HTML5 Fundamentals

# HTML5, CSS, JS Code Excerpts – New Toronto Group



Welcome to HTML5 Fundamentals by New Toronto Group!

This document is provided to you for recording notes during training sessions with the course instructor. Additionally, it also contains select code samples discussed during the training sessions and a lab guide.

This course covers the following topics:

* Introduction to HTML5
* Tools and Resources
* DOM
* Structural Tags
* Article Tags
* Section Tags
* Audio Tags
* Video Tags
* HTML5 Forms
* JavaScript
* HTML5 Canvas
* Integrated APIs
* CSS3
* Web Storage
* Bootstrap
* Extra Topics

At the end of this course you will know the basics of HTML5, CSS, and JavaScript and how to begin web applications using it. Additionally, some demos and exercises in this course use Node.js and GIT.

Environment Setup:

AngularJS at it’s heart is HTML5, JavaScript and CSS. All you really need to get started is a modern web browser and a text editor. This said; there are many modern web development tools available that make our lives as developers easier. Please follow these instructions to install the helpful software we will introduce for this course:

Install Text Editor

Sublime Text is a text editor for code, markup and prose. Downloadable at:

<http://www.sublimetext.com/>

Brackets is a lightweight, powerful and modern text editor. Downloadable at:

http://brackets.io/

Webstorm is a lightweight and powerful IDE, with a server-side developed with Node.js. Downloadable at:

https://www.jetbrains.com/webstorm/

For Windows, check out Notepad++ or TSW WebCoder.

Browser of Choice

If you could, use Google Chrome as your Browser of choice because later in the course we will be discussing MDN Chrome Tools. Downloadable here:

https://www.google.com/chrome/

Running the code

When you have a piece of code that you want to run. You can use these tools to help you:

* MAMP

<https://www.mamp.info/en/>

* http-server

https://www.npmjs.com/package/http-server

Using GitHub

GitHub is a Web-based modern version control system for software. Many libraries and files that we will use to assist our development require GIT.

Download Demo Files:

Clone with GIT:

$ git clone https://github.com/NewTorontoGroup/HTML5-Course-Files

You will find the demos in the Demos folder.

OR, Manual Download:

https://github.com/NewTorontoGroup/HTML5-Course-Files­­

Then “Download ZIP”

Unit 1

Laying Out A Page



1. HTML5 Layout

HTML:

01-html5-layout.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

<title>HTML5 Layout</title>

</head>

<body>

<div class="container">

<header>

<hgroup>

<h1>HTML5 Layout</h1>

<h2>The HTML5 Way</h2>

</hgroup>

<img id="logo" src="images/logo-html5.png" style="width: 77px;"alt="Logo">

</header>

<nav id="mainnav">

<ul>

<li>Home</li>

<li><a href="">Products</a></li>

<li><a href="">Services</a></li>

<li><a href="">About</a></li>

</ul>

</nav>

<div id="container">

<div id="sidebar">

<h2>Side Nav</h2>

<nav id="sidenav">

<ul>

<li><a href="">Link</a></li>

<li><a href="">Link</a></li>

<li><a href="">Link</a></li>

<li><a href="">Link</a></li>

</ul>

</nav>

<h2>Partner Links</h2>

<ul id="partnerlinks">

<li><a href="">Partner Link</a></li>

<li><a href="">Partner Link</a></li>

</ul>

</div>

<div id="content">

<h2>Welcome!</h2>

<p>

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip

ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu

fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia

deserunt mollit anim id est laborum.

</p>

</div>

</div>

<footer>

<p>&copy; Webucator, Inc. All rights reserved.</p>

</footer>

</div>

</body>

</html>

2. HTML5 Layout Styled

HTML:

02-html5-layout-styled.html

<!doctype html>

<html lang="en">

<head>

<title>HTML5 Layout - Styled</title>

<meta charset="UTF-8">

<link rel="stylesheet" href="stylesheets/style-html5.css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<div class="header" class="row">

<div class="hgroup">

<h1>HTML5 Layout</h1>

<h2>The HTML5 Way</h2>

</div>

<img id="logo" src="images/logo-html5.png" alt="Logo">

</div>

<div class="row">

<div class="nav" id="mainnav">

<ul>

<li>Home</li>

<li><a href="">Products</a></li>

<li><a href="">Services</a></li>

<li><a href="">About</a></li>

</ul>

</div>

</div>

<div id="row">

<div class="col-lg-3 col-md-3 col-xs-6 col-sm-6">

<div class="aside" id="sidebar">

<div class="row">

<h2>Side Nav</h2>

<div class="nav" id="sidenav">

<ul>

<li><a href="">Link</a></li>

<li><a href="">Link</a></li>

<li><a href="">Link</a></li>

<li><a href="">Link</a></li>

</ul>

</div>

<h2>Partner Links</h2>

<ul id="partnerlinks">

<li><a href="">Partner Link</a></li>

<li><a href="">Partner Link</a></li>

</ul>

</div>

</div>

</div>

<div class=" col-lg-8 col-md-8 col-xs-6 col-sm-6">

<div id="content">

<h2>Welcome!</h2>

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

</div>

</div>

<div class="row">

<div class="footer">

<p>&copy; Webucator, Inc. All rights reserved.</p>

</div>

</div>

<script src="../../bower\_components/jquery/dist/jquery.min.js"></script>

<script src="../../bower\_components/bootstrap/dist/js/bootstrap.min.js"></script>

</div>

</body>

</html>

CSS:

style-html5.css

body {

font-family: tahoma;

}

.header {

display: block;

padding: 5px;

height: 80px;

margin: auto;

}

.header .hgroup {

display: block;

float: left;

}

.header .hgroup h1 {

font-size: x-large;

margin-bottom: 5px;

margin-top: 10px;

}

.header .hgroup h2 {

font-size: large;

margin: 0px;

}

.header #logo {

float: right;

width: 77px;

}

#mainnav{

list-style-type: none;

clear: both;

display: block;

padding: 10px;

margin: 10px auto;

background-color: cornflowerblue;

}

.nav #mainnav a {

color: white;

}

.nav #mainnav ul {

margin: 0px;

padding: 0px;

}

#mainnav li {

text-decoration: none;

display: inline;

margin-right: 10px;

padding-right: 10px;

}

#container {

margin: auto;

}

.aside h2 {

margin-bottom: 0px;

font-size: large;

color: #006;

}

.aside {

width: 250px;

float: left;

margin-bottom: 5px;

}

.aside ul {

margin: 0px;

padding: 0px;

}

.aside li {

display: block;

width: 50%;

height: 100%;

border: 1px solid white;

padding: 2px;

background-color: cornflowerblue;

}

.aside li:hover {

background-color: #fff;

}

.aside a {

text-decoration: none;

display: block;

width: 100%;

}

li a{

color: white;

}

#content {

float: left;

padding: 10px;

border-left: 2px solid cornflowerblue;

}

.footer {

display: block;

clear: both;

border-top: 1px solid #006;

margin: 5px auto;

font-style: italic;

text-align: right;

}

a:hover {

color: #f60;

}

3. HTML5 and JS Table API

HTML:

03-table-element-api.html

<!doctype html>

<html>

<head>

<meta charset="utf-8">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

<title>Table</title>

</head>

<body>

<div class="container">

<table class="table" id="webucator-employees">

<thead>

<tr>

<th>First Name</th>

<th>Last Name</th>

</tr>

</thead>

<tbody>

<tr>

<td>Nat</td>

<td>Dunn</td>

</tr>

</tbody>

</table>

</div>

<script src="scripts/03-table-element-api.js"></script>

</body>

</html>

JS:

03-table-element-api.js

function addCaption() {

var myTable = document.getElementById("webucator-employees");

var myCaption = myTable.createCaption();

myCaption.innerHTML = "Webucator Employees";

myCaption.style.backgroundColor = "#eee";

myCaption.style.fontWeight = "bold";

myCaption.style.borderBottom = "2px solid #006";

}

window.addEventListener("load", addCaption, false)

Unit 2

Tools and Resources



1. HTML Structures

HTML:

01-htmlStructures.html

<!doctype html>

<html lang="en">

<head>

<title>html4 vs html5</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h2>HTML4 Structure</h2>

<img src="images/html4-structures.png"/>

<h2>HTML5 Structure</h2>

<img src="images/html4-structures.png"/>

</div>

</body>

</html>

2. HTML5 Layout Styled

HTML:

02-html5-layout.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Layout</title>

<link href="stylesheets/style-html5.css" rel="stylesheet">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<header>

<hgroup>

<h1>HTML5 Solutions</h1>

<h2>HTML5 Products and Services</h2>

</hgroup>

<img id="logo" src="images/logo.png" alt="Logo">

</header>

<nav id="mainnav">

<ul>

<li>Home</li>

<li><a href="">Products</a></li>

<li><a href="">Services</a></li>

<li><a href="">About</a></li>

</ul>

</nav>

<div id="content">

<div id="services">

<h1>Services</h1>

<div id="training" contenteditable>

<h2>HTML5 Training</h2>

<img src="images/training.png" alt="Training">

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

<div id="consulting">

<h2>HTML5 Consulting</h2>

<img src="images/consulting.png" alt="Consulting">

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

</div>

<div id="products">

<h1>Products</h1>

<div id="editor">

<h2>HTML5 Editor</h2>

<img src="images/editor.png" alt="Editor">

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

<div id="templates">

<h2>HTML5 Templates</h2>

<img src="images/templates.png" alt="Templates">

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

</div>

</div>

<aside id="partners">

<div>

<h3>Partner 1</h3>

<hr>

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

<div>

<h3>Partner 2</h3>

<hr>

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

<div>

<h3>Partner 3</h3>

<hr>

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquipex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</div>

</aside>

<footer>

<p>&copy; Webucator, Inc. All rights reserved.</p>

</footer>

</div>

</body>

</html>

CSS:

style-html5.css

body {

font-family: tahoma;

}

header {

display: block;

padding: 0px 0px 5px 0px;

margin: 0px 20px;

height: 80px;

width: 890px;

float: left;

}

header hgroup {

display: block;

float: left;

}

header hgroup h1 {

font-size: x-large;

margin-bottom: 5px;

color: #E44B32;

}

header hgroup h2 {

font-size: large;

margin: 0px;

color: #F16338;

}

header #logo {

float: right;

width: 80px;

margin-top: 10px;

}

img{

width: 77px;

}

nav#mainnav {

display: block;

float: left;

width: 80px;

margin: 10px 0px 0px 20px;

border-left: 3px solid #E44B32;

border-bottom: 3px solid #F16338;

padding: 15px;

background-color: #eee;

font-size: small;

}

nav#mainnav ul {

margin: 0px;

padding: 0px;

}

nav#mainnav li {

display: block;

}

nav#mainnav a {

color: #B4AFAD;

}

nav#mainnav a:hover {

text-decoration: underline;

}

#content {

margin: 0px 20px;

}

#content h1 {

margin: 0px;

padding-top: 10px;

font-size: x-large;

letter-spacing: 2px;

font-variant: small-caps;

}

#content div h2 {

float: right;

font-size: xx-large;

color: #F16338;

}

#content>div {

clear: both;

}

#content div div {

float: left;

padding: 10px;

width: 500px;

height: 200px;

border: 1px solid #F16338;

font-size: small;

}

aside#partners {

clear: both;

margin: 0px 20px;

display: block;

}

aside#partners div {

width: 340px;

float: left;

padding: 5px;

font-size: x-small;

}

aside#partners h2 {

margin-bottom: 0px;

font-size: large;

color: #eee;

}

footer {

display: block;

margin: 0px 20px;

clear: both;

border-top: 1px solid #F16338;

font-style: italic;

width: 1050px;

text-align: right;

}

a:hover {

color: #f60;

}

Unit 3

Structural Tags, Sections & Articels



1. Section Tags:

01-html5-course-outline.html

HTML:

01-html5-course-outline.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>CSS Training (HTML 5 Way)</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

<link type="text/css" rel="stylesheet" href="stylesheets/html5.css">

</head>

<body>

<div class="container">

<h1>CSS Training</h1>

<div id="left">

<section id="overview">

<h2>Class Overview</h2>

<p>This CSS training class teaches students to use Cascading Style Sheets to format HTML pages.</p>

</section>

<section id="goals">

<h2>Class Goals</h2>

<ul>

<li>Learn the benefits of CSS.</li>

<li>Learn to avoid using deprecated tags and attributes.</li>

<li>Learn CSS syntax.</li>

<li>Learn to use &lt;div&gt; and &lt;span&gt; tags appropriately.</li>

<li>Learn most of the common properties and their values.</li>

<li>Learn to create custom CSS cursors.</li>

<li>Learn to style links with CSS to create "CSS Buttons".</li>

<li>Learn to work with borders, margin, and padding (the box model).</li>

<li>Learn to style tables with CSS.</li>

</ul>

</section>

</div>

<div id="right">

<section id="outline">

<h2>Class Outline</h2>

<ol>

<li>Crash Course in CSS</li>

<li>CSS Fonts</li>

<li>CSS Text</li>

<li>Colors and Backgrounds</li>

<li>Custom Cursors</li>

<li>CSS and Links</li>

<li>Borders, Margins and Padding</li>

<li>Styling Tables with CSS</li>

</ol>

</section>

<section id="tech-reqs">

<h2>Technical Requirements</h2>

<ol>

<li>HTML or Text Editor</li>

<li>Web Browser</li>

</ol>

</section>

</div>

</div>

</body>

</html>

CSS:

