color: #484848;
    transform: rotate(10deg) translateX(40px) scale(1.5);
}
```

Skew:

The skew(x,y) function specifies a skew along the x and y axes. As you'd expect, the x specifies the skew on the x-axis, and the y specifies the skew on the y-axis. If the second parameter is omitted, the skew will only occur on the x-axis:

```css
transform: skew(15deg, 4deg);
```

Transitions are awesome and are easy to use even in older browsers. It is also lightweight in comparison to other methods that are outside of your CSS file.

The transition-timing function lets you control the pace of the transition in even more granular detail.

Multiple Transitions:

The transition properties allow for multiple transitions in one call. For example, if we want to change the color simultaneously by changing the rotation and size, we can.

```css
transition-property: transform, color;
transition-duration: 0.2s;
transition-timing-function: ease-out;
transition-delay: 50ms;
```

Chapter 12 SVG, Drag and Drop

Canvas:

The Canvas API is supported in the following ways:

-
- Chrome 4+
-
- Firefox 2+
-
- Opera 9.6+
-
- Safari 3.1+
-
- iOS 3.2+
-
- Internet Explorer 9.0+
-
- Android 3.0+

With HTML5's Canvas API, we can draw anything we can imagine, all through JavaScript. This can improve the performance of our websites by avoiding the need to download images off the network.

Canvas was first developed by Apple. Since they already had a framework—Quartz 2D—for drawing in two-dimensional space, they went ahead and based many of the concepts of what would come to be known as HTML5's canvas on that framework. It was then adopted by Mozilla and Opera and then standardized by the WHATWG (and subsequently picked up by the W3C, along with the rest of HTML5).

Note: The Canvas Coordinate System

As you may have gathered, the coordinate system in the canvas element is different from the Cartesian coordinate system you learned in math class. In the canvas coordinate system, the top-left corner is (0,0). If the canvas is 200 pixels by 200 pixels, then the bottom-right corner is (200,200), as Figure 12.3 illustrates.

I spent a lot of time doing the exercises, but going past demo 6, a lot of the exercises couldn't be completed on my own.

LOTS OF COOL THINGS TO DO WITH CANVAS, SVG, AND USING DRAG DROP.