This stylesheet is reused in Demos Number 1, 2, and 3

html5.css

body {

font-family: tahoma;

}

header {

display: block;

padding: 0px 0px 5px 0px;

margin: 0px 20px;

height: 80px;

width: 890px;

float: left;

}

header hgroup {

display: block;

float: left;

}

header hgroup h1 {

font-size: x-large;

margin-bottom: 5px;

color: #E44B32;

}

header hgroup h2 {

font-size: large;

margin: 0px;

color: #F16338;

}

header #logo {

float: right;

width: 80px;

margin-top: 10px;

}

img {

width: 77px;

}

nav#mainnav {

display: block;

float: left;

width: 80px;

margin: 10px 0px 0px 20px;

border-left: 3px solid #E44B32;

border-bottom: 3px solid #F16338;

padding: 15px;

background-color: #eee;

font-size: small;

}

nav#mainnav ul {

margin: 0px;

padding: 0px;

}

nav#mainnav li {

display: block;

}

nav#mainnav a {

color: #B4AFAD;

}

#content {

margin: 0px 20px;

}

#content h1 {

margin: 0px;

padding-top: 10px;

font-size: x-large;

letter-spacing: 2px;

font-variant: small-caps;

}

#content article h2 {

float: right;

font-size: xx-large;

color: #F16338;

}

article {

clear: both;

}

section {

float: left;

padding: 10px;

width: 500px;

height: 200px;

border: 1px solid #F16338;

font-size: small;

}

aside#partners {

clear: both;

margin: 0px 20px;

display: block;

}

aside#partners div {

width: 340px;

float: left;

padding: 5px;

font-size: x-small;

}

aside#partners h2 {

margin-bottom: 0px;

font-size: large;

}

footer {

display: block;

margin: 0px 20px;

clear: both;

border-top: 1px solid #F16338;

font-style: italic;

width: 1050px;

text-align: right;

}

a:hover {

color: #f60;

}

1. Article and Section Tags:

HTML:

02-html5-course-outline-article.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>CSS Training - with article tag</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

<link type="text/css" rel="stylesheet" href="stylesheets/html5.css">

</head>

<body>

<div class="container">

<article id="css-course">

<h1>CSS Training</h1>

<div id="left">

<section id="overview">

<h2>Class Overview</h2>

<p>This CSS training class teaches students to use Cascading Style Sheets to format HTML pages.</p>

</section>

<section id="goals">

<h2>Class Goals</h2>

<ul>

<li>Learn the benefits of CSS.</li>

<li>Learn to avoid using deprecated tags and attributes.</li>

<li>Learn CSS syntax.</li>

<li>Learn to use &lt;div&gt; and &lt;span&gt; tags appropriately.</li>

<li>Learn most of the common properties and their values.</li>

<li>Learn to create custom CSS cursors.</li>

<li>Learn to style links with CSS to create "CSS Buttons".</li>

<li>Learn to work with borders, margin, and padding (the box model).</li>

<li>Learn to style tables with CSS.</li>

</ul>

</section>

</div>

<div id="right">

<section id="outline">

<h2>Class Outline</h2>

<ol>

<li>Crash Course in CSS</li>

<li>CSS Fonts</li>

<li>CSS Text</li>

<li>Colors and Backgrounds</li>

<li>Custom Cursors</li>

<li>CSS and Links</li>

<li>Borders, Margins and Padding</li>

<li>Styling Tables with CSS</li>

</ol>

</section>

<section id="tech-reqs">

<h2>Technical Requirements</h2>

<ol>

<li>HTML or Text Editor</li>

<li>Web Browser</li>

</ol>

</section>

</div>

</article>

</div>

</body>

</html>

CSS:

Look in Demo 1 for CSS code.

1. Course Outline Article Nested:

HTML:

03-html5-course-outline-article-nested.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>CSS Training - with article tag</title>

<link type="text/css" rel="stylesheet" href="stylesheets/html5.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<article id="css-course">

<h1>CSS Training</h1>

<div id="left">

<article id="overview" title="Webucator CSS Class Overview">

<h2>Class Overview</h2>

<p>This CSS training class teaches students to use Cascading Style Sheets to format HTML pages.</p>

</article>

<section id="goals">

<h2>Class Goals</h2>

<ul>

<li>Learn the benefits of CSS.</li>

<li>Learn to avoid using deprecated tags and attributes.</li>

<li>Learn CSS syntax.</li>

<li>Learn to use &lt;div&gt; and &lt;span&gt; tags appropriately.</li>

<li>Learn most of the common properties and their values.</li>

<li>Learn to create custom CSS cursors.</li>

<li>Learn to style links with CSS to create "CSS Buttons".</li>

<li>Learn to work with borders, margin, and padding (the box model).</li>

<li>Learn to style tables with CSS.</li>

</ul>

</section>

</div>

<div id="right">

<section id="outline">

<h2>Class Outline</h2>

<ol>

<li>Crash Course in CSS</li>

<li>CSS Fonts</li>

<li>CSS Text</li>

<li>Colors and Backgrounds</li>

<li>Custom Cursors</li>

<li>CSS and Links</li>

<li>Borders, Margins and Padding</li>

<li>Styling Tables with CSS</li>

</ol>

</section>

<section id="tech-reqs">

<h2>Technical Requirements</h2>

<ol>

<li>HTML or Text Editor</li>

<li>Web Browser</li>

</ol>

</section>

</div>

</article>

</div>

</body>

</html>

CSS:

Look in Demo 1 for CSS code.

1. HTML5 Structural Tags:

HTML:

04-html5-structural-tags.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

<link rel="stylesheet" href="stylesheets/04-html5-structural-tags.css">

<title>HTML5 Structural Elements - Default Styling</title>

</head>

<body>

<div class="container">

<br>

<header>header</header>

<nav>nav</nav>

<aside>aside</aside>

<section>section</section>

<article>article</article>

<footer>footer</footer>

<br>

</div>

</body>

</html>

CSS:

04-html5-structural-tags.css

header {

background-color: #D9EDF7;

border: 2px solid black;

}

nav {

background-color: #31708F;

border: 2px solid black;

}

aside {

background-color: #A94442;

border: 2px solid black;

}

section {

background-color: #45A942;

border: 2px solid black;

}

article {

background-color: #F0AD4E;

border: 2px solid black;

}

footer {

background-color: #999999;

border: 2px solid black;

}

1. HTML5 Structural Tags:

HTML:

05-fight-for-fruit.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Outlining</title>

<link rel="stylesheet" href="stylesheets/05-fight-for-fruit.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css">

</head>

<body>

<div class="container">

<header>

<hgroup>

<h1>Fight for Fruit</h1>

<h2>We hate vegetables</h2>

</hgroup>

</header>

<nav id="mainnav">

<ul>

<li><a href="">Apples</a></li>

<li><a href="">Bananas</a></li>

<li><a href="">Oranges</a></li>

</ul>

</nav>

<section>

<h1>Apples</h1>

<p>

Why do you think the expression is the "<strong>apple</strong> of your eye" and not the zucchini of your eye.

It's because apples are good and zucchinis aren't, that's why!.

</p>

<h2>Doctor Bias towards Veggies</h2>

<p>

An apple a day keeps the doctor away and we like going to the doctor almost as little as we like eating

vegetables. But doctors want your business, that's why they often recommend eating vegetables...

</p>

</section>

<section>

<h1>Peaches</h1>

<p>

If someone tells you that you're a peach, that's a good thing right. But who wants to be told that they're a

squash. Nobody.

</p>

</section>

<section>

<h1>Cherries</h1>

<p>

Remember the line from the musical Oklahoma in the song "I can't say No:"

</p>

<blockquote>

<p>S'posin' 'at he says 'at yer lips're "like cherries"</p>

</blockquote>

<p>

Having lips like cherries is flattering, right? Would you like lips like eggplant? Of course, not. Cheeries = good. Eggplant = bad.

</p>

</section>

<aside>

<h1>Vegetables to Avoid</h1>

<p>

Really you should avoid all veggies as they are likely to make your taste buds squirm, but there are a couple you should avoid at all costs.

</p>

<article>

<h1>Tomatoes are Traitors</h1>

<p>Tomatoes are the Benedict of all "veggies" and should never be eaten.</p>

<h2>The Benedict Arnold Fruit</h2>

<p>Nobody likes at traitor...</p>

<h2>Tomatoes can be useful</h2>

<p>

We're not saying never to buy tomatoes. Just don't eat them. They can be useful for other things, such as throwing at bad actors.

</p>

</article>

<article>

<h1>Green Beans</h1>

<p>If it's green, it ain't ripe yet. Nuff said.</p>

</article>

</aside>

<footer>

<h4>&copy; Fruit Lobby. All rights reserved.</h4>

</footer>

</div>

</body>

</html>

CSS:

05-fight-for-fruit.css

h1, h2, h3 {

background-color: #eee;

}

h1 {

font-size: x-large;

}

h2, aside>article>h1 {

font-size: large;

margin-left: 50px;

}

aside>article>h2 {

font-size: medium;

margin-left: 100px;

}

ul, p {

display: none;

}

1. HTML5 Outlining:

HTML:

06-html5-outlining.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Outlining</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<header>

<hgroup>

<h1>Fight for Fruit</h1>

<h2>We hate vegetables</h2>

</hgroup>

</header>

<nav id="mainnav">

<ul>

<li><a href="">Apples</a></li>

<li><a href="">Bananas</a></li>

<li><a href="">Oranges</a></li>

</ul>

</nav>

<section>

<h1>Apples</h1>

<p>

Why do you think the expression is the "<strong>apple</strong> of your eye" and not the zucchini of your eye.

It's because apples are good and zucchinis aren't, that's why!.

</p>

<h2>Doctor Bias towards Veggies</h2>

<p>

An apple a day keeps the doctor away and we like going to the doctor almost as little as we like eating

vegetables. But doctors want your business, that's why they often recommend eating vegetables...

</p>

</section>

<section>

<h1>Peaches</h1>

<p>

If someone tells you that you're a peach, that's a good thing right. But who wants to be told that they're a squash. Nobody.

</p>

</section>

<section>

<h1>Cherries</h1>

<p>Remember the line from the musical Oklahoma in the song "I can't say No:"</p>

<blockquote>

<p>S'posin' 'at he says 'at yer lips're "like cherries"</p>

</blockquote>

<p>Having lips like cherries is flattering, right? Would you like lips like eggplant? Of course, not. Cheeries = good. Eggplant = bad.</p>

</section>

<aside>

<h1>Vegetables to Avoid</h1>

<p>

Really you should avoid all veggies as they are likely to make your taste buds squirm, but there are a couple you should avoid at all costs.

</p>

<article>

<h1>Tomatoes are Traitors</h1>

<p>Tomatoes are the Benedict of all "veggies" and should never be eaten.</p>

<h2>The Benedict Arnold Fruit</h2>

<p>Nobody likes at traitor...</p>

<h2>Tomatoes can be useful</h2>

<p>

We're not saying never to buy tomatoes. Just don't eat them. They can be useful for other things, such as throwing at bad actors.

</p>

</article>

<article>

<h1>Green Beans</h1>

<p>If it's green, it ain't ripe yet. Nuff said.</p>

</article>

</aside>

<footer>

<p>&copy; Fruit Lobby. All rights reserved.</p>

</footer>

</div>

</body>

</html>

Unit 4

Audio and Video



1. Audio Useless:

HTML:

01-audio-useless.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - Useless</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h1>HTML5 Audio - Useless</h1>

a

<audio src="media/casey-at-the-bat.mp3">b</audio>

c

</div>

</body>

</html>

CSS:

This stylesheet is used in all examples.

style.css

header, footer, aside, section, article, nav, hgroup {

display: block;

}

hgroup {

margin-bottom: 20px;

}

h1, h2, h3, h4 {

margin: 2px auto;

font-family: Arial, Helvetica, sans-serif;

width: 480px;

}

h1 {

font-size: x-large;

margin-bottom: 10px;

}

h2 {

font-size: large;

}

h3 {

font-size: medium;

}

h4 {

font-size: small;

font-style: italic;

}

aside h3 {

margin-left: 0px;

}

article {

font-family: "Lucida Sans Unicode", "Lucida Grande", sans-serif;

width: 480px;

margin: auto;

font-size: small;

}

article>div {

margin-left: 30px;

}

#time-display {

font-weight: bold;

}

#poem p img {

cursor: pointer;

}

.highlight {

background-color: #ff6;

}

video {

display: block;

margin: auto;

}

.warning {

color: red;

}

2. Audio Controls:

HTML:

02-audio-controls.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - controls</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - controls</h1>

<article>

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio src="media/casey-at-the-bat.mp3" controls></audio>

<p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

3. Audio OGG:

HTML:

03-audio-ogg.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - controls</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - controls</h1>

<article>

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio src="media/casey-at-the-bat.ogg" controls></audio>

<p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

4. Audio mp3:

HTML:

04-audio-mp3.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - controls</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - controls</h1>

<article>

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio src="media/casey-at-the-bat.mp3" controls></audio>

<p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

5. Audio Multiple Sources:

HTML:

05-audio-multiple-sources.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio – Multiple Sources </title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - controls</h1>

<article>

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio controls>

<source src="media/casey-at-the-bat.ogg" type="audio/ogg; codecs=vorbis"/>

<source src="media/casey-at-the-bat.mp3" type="audio/mpeg"/>

</audio>

<p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

6. Audio Autoplay:

HTML:

06-audio-autoplay.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - autoplay</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - autoplay</h1>

<article>

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio controls autoplay>

<source src="media/casey-at-the-bat.ogg" type="audio/ogg; codecs=vorbis"/>

<source src="media/casey-at-the-bat.mp3" type="audio/mpeg"/>

</audio>

<p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

7. Audio Loop:

HTML:

07-audio-loop.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - loop</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - loop</h1>

<article>

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio controls>

<source src="media/casey-at-the-bat.ogg" type="audio/ogg; codecs=vorbis"/>

<source src="media/casey-at-the-bat.mp3" type="audio/mpeg"/>

</audio> <p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<strong>Add Cheering</strong>:

<em><a href="<http://creativecommons.org/licenses/sampling+/1.0/>"/>Creative Commons License</a></em>

<br>

<small>- downloaded from <a href="<http://www.freesound.org/samplesViewSingle.php?id=22952>"/>The Freesound

Project</a></small>

</p>

<audio controls loop>

<source src="Media/cheer.ogg" target="\_blank" type="audio/ogg; codecs=vorbis"/>

<source src="Media/cheer.mp3" target="\_blank" type="audio/mpeg"/>

</audio>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

8. Video No Controls:

HTML:

08-video-no-controls.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Video - controls</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h1>HTML5 Video - NO controls</h1>

<video autoplay>

<source src="media/justin.mp4" type="video/mp4"/>

<source src="media/justin.ogv" type="video/ogg"/>

<object type="application/x-shockwave-flash" data="media/justin.swf">

<h3>Download Video</h3>

<ul>

<li><a href="media/justin.mp4">MP4</a></li>

<li><a href="media/justin.ogv">OGG</a></li>

</ul>

</object>

</video>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

9. Video Non-Supporting Browser:

HTML:

09-video-non-supporting-browsers.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Video - controls</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h1>HTML5 Video - controls</h1>

<video controls autoplay height="480" width="640">

<source src="media/justin.mp4" type="video/mp4"/>

<source src="media/justin.ogv" type="video/ogg"/>

<p class="warning">Your browser doesn't support the video tag.</p>

</video>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

10. Video Gracefully Degrade:

HTML:

10-video-gracefully-degrade.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Video - controls</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h1>HTML5 Video - controls</h1>

<video controls>

<source src="media/justin.mp4" type="video/mp4"/>

<source src="media/justin.ogv" type="video/ogg"/>

<object type="application/x-shockwave-flash"data="media/justin.swf">

<h3>Download Video</h3>

<ul>

<li><a href="media/justin.mp4">MP4</a></li>

<li><a href="media/justin.ogv">OGG</a></li>

</ul>

</object>

</video>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 1.

11. Audio JavaScript:

HTML:

11-audio-javascript.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Audio - JavaScript</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css">

</head>

<body>

<div class="container">

<h1 class="center-block">HTML5 Audio - JavaScript</h1>

<article id="poem">

<hgroup>

<h2>Casey at the Bat</h2>

<h3>By Ernest Lawrence Thayer</h3>

<h4>from the San Francisco Examiner - June 3, 1888</h4>

</hgroup>

<audio id="my-audio">

<source src="media/casey-at-the-bat.ogg" type="audio/ogg; codecs=vorbis"/>

<source src="media/casey-at-the-bat.mp3" type="audio/mpeg"/>

</audio>

<menu type="toolbar">

<button class="btn" id="cmd-play" title="Play">Play</button>

<button class="btn" id="cmd-pause" title="Pause">Pause</button>

<button class="btn" id="cmd-restart" title="Restart">Restart</button>

</menu>

<div id="time-display">

Time:

<output id="play-time">0</output>

seconds.

</div>

<p>

The Outlook wasn't brilliant for the Mudville nine that day:<br>

The score stood four to two, with but one inning more to play.<br>

And then when Cooney died at first, and Barrows did the same,<br>

A sickly silence fell upon the patrons of the game.

</p>

<p>

A straggling few got up to go in deep despair. The rest<br>

Clung to that hope which springs eternal in the human breast;<br>

They thought, if only Casey could get but a whack at that -<br>

We'd put up even money, now, with Casey at the bat.

</p>

<p>

But Flynn preceded Casey, as did also Jimmy Blake,<br>

And the former was a lulu and the latter was a cake;<br>

So upon that stricken multitude grim melancholy sat,<br>

For there seemed but little chance of Casey's getting to the bat.

</p>

<p>

But Flynn let drive a single, to the wonderment of all,<br>

And Blake, the much despis-ed, tore the cover off the ball;<br>

And when the dust had lifted, and the men saw what had occurred,<br>

There was Jimmy safe at second and Flynn a-hugging third.

</p>

<p>

Then from 5,000 throats and more there rose a lusty yell;<br>

It rumbled through the valley, it rattled in the dell;<br>

It knocked upon the mountain and recoiled upon the flat,<br>

For Casey, mighty Casey, was advancing to the bat.

</p>

<p>

There was ease in Casey's manner as he stepped into his place;<br>

There was pride in Casey's bearing and a smile on Casey's face.<br>

And when, responding to the cheers, he lightly doffed his hat,<br>

No stranger in the crowd could doubt 'twas Casey at the bat.

</p>

<p>

Ten thousand eyes were on him as he rubbed his hands with dirt;<br>

Five thousand tongues applauded when he wiped them on his shirt.<br>

Then while the writhing pitcher ground the ball into his hip,<br>

Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

</p>

<p>

And now the leather-covered sphere came hurtling through the air,<br>

And Casey stood a-watching it in haughty grandeur there.<br>

Close by the sturdy batsman the ball unheeded sped-<br>

"That ain't my style," said Casey. "Strike one," the umpire said.

</p>

<p>

From the benches, black with people, there went up a muffled roar,<br>

Like the beating of the storm-waves on a stern and distant shore.<br>

"Kill him! Kill the umpire!" shouted someone on the stand;<br>

And its likely they'd a-killed him had not Casey raised his hand.

</p>

<p>

With a smile of Christian charity great Casey's visage shone;<br>

He stilled the rising tumult; he bade the game go on;<br>

He signaled to the pitcher, and once more the spheroid flew;<br>

But Casey still ignored it, and the umpire said, "Strike two."

</p>

<p>

"Fraud!" cried the maddened thousands, and echo answered fraud;<br>

But one scornful look from Casey and the audience was awed.<br>

They saw his face grow stern and cold, they saw his muscles strain,<br>

And they knew that Casey wouldn't let that ball go by again.

</p>

<p>

The sneer is gone from Casey's lip, his teeth are clenched in hate;<br>

He pounds with cruel violence his bat upon the plate.<br>

And now the pitcher holds the ball, and now he lets it go,<br>

And now the air is shattered by the force of Casey's blow.

</p>

<p>

Oh, somewhere in this favored land the sun is shining bright;<br>

The band is playing somewhere, and somewhere hearts are light,<br>

And somewhere men are laughing, and somewhere children shout;<br>

But there is no joy in Mudville - mighty Casey has struck out.

</p>

</article>

</div>

<script src="scripts/audio-javascript.js"></script>

</body>

</html>

JavaScript:

audio-javascript.js

var playTimer;

window.addEventListener("load", function () {

document.getElementById("cmd-play").addEventListener("click", play, false);

document.getElementById("cmd-pause").addEventListener("click", pause, false);

document.getElementById("cmd-restart").addEventListener("click", restart, false);

}, false);

function play() {

document.getElementById("my-audio").play();

reportTime();

}

function reportTime() {

var curTime = document.getElementById("my-audio").currentTime;

document.getElementById("play-time").innerHTML = Math.round(curTime);

playTimer = setTimeout(reportTime, 500);

}

function pause() {

document.getElementById("my-audio").pause();

if (typeof playTimer != "undefined") {

clearTimeout(playTimer);

}

}

function restart() {

document.getElementById("my-audio").currentTime = 0;

play();

}

Unit 5

Forms



1. Input Validity Support:

HTML:

01-input-validity-support.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form - Validity Support</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<button class="btn btn-default" onclick="check( );">Check Validity</button>

</div>

</body>

<script src="scripts/01-input-validity-support.js"></script>

</html>

JavaScript:

01-input-validity-support.js

function check() {

var input = document.createElement("input");

if (input.validity) {

alert("validity is supported");

} else {

alert("validity is NOT supported");

}

}

2. Input Validity:

HTML:

02-input-validity.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form - Validity</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<div class="form-group">

<p>Numbers with decimal points aren't valid numbers</p>

<label for="number">Number:</label>

<input class="form-control" id="number" type="number">

<br>

<button class="btn btn-default" onclick="check( document.getElementById('number') );">Check Validity</button>

<hr>

<label for="color">Color:</label>

<input id="color" type="color">

<button class="btn btn-default" onclick="check( document.getElementById('color') );">Check Validity</button>

</div>

</div>

<script src="scripts/02-input-validity.js"></script>

</body>

</html>

CSS:

This stylesheet is also used in Demos 6, 12, 14

style.css

label {

display: block;

float: left;

clear: both;

font-weight: bold;

width: 100px;

}

div {

margin: 8px 0px;

}

legend {

font-weight: bold;

font-size: x-large;

}

fieldset fieldset legend {

font-size: large;

}

\*:invalid {

color: #f00;

}

#rangeoutput {

display: none;

}

JavaScript:

02-input-validity.js

function check(input) {

var type = input.getAttribute('type');

if (input.type == "text") {

alert(type + " type not supported.");

} else if (input.validity.valid) {

alert(input.value + " is a valid " + input.type);

} else {

alert(input.value + " is NOT a valid " + input.type);

}

}

3. Input Number Step:

HTML:

03-input-number-step.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Field Attributes - min, max, step</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" href="stylesheets/03-input-number-step.css"/>

</head>

<body>

<div class="container">

<br>

<div class="form-group">

<label for="evennumber">Even Number: </label>

<input class="form-input" type="number" name="evennumber" id="evennumber" min="0" max="100" step="2">

</div>

</div>

</body>

</html>

CSS:

03-input-number-step.css

input:invalid {

color: red;

}

4. Input Number Range Output Dynamic:

HTML:

04-input-range-output-dynamic.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form - Input Range Type</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<div class="form-group">

<form method="post" action="../../html5-forms/Demos/example.xyz">

<label for="pace">

<strong>How is the pace of the class?</strong><br>

<small>(1=way too slow, 9=way too fast, 5=perfect):</small>

</label><br>

<input type="range" name="pace" id="pace" min="1" max="9" value="5">

<output for="pace" id="paceoutput"></output>

</form>

</div>

</div>

<script src="scripts/04-input-range-output-dynamic.js" type="text/javascript"></script>

</body>

</html>

</html>

JS:

04-input-range-output-dynamic.js

window.addEventListener("load", function () {

document.getElementById('paceoutput').innerHTML = document.getElementById('pace').value;

document.getElementById("pace").addEventListener("change", function () {

document.getElementById('paceoutput').innerHTML = this.value;

}, false);

}, false);

5. Input Range Output Dynamic:

HTML:

05-input-range-output.html

<!doctype html>

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form - Input Range Type</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<div class="form-group">

<br>

<form method="post">

<label for="pace">

<strong>How is the pace of the class?</strong><br>

<small>(1=way too slow, 9=way too fast, 5=perfect):</small>

</label><br>

<input type="range" name="pace" id="pace" min="1" max="9" value="5" onchange="document.getElementById('paceoutput').innerHTML=this.value;">

<output for="pace" id="paceoutput">5</output>

</form>

</div>

</div>

</body>

</html>

6. Input Types:

HTML:

06-input-types.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Input Types</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="form-control">

<form method="post" action="">

<fieldset>

<legend>Input Types</legend>

<fieldset>

<legend>Date Pickers</legend>

<div>

<label for="date">date:</label>

<input class="form-control" type="date" name="date" id="date" required/>

</div>

<div>

<label for="datetime">datetime:</label>

<input class="form-control" type="datetime" name="datetime" id="datetime" required/>

</div>

<div>

<label for="datetime-local">datetime-local:</label>

<input class="form-control" type="datetime-local" name="datetime-local" id="datetime-local" required/>

</div>

<div>

<label for="time">time:</label>

<input class="form-control"type="time" name="time" id="time" required/>

</div>

<div>

<label for="month">month:</label>

<input class="form-control"type="month" name="month" id="month" required/>

</div>

<div>

<label for="week">week:</label>

<input class="form-control" type="week" name="week" id="week" required/>

</div>

</fieldset>

<fieldset>

<legend>Contact Information</legend>

<div>

<label for="tel">tel:</label>

<input class="form-control"type="tel" name="tel" id="tel" required/>

</div>

<div>

<label for="email">email:</label>

<input class="form-control"type="email" name="email" id="email" required/>

</div>

<div>

<label for="url">url:</label>

<input type="url" class="form-control" name="url" id="url" required/>

</div>

</fieldset>

<fieldset>

<legend>Other</legend>

<div>

<label for="number">number:</label>

<input type="number" class="form-control" name="number" id="number" required/>

</div>

<div>

<label for="range">range:</label>

<input type="range" name="range" id="range" min="0" max="10" value="5">

<output for="range" id="rangeoutput"></output>

</div>

<div>

<label for="color">color:</label>

<input type="color" name="color" id="color" required/>

</div>

<div>

<label for="search">search:</label>

<input type="search" class="form-control" name="search" id="search" autocomplete="off" required/>

</div>

</fieldset>

</fieldset>

</form>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 2.

7. Form Attributes:

HTML:

07-form-attributes.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Attributes</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br/>

<form method="post" action="" autocomplete="on">

<div class="form-group">

<!--novalidate attribute not included-->

<label for="fullname">Name: </label>

<input class="form-control" type="text" name="fullname" id="fullname" required>

<label for="email">Email: </label>

<input class="form-control" type="email" name="email" id="email">

<br/>

<input class="btn btn-default" type="submit">

</div>

</form>

</div>

</body>

</html>

8. Form Validate Override:

HTML:

08-form-validate-override.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Attributes</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<br/>

<div class="container">

<div class='form-group'>

<form id="my-form" method="post" action="" novalidate>

<label for="fullname">Name: </label>

<input class="form-control" type="text" name="fullname" id="fullname" required/>

<label for="email">Email: </label>

<input class="form-control" type="email" name="email" id="email"/>

<br/>

<input class="btn btn-default" type="submit"/>

</form>

</div>

</div>

<script src="scripts/08-form-validate-override.js"></script>

</body>

</html>

JS:

08-form-validate-override.js

window.addEventListener("load", function () {

document.getElementById("my-form").addEventListener("submit", validate, false);

}, false);

function validate(e) {

var myForm = this;

var errMsg = "";

if (this.fullname.value.length == 0) {

errMsg += "\n\t\*Full Name must be filled out";

}

if (this.email.value.length > 0 && !/^(\w+[\-\.])\*\w+@(\w+\.)+[A-Za-z]+$/.test(this.email.value)) {

errMsg += "\n\t\*Email is not valid";

}

if (errMsg.length > 0) {

alert(errMsg);

e.preventDefault();

}

}

9. Required:

HTML:

09-required.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Field Attribute - required</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<div class="form-group">

<br>

<form method="post" action="">

<label for="fullname">Name: </label>

<input class="form-control" type="text" name="fullname" id="fullname" required>

<br>

<input class="btn btn-default" type="submit">

</form>

</div>

</div>

</body>

</html>

10. Placeholder:

HTML:

10-placeholder.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Field Attribute - placeholder</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<div class="form-group">

<br>

<form method="post" action="">

<label for="fullname">Name: </label>

<input class="form-control" type="text" name="fullname" id="fullname" placeholder="Enter Firstname">

<br>

<input class="btn btn-default" type="submit">

</form>

</div>

</div>

</body>

</html>

11. Autofocus:

HTML:

11-autofocus.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Field - Autofocus</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<form method="post" action="">

<div class="form-group">

<label for="fullname">Name: </label>

<input class="form-control" type="text" name="fullname" id="fullname" autofocus/>

<label for="email">Email: </label>

<input class="form-control" type="email" name="email" id="email"/>

<br>

<input class="form-control" class="btn btn-default" type="submit"/>

</div>

</form>

</div>

</body>

</html>

12. Chrome Autofocus Bug:

HTML:

12-chrome-autofocus-bug.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Chrome autofocus Bug</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

</head>

<body>

<div class="container">

<h1>Chrome autofocus Bug</h1>

<form method="post" action="../../html5-forms/Demos/process.xyz">

<div class="form-group">

<label for="fullname">Your name:</label>

<input class="form-control" type="text" name="fullname" id="fullname" autofocus>

</div>

<div class="form-group">

<label for="age">Your age:</label>

<input class="form-control" type="number" name="age" id="age" min="0" step="1">

</div>

</form>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 2.

13. Pattern:

HTML:

13-pattern.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Field Attribute - pattern</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" href="stylesheets/pattern.css">

</head>

<body>

<div class="container">

<br>

<div class="form-group">

<form method="post" action="">

<label for="telephone">Telephone: </label>

<input class="form-control" type="tel" name="telephone" id="telephone" pattern="^\(?([2-9]\d\d)\)?[\-\. ]?([2-9]\d\d)[\-\. ]?(\d{4})$">

<br>

<input class="btn btn-default" type="submit">

</form>

</div>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 2.

14. Progress:

HTML:

14-progress.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Progress</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<div class="form-group">

<form method="post" action="" id="my-form">

<div>

<label for="fname">First Name:</label>

<input class="form-control" type="text" name="fname" id="fname" required/>

</div>

<div>

<label for="lname">Last Name:</label>

<input class="form-control" type="text" name="lname" id="lname" required>

</div>

<div>

<label for="uname">User Name:</label>

<input class="form-control" /type="text" name="uname" id="uname" required/>

</div>

<div>

<label for="password">Password:</label>

<input class="form-control" type="password" name="password" id="password" required/>

</div>

<div>

<br>

<input class="btn btn-default" type="submit" value="Register" id="register-button">

</div>

</form>

<br>

<progress role="progressbar" id="form-progress" min="0" max="4" value="0">

Amount Complete: <span>0</span>%

</progress>

</div>

</div>

<script src="scripts/14-progress.js"></script>

</body>

</html>

CSS:

For the CSS of this file, look at Example 2.

JS:

14-progress.js

window.addEventListener("load", function () {

document.getElementById("my-form").addEventListener("change", showProgress, false);

}, false);

function showProgress() {

var formInputs = [

document.getElementById("fname"),

document.getElementById("lname"),

document.getElementById("uname"),

document.getElementById("password")

];

var numComplete = 0;

for (var i = 0; i < formInputs.length; ++i) {

if (formInputs[i].value.length > 0) numComplete++;

}

var formProgress = document.getElementById("form-progress");

formProgress.value = numComplete;

var percentComplete = Math.round(numComplete / formInputs.length \* 100);

formProgress.getElementsByTagName("span")[0].innerHTML = percentComplete;

}

15. Datalist:

HTML:

15-datalist.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form Field Attributes - datalist</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br/>

<label for="color">Color: </label>

<input type="color" name="color" id="color" list="color-list"/>

<datalist id="color-list">

<option value="red"/>

<option value="blue"/>

<option value="green"/>

<option value="yellow"/>

<option value="orange"/>

</datalist>

</div>

</body>

</html>

16. All in One:

HTML:

16-all-in-one.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>HTML5 Form - New HTML5 Elements</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<h1>HTML5 Form - New HTML5 Elements</h1>

<form method="post" action="" id="my-form">

<fieldset>

<legend>Input Types</legend>

<fieldset>

<legend>Date Picker</legend>

<div class="form-group">

<label for="date">date:</label>

<input class="form-control" type="date" name="date" id="date" required/>

</div>

<div class="form-group">

<label for="datetime">datetime:</label>

<input class="form-control" type="datetime" name="datetime" id="datetime" required/>

</div>

<div class="form-group">

<label for="datetime-local">datetime-local:</label>

<input class="form-control" type="datetime-local" name="datetime-local" id="datetime-local" required/>

</div>

<div class="form-group">

<label for="time">time:</label>

<input class="form-control" type="time" name="time" id="time" required/>

</div>

<div class="form-group">

<label for="month">month:</label>

<input class="form-control" type="month" name="month" id="month" required/>

</div>

<div class="form-group">

<label for="week">week:</label>

<input class="form-control" type="week" name="week" id="week" required/>

</div>

</fieldset>

<fieldset>

<legend>Contact Information</legend>

<div class="form-group">

<label for="tel">tel:</label>

<input class="form-control" type="tel" name="tel" id="tel" required/>

</div>

<div class="form-group">

<label for="email">email:</label>

<input class="form-control" type="email" name="email" id="email" required/>

</div>

<div class="form-group">

<label for="url">url:</label>

<input class="form-control" type="url" name="url" id="url" required/>

</div>

</fieldset>

<fieldset>

<legend>Other</legend>

<div class="form-group">

<label for="number">number:</label>

<input class="form-control" type="number" name="number" id="number" required/>

</div>

<div class="form-group">

<label for="range">range:</label>

<input type="range" name="range" id="range" min="0" max="10" value="5"/>

<output for="range" id="rangeoutput"></output>

</div>

<div class="form-group">

<label for="color">color:</label>

<input type="color" name="color" id="color" required>

</div>

<div class="form-group">

<label for="search">search:</label>

<input class="form-control" type="search" name="search" id="search" autocomplete="off" required/>

</div>

</fieldset>

</fieldset>

<fieldset>

<legend>New HTML5 Form Elements</legend>

<div>

<label for="superhero">Favorite Superhero:</label>

<input class="form-control" type="text" list="hero\_list" name="superhero" id="superhero" required/>

<datalist id="hero\_list">

<option label="Spiderman" value="Spiderman"/>

<option label="Batman" value="Batman"/>

<option label="Superman" value="Superman"/>

<option label="Iron Man" value="Iron Man"/>

</datalist>

</div>

<div>

<label for="security">Encryption:</label>

<keygen name="security"/>

</div>

</fieldset>

<input class="btn btn-default" type="submit"/>

<progress id="progress-bar" value="0" max="10"></progress>

</form>

<script src="scripts/16-dateFormat.js" type="text/javascript"></script>

<script src="scripts/16-all-in-one.js" type="text/javascript"></script>

</div>

</body>

</html>

CSS:

For the CSS of this file, look at Example 2

JS:

16-dateFormat.js

/\*\*

\* getWeek() taken from <http://www.meanfreepath.com/support/getting_iso_week.html>

\* Returns the week number for this date. dowOffset is the day of week the week

\* "starts" on for your locale - it can be from 0 to 6. If dowOffset is 1 (Monday),

\* the week returned is the ISO 8601 week number.

\* @param int dowOffset

\* @return int

\*/

Date.prototype.getWeek = function (dowOffset) {

/\*getWeek() was developed by Nick Baicoianu at MeanFreePath: <http://www.meanfreepath.com> \*/

dowOffset = typeof(dowOffset) == 'int' ? dowOffset : 0; //default dowOffset to zero

var newYear = new Date(this.getFullYear(),0,1);

var day = newYear.getDay() - dowOffset; //the day of week the year begins on

day = (day >= 0 ? day : day + 7);

var daynum = Math.floor((this.getTime() - newYear.getTime() -

(this.getTimezoneOffset()-newYear.getTimezoneOffset())\*60000)/86400000) + 1;

var weeknum;

//if the year starts before the middle of a week

if(day < 4) {

weeknum = Math.floor((daynum+day-1)/7) + 1;

if(weeknum > 52) {

nYear = new Date(this.getFullYear() + 1,0,1);

nday = nYear.getDay() - dowOffset;

nday = nday >= 0 ? nday : nday + 7;

/\*if the next year starts before the middle of

the week, it is week #1 of that year\*/

weeknum = nday < 4 ? 1 : 53;

}

}

else {

weeknum = Math.floor((daynum+day-1)/7);

}

return weeknum;

};

/\*

\* Date Format 1.2.3

\* (c) 2007-2009 Steven Levithan <stevenlevithan.com>

\* MIT license

\*

\* Includes enhancements by Scott Trenda <scott.trenda.net>

\* and Kris Kowal <cixar.com/~kris.kowal/>

\*

\* Accepts a date, a mask, or a date and a mask.

\* Returns a formatted version of the given date.

\* The date defaults to the current date/time.

\* The mask defaults to dateFormat.masks.default.

\*/

var dateFormat = function () {

var token = /d{1,4}|m{1,4}|yy(?:yy)?|([wHhMsTt])\1?|[LloSZ]|"[^"]\*"|'[^']\*'/g,

timezone = /\b(?:[PMCEA][SDP]T|(?:Pacific|Mountain|Central|Eastern|Atlantic) (?:Standard|Daylight|Prevailing) Time|(?:GMT|UTC)(?:[-+]\d{4})?)\b/g,

timezoneClip = /[^-+\dA-Z]/g,

pad = function (val, len) {

val = String(val);

len = len || 2;

while (val.length < len) val = "0" + val;

return val;

};

// Regexes and supporting functions are cached through closure

return function (date, mask, utc) {

var dF = dateFormat;

// You can't provide utc if you skip other args (use the "UTC:" mask prefix)

if (arguments.length == 1 && Object.prototype.toString.call(date) == "[object String]" && !/\d/.test(date)) {

mask = date;

date = undefined;

}

// Passing date through Date applies Date.parse, if necessary

date = date ? new Date(date) : new Date;

if (isNaN(date)) throw SyntaxError("invalid date");

mask = String(dF.masks[mask] || mask || dF.masks["default"]);

// Allow setting the utc argument via the mask

if (mask.slice(0, 4) == "UTC:") {

mask = mask.slice(4);

utc = true;

}

var \_ = utc ? "getUTC" : "get",

d = date[\_ + "Date"](),

D = date[\_ + "Day"](),

m = date[\_ + "Month"](),

y = date[\_ + "FullYear"](),

H = date[\_ + "Hours"](),

M = date[\_ + "Minutes"](),

s = date[\_ + "Seconds"](),

L = date[\_ + "Milliseconds"](),

w = date.getWeek(),

o = utc ? 0 : date.getTimezoneOffset(),

flags = {

d: d,

dd: pad(d),

ddd: dF.i18n.dayNames[D],

dddd: dF.i18n.dayNames[D + 7],

m: m + 1,

mm: pad(m + 1),

mmm: dF.i18n.monthNames[m],

mmmm: dF.i18n.monthNames[m + 12],

yy: String(y).slice(2),

yyyy: y,

h: H % 12 || 12,

hh: pad(H % 12 || 12),

H: H,

HH: pad(H),

M: M,

MM: pad(M),

s: s,

ss: pad(s),

l: pad(L, 3),

L: pad(L > 99 ? Math.round(L / 10) : L),

t: H < 12 ? "a" : "p",

tt: H < 12 ? "am" : "pm",

T: H < 12 ? "A" : "P",

TT: H < 12 ? "AM" : "PM",

w: w,

Z: utc ? "UTC" : (String(date).match(timezone) || [""]).pop().replace(timezoneClip, ""),

o: (o > 0 ? "-" : "+") + pad(Math.floor(Math.abs(o) / 60) \* 100 + Math.abs(o) % 60, 4),

S: ["th", "st", "nd", "rd"][d % 10 > 3 ? 0 : (d % 100 - d % 10 != 10) \* d % 10]

};

return mask.replace(token, function ($0) {

return $0 in flags ? flags[$0] : $0.slice(1, $0.length - 1);

});

};

}();

// Some common format strings

dateFormat.masks = {

"default": "ddd mmm dd yyyy HH:MM:ss",

shortDate: "m/d/yy",

mediumDate: "mmm d, yyyy",

longDate: "mmmm d, yyyy",

fullDate: "dddd, mmmm d, yyyy",

shortTime: "h:MM TT",

mediumTime: "h:MM:ss TT",

longTime: "h:MM:ss TT Z",

isoDate: "yyyy-mm-dd",

isoTime: "HH:MM:ss",

isoDateTime: "yyyy-mm-dd'T'HH:MM:ss",

isoUtcDateTime: "UTC:yyyy-mm-dd'T'HH:MM:ss'Z'"

};

// Internationalization strings

dateFormat.i18n = {

dayNames: [

"Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat",

"Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"

],

monthNames: [

"Jan", "Feb", "Mar", "Apr", "May", "Jun", "Jul", "Aug", "Sep", "Oct", "Nov", "Dec",

"January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", "December"

]

};

// For convenience...

Date.prototype.format = function (mask, utc) {

return dateFormat(this, mask, utc);

};

JS:

16-all-in-one.js

var formFieldCount = 0;

var formFieldsCompleted = 0;

if (window.addEventListener) {

window.addEventListener("load", false);

}

function setFormDates() {

var dateFieldTypes = ["date", "datetime", "datetime-local", "time", "month", "week"];

var myForm = document.getElementById("my-form");

var field;

var currentDate = new Date();

var formFieldCount = 0;

//updateProgress();

for (var i = 0; i < myForm.elements.length; ++i) {

field = myForm.elements[i];

formFieldCount++;

switch (field.type) {

case "date" :

field.value = currentDate.format("yyyy-mm-dd", true);

break;

case "datetime" :

field.value = currentDate.format("yyyy-mm-dd'T'HH:MM'Z'", true);

break;

case "datetime-local" :

field.value = currentDate.format("yyyy-mm-dd'T'HH:MM");

break;

case "time" :

field.value = currentDate.format("HH:MM", true);

break;

case "month" :

field.value = currentDate.format("yyyy-mm", true);

break;

case "week" :

field.value = currentDate.format("yyyy-'W'w");

break;

case "range" :

document.getElementById(field.id + "output").innerHTML = field.value;

field.addEventListener("change", function () {

document.getElementById(this.id + "output").innerHTML = this.value;

}, false);

case undefined :

break;

formFieldCount--;

default :

}

}

}

function updateProgress() {

var progressBar = document.getElementById("progress-bar");

progressBar.max = formFieldCount;

progressBar.value = formFieldsCompleted;

}

Unit 6

JavaScript



1. Variables:

HTML:

01-variables.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables</h1>

Untyped but not typeless.

<br/>

<br/>

<button class="btn btn-default" onclick="show(nothing)">Show null: nothing</button>

<button class="btn btn-default" onclick="show(isSunny)">Show Boolean: isSunny</button>

<button class="btn btn-default" onclick="show(greeting)">Show String: greeting</button>

<button class="btn btn-default" onclick="show(age)">Show Number: age</button>

<button class="btn btn-default" onclick="show(now)">Show Date: now</button>

<button class="btn btn-default" onclick="show(this)">Show "this" Object</button>

<button class="btn btn-default" onclick="show(window)">Show "window" (GLOBAL) Object</button>

</div>

</body>

<script type="text/javascript" src="scripts/01-variables.js"></script>

</html>

JS:

01-variables.html

// null

var nothing = null;

// Boolean

var isSunny = true;

// String

var greeting = 'hello';

// Number

var age = 25.2;

// Date

var now = new Date();

var show = function (value) {

alert(value);

// console.log(value);

};

2. Variables Functions:

HTML:

02-variablesFunctions.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; Functions</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript &mdash; Functions</h1>

<br/>

<br/>

</div>

<script src="scripts/02-variablesFunctions.js"></script>

</body>

</html>

JS:

02-variablesFunctions.html

var expressionFunction,

utils,

myAppliedFunction;

function statementFunction() {

console.log('statementFunction - ahhh, the good old days;)');

}

statementFunction();

// Block 1: Expression function

expressionFunction = function (message) {

alert(message);

};

expressionFunction('expressionFunction');

// Block 2: Anonymous immediate function

(function (message) {

console.log(message);

}('anonymous immediate function'));

// Block 3: Object function

utils = {

appTitle : 'My Grand Application',

appFunction : function () {

console.log('appFunction');

}

};

utils.appFunction();

// Block 4: Applied function

myAppliedFunction = function () {

console.log('myAppliedFunction');

};

myAppliedFunction.apply();

myAppliedFunction.call();

3. Variables Objects:

HTML:

03-variablesObjects.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; Objects</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables &mdash; Objects</h1>

JavaScript <em>is</em> Object Oriented. It's just not Class-y.

<br/>

<br/>

<ol>

<!-- Block 1 -->

<li>

<button class="btn btn-default" onclick="show(animal)">Show Object (verbose): animal</button>

</li>

<br/>

<!-- Block 2 -->

<li>

<button class="btn btn-default" onclick="show(person)">Show Object (literal): person</button>

</li>

<br/>

<!-- Block 3 -->

<li>

<button class="btn btn-default" onclick="makeSuperBaby()">Create Super Baby Object (create)</button>

</li>

<br/>

<!-- Block 4 -->

<li>

<button class="btn btn-default" onclick="removeSuperPowers()">Remove Super Baby powers</button>

</li>

<br/>

<!-- Block 5 -->

<li>

<button class="btn btn-default" onclick="getInfo(superbaby)">Show object creator</button>

</li>

</ol>

<br/>

</div>

<script src="scripts/03-variablesObjects.js"></script>

</body>

</html>

JS:

03-variablesObjects.js

// Hoist all variable declarations to the top; the browser will do this regardless.

var animal,

person,

superbaby,

makeSuperBaby,

removeSuperPowers,

getInfo,

show;

// Object - verbose

animal = new Object();

animal.name = 'Cougar';

animal.color = 'brown';

// Block 1: Object - literal

person = {

firstName : 'Fred',

lastName : 'Flintstone'

};

// Block 2: Object - create: Object.create(proto [, propertiesObject ])

makeSuperBaby = function () {

superbaby = Object.create(person);

Object.defineProperty(superbaby,

"hasSuperPowers",

{ value : true,

writable : true, // allows assignment

enumerable : true, // shows up in for...in loop

configurable : true // property can be deleted (using "delete" syntax")

}

);

console.log(superbaby); // note the \_\_proto\_\_ object

superbaby.firstName = 'Pebbles';

console.log('Super Baby name: ' + superbaby.firstName + ' ' + superbaby.lastName);

console.log('Super powers? ' + (superbaby.hasSuperPowers ? 'You bet!' : 'No way!'));

};

// Block 3: delete obj.property

removeSuperPowers = function () {

delete superbaby['hasSuperPowers'];

console.log(superbaby);

console.log('Super powers? ' + (superbaby.hasSuperPowers ? 'You bet!' : 'No way!'));

};

// Block 4: add a function to the prototype object

Object.prototype.getObjectInfo = function () {

return 'I created this object!';

};

getInfo = function (obj) {

console.log(obj.getObjectInfo());

};

show = function (value) {

console.log(value);

};

4. Variables Arrays:

HTML:

04-variablesArrays.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; Arrays</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables &mdash; Arrays</h1>

Arrays are objects, too!

<br/>

<br/>

<ul>

<button class="btn btn-default" onclick="show(habitats)">Show Array (verbose): habitats</button>

<br><br>

<!-- Block 1 -->

<button class="btn btn-default"

onclick="show(cities)">Show Array (verbose): cities</button>

<br><br>

<!-- Block 2 -->

<button class="btn btn-default" onclick="show(numStreets)">Show Array (verbose): numStreets</button>

<br><br>

<!-- Block 3 -->

<button class="btn btn-default" onclick="show(sequence)">Show Array (verbose): sequence</button>

<br><br>

<!-- Block 4 -->

<button class="btn btn-default" onclick="show(titles)">Show Array (literal): titles</button>

<br><br>

<!-- Block 5 -->

<button class="btn btn-default" onclick="explore()">Explore Array (literal): mixed</button>

</ul>

<br/>

</div>

<script type="text/javascript" src="scripts/04-variablesArrays.js"></script>

</body>

</html>

JS:

04-variablesArrays.js

var habitats,

cities,

numStreets,

sequence,

titles,

mixed,

explore,

show;

// Array - verbose

habitats = new Array();

habitats.push('Canadian West Coast');

habitats.push('US Northwest');

habitats.push('Central America');

habitats.push('South America');

// Block 1: Array - verbose - integer param

cities = new Array('Toronto', 'Montreal', 'Tokyo');

// Block 2: Array - verbose - string param

numStreets = new Array('360');

// Block 3: Array - verbose - several params

sequence = new Array(0, 1, 1, 2, 3, 5, 8, 13, 21);

// Block 4: Array - literal

titles = [

'Miss',

'Ms.',

'Mrs.',

'Mr.'

];

// Block 5: Array of mixed element types

mixed = [0, 'one', 2, 'three'];

explore = function () {

console.log(mixed);

console.log('Mixed array: ' + mixed);

console.log('Length: ' + mixed.length);

console.log('Sorted: ' + mixed.sort());

console.log('mixed[2]: ' + mixed[2]);

console.log('mixed["2"]: ' + mixed["2"]);

console.log('mixed["three"]: ' + mixed["three"]);

console.log('typeof mixed: ' + (typeof mixed));

console.log('mixed.constructor === Array: ' + (mixed.constructor === Array));

console.log('--------------------');

mixed[10] = 'I feel out of place here...';

console.log('mixed[9]: ' + mixed[9]);

console.log('mixed[10]: ' + mixed[10]);

console.log('Length: ' + mixed.length);

console.log(mixed);

console.log('--------------------');

mixed['regular property'] = 'I\'m just a regular property';

console.log('mixed[\'regular property\']: ' + mixed['regular property']);

console.log(mixed);

};

show = function (value) {

console.log(value);

};

5. Variables Equality:

HTML:

05-variablesEquality.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; Equality</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables &mdash; Equality</h1>

<br/>

Cast your eyes on this!

<br/>

<br/>

</div>

<script type="text/javascript" src="scripts/05-variablesEquality.js"></script>

</body>

</html>

JS:

05-variablesEquality.js

var x,

y,

obj1,

obj2,

testVar1,

testVar2;

x = 10;

y = 10;

console.log('x==y: ' + (x == y));

console.log('x===y: ' + (x === y));

// Block 1

x = y;

console.log('x==y: ' + (x==y));

console.log('x===y: ' + (x===y));

// Block 2

obj1 = {

property1:'hello'

};

obj2 = {

property1:'hello'

};

console.log('obj1==obj2: ' + (obj1==obj2));

console.log('obj1===obj2: ' + (obj1===obj2));

obj2 = obj1;

console.log('obj1==obj2: ' + (obj1==obj2));

console.log('obj1===obj2: ' + (obj1===obj2));

// Block 3

var testVar1 = "1";

var testVar2 = 1;

console.log('testVar1==testVar2: ' + (testVar1==testVar2));

console.log('testVar1===testVar2: ' + (testVar1===testVar2));

// Block 4

console.log('null==undefined: ' + (null==undefined));

console.log('null===undefined: ' + (null===undefined));

// Block 5

console.log('0==false: ' + (0==false));

console.log('0===false: ' + (0===false));

// Block 6

console.log('12==true: ' + (12==true));

console.log('12===true: ' + (12===true));

// Block 7

console.log('12!=true: ' + (12!=true));

console.log('12!==true: ' + (12!==true));

// Block 8

console.log('12>true: ' + (12>true));

console.log('12<false: ' + (12<false));

6. Variables TypeOf:

HTML:

06-variablesTypeOf.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; typeof</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables &mdash; typeof</h1>

Exploring more types.

<br/>

<br/>

</div>

<script src="scripts/06-variablesTypeOf.js"></script>

</body>

</html>

JS:

06-variablesTypeOf.js

// Show types of various objects

console.log('Number');

console.log('---------');

console.log('typeof (37): ' + (typeof (37)));

console.log('typeof (3.14): ' + (typeof (3.14)));

console.log('typeof (Math.LN2): ' + (typeof (Math.LN2)));

console.log('typeof (Infinity): ' + (typeof (Infinity)));

console.log('typeof (NaN): ' + (typeof (NaN)));

console.log('despite not Not-A-Number');

console.log('typeof Number(1): ' + (typeof Number(1)));

console.log('---------');

console.log('Strings');

console.log('---------');

console.log('typeof (""): ' + (typeof ("")));

console.log('typeof ("bla"): ' + (typeof ("bla")));

console.log('typeof (typeof 1): ' + (typeof (typeof 1)));

console.log('typeof ("abc"): ' + (typeof ("abc")));

console.log('---------');

console.log('Booleans');

console.log('---------');

console.log('typeof (true): ' + (typeof (true)));

console.log('typeof (false): ' + (typeof (false)));

console.log('typeof Boolean(true): ' + (typeof Boolean(true)));

console.log('---------');

console.log('Symbols');

console.log('---------');

console.log('typeof (Symbol()): ' + (typeof (Symbol())));

console.log('typeof (Symbol(foo)): ' + (typeof (Symbol('foo'))));

console.log('typeof (Symbol.iterator): ' + (typeof (Symbol.iterator)));

console.log('---------');

console.log('Objects');

console.log('---------');

console.log('typeof ({a:1}): ' + (typeof ({a:1})));

console.log('---------');

console.log('typeof ([1,2,4]): ' + (typeof ([1,2,4])));

console.log('---------');

console.log('typeof (new Date()): ' + (typeof (new Date())));

console.log('---------');

console.log('Null and Undefined');

console.log('---------');

console.log('typeof (null): ' + (typeof (null)));

console.log('typeof (undefined): ' + (typeof (undefined)));

console.log('---------');

console.log('How to test an Array?');

// // Polyfill - in case not using ECMAScript 5:

if (!Array.isArray) {

Array.isArray = function (arg) {

return Object.prototype.toString.call(arg) == '[object Array]';

};

}

console.log(Array.isArray([]));

console.log(Array.isArray({}));

7. Variables Passing:

HTML:

07-variablesPassing.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; Passing</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables &mdash; Passing</h1>

<br/>

<br/>

</div>

<script type="text/javascript" src="scripts/07-variablesPassing.js"></script>

</body>

</html>

JS:

07-variablesPassing.html

var obj,

a,

b,

startValue,

x,

valueChanger,

propertyChanger;

// Assignments are by reference

obj = {};

a = obj;

b = obj;

console.log('Does a === b ? ' + (a === b));

console.log('------------------------');

// Block 1: Simple types are passed by value

startValue = 'Original value';

valueChanger = function (value) {

return 'NEW value';

};

valueChanger(startValue);

console.log('After the function call, startValue is: ' + startValue);

console.log('------------------------');

// Block 2:

x = {name : 'value', inner : {variable : 'hey'} };

propertyChanger = function (o) {

o.name = 'CHANGED VALUE!';

console.log('Does o === x ? ' + (o === x));

};

propertyChanger(x);

console.log('x.name is: ' + x.name);

8. Variables Understanding This:

HTML:

08-variablesUnderstandingThis.html

<!doctype html>

<html>

<head>

<title>JavaScript &mdash; Understanding This</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript &mdash; Understanding This</h1>

</div>

<script type="text/javascript" src="scripts/08-variablesUnderstandingThis.js"></script>

</body>

</html>

JS:

08-variablesUnderstandingThis.js

var APP = {},

expressionFunction;

// Block 1

console.log('this: ');

console.log(this);

console.log('----------------');

// Block 2

function statementFunction() {

console.log('this: ');

console.log(this);

}

statementFunction();

console.log('----------------');

//Block 3

expressionFunction = function () {

console.log('this: ');

console.log(this);

}();

console.log('----------------');

//Block 4

APP.utils = {

appTitle : 'My Grand Application',

appFunction : function () {

console.log('this: ');

console.log(this);

return this.appTitle;

}

};

APP.utils.appFunction();

console.log('----------------');

// console.log('----------------');

// //Block 6

// // Applying a function allows you to set the value of 'this' inside the function

// APP.myAppliedFunction = function () {

// console.log('APP.myAppliedFunction: this: ');

// console.log(this);

// };

// APP.myAppliedFunction.apply(null);

// console.log('----------------');

// APP.myAppliedFunction.apply(that);

// console.log('----------------');

// APP.myAppliedFunction.apply(APP);

// console.log('----------------');

// APP.myAppliedFunction.apply({});

// console.log('----------------');

9. Variables Understanding This:

HTML:

09-variablesOoFunctions.html

<!doctype html>

<html>

<head>

<title>Object-Oriented Functions</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>Object-Oriented Functions</h1>

JavaScript is Class-less, but it can fake it. Note the use of <em>this</em>!

<br/>

<br/>

Put methods on the prototype instead of in each instance of the object.

</div>

<script type="text/javascript" src="scripts/09-variablesOoFunctions.js"></script>

</body>

</html>

JS:

09-variablesOoFunctions.js

var Person = function () {

this.firstName = '';

this.lastName = '';

var age = 32;

this.getAge = function () {

return 'Private age: ' + age;

};

this.getName = function () {

return 'Expensive function: ' + this.firstName + ' ' + this.lastName +

'\n\*\*\* Move it to the prototype object!\*\*\*';

};

// "return this;" is implied

};

// Person.prototype.getName = function () {

// return 'EFFICIENT function: ' + this.firstName + ' ' + this.lastName;

// };

var person1 = new Person();

person1.firstName = 'Betty';

person1.lastName = 'Rubble';

var person2 = new Person();

person2.firstName = 'Wilma';

console.log('person1 === person2 ? ' + (person1 === person2));

console.log('--------------------');

console.log('person1: ');

console.log(person1);

console.log('--------------------');

console.log('person2: ');

console.log(person2);

console.log('--------------------');

console.log('person1.getName(): ' + person1.getName());

console.log('person1.age: ' + person1.age);

console.log('person1.getAge(): ' + person1.getAge());

10. Variables Operations:

HTML:

10-variablesOperations.html

<!doctype html>

<html>

<head>

<title>JavaScript Variables &mdash; Operations (aka Math Abuse)</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>JavaScript Variables &mdash; Operations (aka Math Abuse)</h1>

Most of these are for fun, but watch out for that last example!

<br/>

<br/>

Check this link:

<a href="<https://www.destroyallsoftware.com/talks/wat>" target="\_blank">https://www.destroyallsoftware.com/talks/wat</a>

</div>

<script type="text/javascript" src="scripts/10-variablesOperations.js"></script>

</body>

</html>

JS:

10-variablesOperations.js

var a, b, c, d, e, f, g, h, i, j, k, l, m, o, p, q, r, s;

a = 2 + 2;

console.log('a: ' + a);

b = 2 + 'b';

console.log('b: ' + b);

c = 'c' + 3;

console.log('c: ' + c);

d = 'd' \* 4;

console.log('d: ' + d);

e = {} + {};

console.log('e: ' + e);

f = {} - {};

console.log('f: ' + f);

g = {} \* {};

console.log('g: ' + g);

h = {} / {};

console.log('h: ' + h);

i = [] + [];

console.log('i: ' + i);

j = [] - [];

console.log('j: ' + j);

k = [] \* [];

console.log('k: ' + k);

l = [] / [];

console.log('l: ' + l);

m = {} + [];

console.log('m: ' + m);

n = [] + {};

// console.log('n: ' + n);

// o = Array(16).join('huh');

// console.log('o: ' + o);

// p = Array(16).join('huh' + 1);

// console.log('p: ' + p);

// q = Array(16).join('huh' - 1) + ' batman!';

// console.log('r: ' + r);

// r = (0.1 + 0.2);

// console.log('s: ' + s);

// s = (((10\*0.1) + (10\*0.2))/10);

// console.log('t: ' + t);

11. Scope Intro:

HTML:

11-scopeIntro.html

<!doctype html>

<html>

<head>

<title>Scope &mdash; Introduction</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>Scope &mdash; Introduction</h1>

JavaScript has functional scope but not block scope.

<br/>

<br/>

<button class="btn btn-default" onclick="myFunction()">Call myFunction( )</button>

</div>

<script type="text/javascript" src="scripts/11-scopeIntro.js"></script>

</body>

</html>

JS:

11-scopeIntro.js

var i = 1, myFunction, j;

myFunction = function () {

// This function has its own scope

var i = 99;

console.log('Inside the function, i = ' + i);

};

console.log('After the function, i = ' + i);

j = 2;

for (; i < 20; i += 1) {

// This block does not have its own scope

var j = 33;

}

console.log('After the loop, j = ' + j + ' and i = ' + i);

12. Scope Closure Intro:

HTML:

12-scopeClosureIntro.html

<!doctype html>

<html>

<head>

<title>Scope &mdash; Introduction to Closure</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>Scope &mdash; Introduction to Closure</h1>

<p>Closures are functions with persistent state.</p>

<br/>

<button class="btn btn-default" onclick="counter()">Get Count</button>

</div>

</body>

<script type="text/javascript" src="scripts/12-scopeClosureIntro.js"></script>

</html>

JS:

12-scopeClosureIntro.js

var getCounter = function () {

// First-class Object

var i = 0;

// Acts as a private, instance variable

return function () {

// Anonynmous function

i += 1;

console.log(i);

};

};

var counter = getCounter();

13. Scope Closure Advanced:

HTML:

13-scopeClosureAdvanced.html

<!doctype html>

<html>

<head>

<title>Scope &mdash; Advanced Closure</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

</head>

<body>

<div class="container">

<h1>Scope &mdash; Advanced Closure</h1>

<strong>Thou shalt not pollute the global scope.</strong>

<br/>

<br/>

<p>

"Global variables should be as rare as hen's teeth and stick out like a sore thumb."

<br>

- Douglas Crockford

</p>

</div>

</body>

<script src="scripts/13-scope\_main.js"></script>

<script src="scripts/13-scope\_utils.js"></script>

<script type="text/javascript" src="scripts/13-ScopeClosureAdvanced.js"></script>

</html>

JS:

13-scopeClosureAdvanced.js

console.log('APP.main.message: ' + APP.main.message);

console.log('APP.utils.getUser(): ' + APP.utils.getUser());

JS:

13-scope\_main.js

var APP = {

name : 'My Application',

version : 1,

main : null,

utils : null

};

APP.main = (function () {

'use strict';

var pub = {};

console.log('Inside app.main()');

pub.message = 'Initialized app.main';

return pub;

}());

JS:

13-scope\_utils.js

APP.utils = (function () {

'use strict';

var pub = {};

var userName = 'Barney';

var userStatus = 'Administrator';

pub.getUser = function () {

return userName + ' is of type: ' + userStatus;

};

// with(this) {

// }

return pub;

}());

Unit 7

Canvas



1. Path Simple:

HTML:

01-path-simple.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - Simple</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/01-path-simple.js"></script>

</body>

</html>

CSS:

This stylesheet is referenced in each demo in this unit.

style.css

#my-canvas {

border: 1px dotted #006;

}

label {

display: block;

float: left;

width: 100px;

clear: both;

font-weight: bold;

}

label[for='red'] {

color: red;

}

label[for='green'] {

color: green;

}

label[for='blue'] {

color: blue;

}

.container {

margin-top: 10px;

}

output {

display: block;

float: left;

}

menu {

display: block;

float: left;

}

menu h1 {

font-size: large;

border-bottom: 1px solid #000;

}

#codecontainer {

clear: both;

}

#code {

width: 496px;

height: 200px;

float: left;

margin-right: 10px;

}

section#coordinates {

display: block;

float: left;

}

JS:

01-path-simple.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.lineTo(100, 100);

context.stroke();

}

}

2. Path Multiple Subpaths:

HTML:

02-path-multiple-subpaths.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - Subpaths</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/02-path-multiple-subpaths.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

02-path-multiple-subpaths.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.lineTo(100, 100);

context.lineTo(100, 50);

context.lineTo(50, 50);

context.stroke();

}

}

3. Path Closepath:

HTML:

03-path-closepath.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - closePath()</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script src="scripts/03-path-closepath.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

03-path-closepath.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.lineTo(100, 100);

context.lineTo(100, 50);

context.closePath();

context.stroke();

}

}

4. Path Disconnected:

HTML:

04-path-disconnected.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - Disconnected</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/04-path-disconnected.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

04-path-disconnected.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.lineTo(100, 100);

context.moveTo(50, 60);

context.lineTo(100, 110);

context.moveTo(50, 70);

context.lineTo(100, 120);

context.stroke();

}

}

5. Path Fill:

HTML:

05-path-fill.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - fill()</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/05-path-fill.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

05-path-fill.html

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.lineTo(100, 100);

context.lineTo(100, 50);

context.fill();

}

}

6. Path Fill Stroke:

HTML:

06-path-fill-stroke.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - fill() and stroke()</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/06-path-fill-stroke.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

path-fill-stroke.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.lineWidth = 10;

context.strokeStyle = "rgb(255,0,0)";

context.fillStyle = "rgb(204,255,255)";

context.beginPath();

context.moveTo(50, 50);

context.lineTo(100, 100);

context.lineTo(100, 50);

context.closePath();

context.stroke();

context.fill();

}

}

7. Path Fill Stroke:

HTML:

07-transparency.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Path - transparency</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/07-transparency.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

07-transparency.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.fillStyle = "rgba(255,0,0,1)";

context.beginPath();

context.moveTo(0, 0);

context.lineTo(200, 0);

context.lineTo(100, 200);

context.fill();

context.fillStyle = "rgba(0,0,255,.3)";

context.beginPath();

context.moveTo(0, 200);

context.lineTo(200, 200);

context.lineTo(100, 0);

context.fill();

}

}

8. Rect:

HTML:

08-rect.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Rectangles</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="drawPath();">Draw</button>

</div>

<script type="text/javascript" src="scripts/08-rect.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

08-rect.js

function drawPath() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.strokeStyle = "red";

context.fillStyle = "blue";

context.fillRect(80, 80, 40, 40);

context.strokeRect(60, 60, 80, 80);

context.clearRect(90, 90, 20, 20);

}

}

9. Arc Explained:

HTML:

09-arc-explained.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Degrees</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<canvas class="center-block" id="my-canvas" height="100" width="100">Your browser doesn't support canvas.</canvas>

<br>

<ol>

<li>Identify the center point:

<button class="btn btn-default" onclick="centerPoint();">Show</button>

</li>

<li>Choose a radius (e.g., 40). We draw the radius directly out to the right. Its end marks the 0 degree/radians

point of the circle/arc.

<button class="btn btn-default" onclick="radius();">Show</button>

</li>

<li>Choose a starting point along the (usually 0) and an ending point (e.g, 90 degrees):

<button class="btn btn-default" onclick="showArc(true);">Show CCW</button>

<button class="btn btn-default" onclick="showArc(false);">Show CW</button>

</li>

</ol>

</div>

<script src="scripts/09-arc-explained.js"></script>

</body>

</html>

CSS:

See the code for the CSS in Exercise 1.

JS:

09-arc-explained.js

window.addEventListener("load", function () {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.arc(50, 50, 40, 0, degreesToRadians(360), true);

context.fillStyle = "rgba(255,0,0,.1)";

context.fill();

}

}, false);

function centerPoint() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context.fillStyle = "rgba(0,0,0,1)";

context = canvas.getContext("2d");

context.beginPath();

context.arc(50, 50, 2, 0, degreesToRadians(360), true);

context.fill();

}

}

function radius() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.moveTo(50, 50);

context.lineTo(50 + 40, 50);

context.stroke();

}

}

function showArc(ccw) {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.beginPath();

context.arc(50, 50, 40, 0, degreesToRadians(90), ccw);

context.stroke();

}

}

function degreesToRadians(degrees) {

return (Math.PI / 180) \* degrees;

}

10. Arc Degrees:

HTML:

10-arc-degrees.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Degrees</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<canvas id="my-canvas" height="300" width="300">Your browser doesn't support canvas.</canvas>

<br>

<button class="btn btn-default" onclick="drawPath(true);">Draw Counterclockwise Circles</button>

<button class="btn btn-default" onclick="drawPath(false);">Draw Clockwise Circles</button>

</div>

<script src="scripts/10-arc-degrees.js"></script>

</body>

</html>

JS:

10-arc-degrees.js

function drawPath(counterclockwise) {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.restore();

context.save();

context.scale(1.5, 1.5);

context.clearRect(0, 0, 200, 200);

context.fillText("Degrees", 80, 20);

if (counterclockwise) {

context.fillText("counter-clockwise", 10, 190);

} else {

context.fillText("clockwise", 10, 190);

}

context.moveTo(100, 100);

context.arc(100, 100, 70, 0, degreesToRadians(90), counterclockwise);

context.fillText("90", 100, 169);

context.stroke();

context.beginPath();

context.arc(100, 100, 60, 0, degreesToRadians(180), counterclockwise);

context.fillText("180", 40, 100);

context.stroke();

context.beginPath();

context.arc(100, 100, 50, 0, degreesToRadians(270), counterclockwise);

context.fillText("270", 90, 50);

context.stroke();

context.beginPath();

context.arc(100, 100, 40, 0, degreesToRadians(360), counterclockwise);

context.fillText("360", 120, 100);

context.stroke();

}

}

function degreesToRadians(degrees) {

return (Math.PI / 180) \* degrees;

}

11. Arc Radians:

HTML:

11-arc-radians.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Radians</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<canvas id="my-canvas" height="300" width="300">Your browser doesn't support canvas.</canvas>

<br>

<button class="btn btn-default" onclick="drawPath(true);">Draw Counterclockwise Circles</button>

<button class="btn btn-default" onclick="drawPath(false);">Draw Clockwise Circles</button>

</div>

<script src="scripts/11-arc-radians.js"></script>

</body>

</html>

JS:

11-arc-radians.html

function drawPath(counterclockwise) {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

context = canvas.getContext("2d");

context.restore();

context.save();

context.scale(1.5, 1.5);

context.clearRect(0, 0, 200, 200);

context.fillText("Radians", 80, 20);

if (counterclockwise) {

context.fillText("counter-clockwise", 10, 190);

} else {

context.fillText("clockwise", 10, 190);

}

context.moveTo(100, 100);

context.arc(100, 100, 70, 0, 1, counterclockwise);

context.fillText("1", 134, 156);

context.stroke();

context.beginPath();

context.arc(100, 100, 60, 0, 2, counterclockwise);

context.fillText("2", 75, 153);

context.stroke();

context.beginPath();

context.arc(100, 100, 50, 0, 3, counterclockwise);

context.fillText("3", 53, 110);

context.stroke();

context.beginPath();

context.arc(100, 100, 40, 0, 4, counterclockwise);

context.fillText("4", 74, 77);

context.stroke();

context.beginPath();

context.arc(100, 100, 30, 0, 5, counterclockwise);

context.fillText("5", 102, 79);

context.stroke();

context.beginPath();

context.arc(100, 100, 20, 0, 6, counterclockwise);

context.fillText("6", 111, 97);

context.stroke();

context.beginPath();

context.arc(100, 100, 10, 0, 2 \* Math.PI, counterclockwise);

context.stroke();

context.beginPath();

context.moveTo(110, 100);

context.strokeStyle = "blue";

context.lineTo(134, 176);

context.fillText("2π", 136, 186);

context.stroke();

}

}

12. Quadratic:

HTML:

12-quadratic.html

<!doctype html>

<html>

<head>

<title>Canvas - Quadratic Curve</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="500" width="500" style="float:left;">Your browser doesn't support canvas.</canvas>

<menu>

<button class="btn btn-default" onclick="erase()">Start Over</button>

<h1>Set Color</h1>

<label for="red">Red: </label>

<input type="range" min="0" max="255" step="5" id="red" value="0" size="5">

<output id="red-output">0</output>

<br>

<label for="green">Green: </label>

<input type="range" min="0" max="255" step="5" id="green" value="0" size="5">

<output id="green-output">0</output>

<br>

<label for="blue">Blue: </label>

<input type="range" min="0" max="255" step="5" id="blue" value="0" size="5">

<output id="blue-output">0</output>

<br>

<output id="color" style="display:block;width:200px;height:20px;"></output>

</menu>

<div id="codecontainer">

<textarea id="code" placeholder="Generated Code Goes Here"></textarea>

<section id="coordinates">

<label>startx:</label>

<output id="startx">unknown</output>

<label>starty:</label>

<output id="starty">unknown</output>

<label>endx:</label>

<output id="endx">unknown</output>

<label>endy:</label>

<output id="endy">unknown</output>

<label>cp1x:</label>

<output id="cp1x">unknown</output>

<label>cp1y:</label>

<output id="cp1y">unknown</output>

</section>

</div>

</div>

<script type="text/javascript" src="scripts/quadratic.js"></script>

</body>

</html>

JS:

12-quadratic.js

window.addEventListener("load", setup, false);

var colorChanged = true;

function setup() {

var canvas = document.getElementById("my-canvas");

var context;

if (canvas.getContext) {

context = canvas.getContext("2d");

setColor(context);

setLineProps(context, 1, 'square');

markCenter(context);

canvas.addEventListener("click", recordClick, false);

document.getElementById('blue').addEventListener("change", function () {

setColor(context);

}, false);

document.getElementById('red').addEventListener("change", function () {

setColor(context);

}, false);

document.getElementById('green').addEventListener("change", function () {

setColor(context);

}, false);

}

}

function markCenter(context) {

circle("fill", 250, 250, 5, 0, 360, true);

context.fillText("mid", 255, 245);

}

function setColor(context) {

colorChanged = true;

var red = document.getElementById('red').value;

var green = document.getElementById('green').value;

var blue = document.getElementById('blue').value;

document.getElementById("red-output").innerHTML = red;

document.getElementById("green-output").innerHTML = green;

document.getElementById("blue-output").innerHTML = blue;

document.getElementById("color").style.backgroundColor = "rgb(" + red + "," + green + "," + blue + ")";

context.strokeStyle = "rgb(" + red + "," + green + "," + blue + ")";

}

function setLineProps(context, width, cap) {

context.lineWidth = width;

context.lineCap = cap; //butt,round,square

}

function degreesToRadians(degrees) {

return (Math.PI / 180) \* degrees;

}

function circle(type, x, y, radius, startAngle, endAngle, anticlockwise) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

var start = degreesToRadians(startAngle);

var end = degreesToRadians(endAngle);

context.moveTo(x + radius, y);

context.arc(x, y, radius, start, end, anticlockwise);

switch (type) {

case "fill" :

context.fill();

break;

case "stroke" :

context.stroke();

break;

}

}

var startx, starty, cp1x, cp1y, endx, endy;

var clicks = 0;

function recordClick(e) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

clicks++;

if (clicks == 4) clicks = 1;

context.beginPath();

switch (clicks) {

case 1:

resetCoordinates(false);

startx = getMouseX(e);

starty = getMouseY(e);

document.getElementById('startx').innerHTML = startx;

document.getElementById('starty').innerHTML = starty;

circle("stroke", startx, starty, 4, 0, 360, true);

context.fillText("start", startx + 5, starty - 5);

break;

case 2:

endx = getMouseX(e);

endy = getMouseY(e);

document.getElementById('endx').innerHTML = startx;

document.getElementById('endy').innerHTML = starty;

circle("stroke", endx, endy, 4, 0, 360, true);

context.fillText("end", endx + 5, endy - 5);

break;

case 3:

context.restore();

cp1x = getMouseX(e);

cp1y = getMouseY(e);

document.getElementById('cp1x').innerHTML = cp1x;

document.getElementById('cp1y').innerHTML = cp1y;

circle("stroke", cp1x, cp1y, 4, 0, 360, true);

context.fillText("c1", cp1x + 5, cp1y - 5);

context.moveTo(startx, starty);

context.quadraticCurveTo(cp1x, cp1y, endx, endy);

context.stroke();

document.getElementById("code").value += "context.beginPath();\n";

if (colorChanged) {

var red = document.getElementById('red').value;

var green = document.getElementById('green').value;

var blue = document.getElementById('blue').value;

document.getElementById("code").value += "context.strokeStyle='rgb(" + red + "," + green + "," + blue + ")';\n";

colorChanged = false;

}

document.getElementById("code").value += "context.moveTo(" + startx + "," + starty + ");\n";

document.getElementById("code").value += "context.quadraticCurveTo(" + cp1x + "," + cp1y + "," + endx + "," + endy + ");\n";

document.getElementById("code").value += "context.stroke();\n";

break;

}

}

function getMouseX(e) { //modified from <http://diveintohtml5.org/canvas.html#divingin>

var x;

if (e.pageX != undefined) {

x = e.pageX;

} else {

x = e.clientX + document.body.scrollLeft + document.documentElement.scrollLeft;

}

x -= document.getElementById("my-canvas").offsetLeft;

return x;

}

function getMouseY(e) {

var y;

if (e.pageY != undefined) {

y = e.pageY;

} else {

y = e.clientY + document.body.scrollTop + document.documentElement.scrollTop;

}

y -= document.getElementById("my-canvas").offsetTop;

return y;

}

function erase() {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

resetCoordinates(true);

context.beginPath();

context.clearRect(0, 0, 500, 500);

markCenter(context);

document.getElementById("code").value = "";

}

function resetCoordinates(resetClicks) {

if (resetClicks) clicks = 0;

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

startx = "unknown";

starty = "unknown";

endx = "unknown";

endy = "unknown";

cp1x = "unknown";

cp1y = "unknown";

document.getElementById('startx').innerHTML = startx;

document.getElementById('starty').innerHTML = starty;

document.getElementById('endx').innerHTML = endx;

document.getElementById('endy').innerHTML = endy;

document.getElementById('cp1x').innerHTML = cp1x;

document.getElementById('cp1y').innerHTML = cp1y;

}

13. Bezier:

HTML:

13-bezier.html

<!doctype html>

<html>

<head>

<title>Canvas - Bezier Curve</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<canvas id="my-canvas" height="500" width="500" style="float:left;">Your browser doesn't support canvas.</canvas>

<menu>

<button class="btn btn-default" onclick="erase()">Start Over</button>

<h1>Set Color</h1>

<label for="red">Red: </label>

<input type="range" min="0" max="255" step="5" id="red" value="0" size="5">

<output id="red-output">0</output>

<br>

<label for="green">Green: </label>

<input type="range" min="0" max="255" step="5" id="green" value="0" size="5">

<output id="green-output">0</output>

<br>

<label for="blue">Blue: </label>

<input type="range" min="0" max="255" step="5" id="blue" value="0" size="5">

<output id="blue-output">0</output>

<br>

<output id="color" style="display:block;width:200px;height:20px;"></output>

</menu>

<div id="codecontainer">

<textarea id="code" placeholder="Generated Code Goes Here"></textarea>

<section id="coordinates">

<label>startx:</label>

<output id="startx">unknown</output>

<label>starty:</label>

<output id="starty">unknown</output>

<label>endx:</label>

<output id="endx">unknown</output>

<label>endy:</label>

<output id="endy">unknown</output>

<label>cp1x:</label>

<output id="cp1x">unknown</output>

<label>cp1y:</label>

<output id="cp1y">unknown</output>

<label>cp2x:</label>

<output id="cp2x">unknown</output>

<label>cp2y:</label>

<output id="cp2y">unknown</output>

</section>

</div>

</div>

<script src="scripts/13-bezier.js"></script>

</body>

</html>

JS:

13-bezier.js

window.addEventListener("load", setup, false);

var colorChanged = true;

function setup() {

var canvas = document.getElementById("my-canvas");

var context;

if (canvas.getContext) {

context = canvas.getContext("2d");

setColor(context);

setLineProps(context, 1, 'square');

markCenter(context);

canvas.addEventListener("click", recordClick, false);

document.getElementById('blue').addEventListener("change", function () {

setColor(context);

}, false);

document.getElementById('red').addEventListener("change", function () {

setColor(context);

}, false);

document.getElementById('green').addEventListener("change", function () {

setColor(context);

}, false);

}

}

function markCenter(context) {

circle("fill", 250, 250, 5, 0, 360, true);

context.fillText("mid", 255, 245);

}

function setColor(context) {

colorChanged = true;

var red = document.getElementById('red').value;

var green = document.getElementById('green').value;

var blue = document.getElementById('blue').value;

document.getElementById("red-output").innerHTML = red;

document.getElementById("green-output").innerHTML = green;

document.getElementById("blue-output").innerHTML = blue;

document.getElementById("color").style.backgroundColor = "rgb(" + red + "," + green + "," + blue + ")";

context.strokeStyle = "rgb(" + red + "," + green + "," + blue + ")";

}

function setLineProps(context, width, cap) {

context.lineWidth = width;

context.lineCap = cap; //butt,round,square

}

function degreesToRadians(degrees) {

return (Math.PI / 180) \* degrees;

}

function circle(type, x, y, radius, startAngle, endAngle, anticlockwise) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

var start = degreesToRadians(startAngle);

var end = degreesToRadians(endAngle);

context.moveTo(x + radius, y);

context.arc(x, y, radius, start, end, anticlockwise);

switch (type) {

case "fill" :

context.fill();

break;

case "stroke" :

context.stroke();

break;

}

}

var startx, starty, cp1x, cp1y, cp2x, cp2y, endx, endy;

var clicks = 0;

function recordClick(e) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

clicks++;

if (clicks == 5) clicks = 1;

context.beginPath();

switch (clicks) {

case 1:

resetCoordinates(false);

startx = getMouseX(e);

starty = getMouseY(e);

document.getElementById('startx').innerHTML = startx;

document.getElementById('starty').innerHTML = starty;

circle("stroke", startx, starty, 4, 0, 360, true);

context.fillText("start", startx + 5, starty - 5);

break;

case 2:

endx = getMouseX(e);

endy = getMouseY(e);

document.getElementById('endx').innerHTML = startx;

document.getElementById('endy').innerHTML = starty;

circle("stroke", endx, endy, 4, 0, 360, true);

context.fillText("end", endx + 5, endy - 5);

break;

case 3:

cp1x = getMouseX(e);

cp1y = getMouseY(e);

document.getElementById('cp1x').innerHTML = cp1x;

document.getElementById('cp1y').innerHTML = cp1y;

circle("stroke", cp1x, cp1y, 4, 0, 360, true);

context.fillText("c1", cp1x + 5, cp1y - 5);

break;

case 4:

context.restore();

cp2x = getMouseX(e);

cp2y = getMouseY(e);

document.getElementById('cp2x').innerHTML = cp2x;

document.getElementById('cp2y').innerHTML = cp2y;

circle("stroke", cp2x, cp2y, 4, 0, 360, true);

context.fillText("c2", cp2x + 5, cp2y - 5);

context.moveTo(startx, starty);

context.bezierCurveTo(cp1x, cp1y, cp2x, cp2y, endx, endy);

context.stroke();

document.getElementById("code").value += "context.beginPath();\n";

if (colorChanged) {

var red = document.getElementById('red').value;

var green = document.getElementById('green').value;

var blue = document.getElementById('blue').value;

document.getElementById("code").value += "context.strokeStyle='rgb(" + red + "," + green + "," + blue + ")';\n";

colorChanged = false;

}

document.getElementById("code").value += "context.moveTo(" + startx + "," + starty + ");\n";

document.getElementById("code").value += "context.bezierCurveTo(" + cp1x + "," + cp1y + "," + cp2x + "," + cp2y + "," + endx + "," + endy + ");\n";

document.getElementById("code").value += "context.stroke();\n";

break;

}

}

function getMouseX(e) { //modified from <http://diveintohtml5.org/canvas.html#divingin>

var x;

if (e.pageX != undefined) {

x = e.pageX;

} else {

x = e.clientX + document.body.scrollLeft + document.documentElement.scrollLeft;

}

x -= document.getElementById("my-canvas").offsetLeft;

return x;

}

function getMouseY(e) {

var y;

if (e.pageY != undefined) {

y = e.pageY;

} else {

y = e.clientY + document.body.scrollTop + document.documentElement.scrollTop;

}

y -= document.getElementById("my-canvas").offsetTop;

return y;

}

function erase() {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

resetCoordinates(true);

context.beginPath();

context.clearRect(0, 0, 500, 500);

markCenter(context);

document.getElementById("code").value = "";

}

function resetCoordinates(resetClicks) {

if (resetClicks) clicks = 0;

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

startx = "unknown";

starty = "unknown";

endx = "unknown";

endy = "unknown";

cp1x = "unknown";

cp1y = "unknown";

cp2x = "unknown";

cp2y = "unknown";

document.getElementById('startx').innerHTML = startx;

document.getElementById('starty').innerHTML = starty;

document.getElementById('endx').innerHTML = endx;

document.getElementById('endy').innerHTML = endy;

document.getElementById('cp1x').innerHTML = cp1x;

document.getElementById('cp1y').innerHTML = cp1y;

document.getElementById('cp2x').innerHTML = cp2x;

document.getElementById('cp2y').innerHTML = cp2y;

}

14. Bezier:

HTML:

14-bezier-whatg-example.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Canvas - Bezier Curve</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<br>

<div class="container">

<canvas id="my-canvas" height="500" width="500">Your browser doesn't support canvas.</canvas>

<a href="<http://www.whatwg.org/specs/web-apps/current-work/multipage/the-canvas-element.html#examples>">http://www.whatwg.org/specs/web-apps/current-work/multipage/the-canvas-element.html#examples</a>

</div>

<script src="scripts/14-bezier-whatg-example.js"></script>

</body>

</html>

JS:

14-bezier-whatg-example.js

var context = document.getElementById('my-canvas').getContext('2d');

var lastX = context.canvas.width \* Math.random();

var lastY = context.canvas.height \* Math.random();

var hue = 0;

function line() {

context.save();

context.translate(context.canvas.width / 2, context.canvas.height / 2);

context.scale(0.9, 0.9);

context.translate(-context.canvas.width / 2, -context.canvas.height / 2);

context.beginPath();

context.lineWidth = 5 + Math.random() \* 10;

context.moveTo(lastX, lastY);

lastX = context.canvas.width \* Math.random();

lastY = context.canvas.height \* Math.random();

context.bezierCurveTo(context.canvas.width \* Math.random(),

context.canvas.height \* Math.random(),

context.canvas.width \* Math.random(),

context.canvas.height \* Math.random(),

lastX, lastY);

hue = hue + 10 \* Math.random();

context.strokeStyle = 'hsl(' + hue + ', 50%, 50%)';

context.shadowColor = 'white';

context.shadowBlur = 10;

context.stroke();

context.restore();

}

setInterval(line, 50);

function blank() {

context.fillStyle = 'rgba(0,0,0,0.1)';

context.fillRect(0, 0, context.canvas.width, context.canvas.height);

}

setInterval(blank, 40);

15. All in One:

HTML:

15-all-in-one.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Canvas: All-in-One</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<canvas id="my-canvas" height="400" width="400">Your browser doesn't support canvas.</canvas>

<menu>

<button class="btn btn-default" onclick="line(135,45,150,65);">Line</button>

<button class="btn btn-default" onclick="triangle(100,100,200,50,300,100);">Triangle</button>

<button class="btn btn-default" onclick="rectangle('fill',100,100,200,200);">Rectangle</button>

<button class="btn btn-default" onclick="circle('stroke',300,300,20,11,90,false);">Circle</button>

<button class="btn btn-default" onclick="curve('fill',25,25,25,62.5);">Quadratic Curve</button>

<button class="btn btn-default" onclick="curve('fill',75,37,70,25,50,25);">Bezier Curve</button>

</menu>

</div>

<script src="scripts/15-all-in-one.js"></script>

</body>

</html>

JS:

15-all-in-one.js

window.addEventListener("load", setup, false);

function setup() {

var canvas = document.getElementById("my-canvas");

var context;

if (canvas.getContext) {

context = canvas.getContext("2d");

setLineProps(context, 10, 'square');

setStrokeProps(context, 'rgb(100,25,0)');

setFillProps(context, 'rgb(255,0,255)');

}

}

function setLineProps(context, width, cap) {

context.lineWidth = width;

context.lineCap = cap; //butt,round,square

}

function setStrokeProps(context, color) {

context.strokeStyle = color;

}

function setFillProps(context, color) {

context.fillStyle = color;

}

function line(x1, y1, x2, y2) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

context.beginPath();

context.moveTo(x1, y1);

context.lineTo(x2, y2);

context.stroke();

}

function triangle(x1, y1, x2, y2, x3, y3) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

context.beginPath();

context.moveTo(x1, y1);

context.lineTo(x2, y2);

context.lineTo(x3, y3);

context.closePath();

context.stroke();

}

function rectangle(type, x, y, w, h) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

switch (type) {

case "fill" :

context.fillRect(x, y, w, h);

break;

case "stroke" :

context.strokeRect(x, y, w, h);

break;

case "clear" :

context.clearRect(x, y, w, h);

break;

}

}

function degreesToRadians(degrees) {

return (Math.PI / 180) \* degrees;

}

function circle(type, x, y, radius, startAngle, endAngle, anticlockwise) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

var start = degreesToRadians(startAngle);

var end = degreesToRadians(endAngle);

context.moveTo(x + radius, y);

context.arc(x, y, radius, start, end, anticlockwise);

switch (type) {

case "fill" :

context.fill();

break;

case "stroke" :

context.stroke();

break;

}

}

function curve(type, cp1x, cp1y, cp2x, cp2y, x, y) {

var canvas = document.getElementById("my-canvas");

if (!canvas.getContext) return;

var context = canvas.getContext("2d");

context.moveTo(x, y);

switch (arguments.length) {

case 5 : //quadratic curve

context.quadraticCurveTo(cp1x, cp1y, x, y);

break;

case 7 : //bezier curve

context.bezierCurveTo(cp1x, cp1y, cp2x, cp2y, x, y)

break;

default : //error

throw("Wrong number of arguments");

}

switch (type) {

case "fill" :

context.fill();

break;

case "stroke" :

context.stroke();

break;

}

}

16. Image Basic:

HTML:

16-image-basic.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Image - Basic</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="400">Your browser doesn't support canvas.</canvas>

</div>

<script src="scripts/16-image-basic.js"></script>

</body>

</html>

JS:

16-image-basic.js

window.addEventListener("load", draw, false);

function draw() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

var context = canvas.getContext("2d");

var logo = new Image();

logo.src = 'images/logo.png';

logo.onload = function () {

context.drawImage(logo, 50, 50);

};

}

}

17. Image Sprite:

HTML:

17-image-sprite.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Image - Sprite</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="200">Your browser doesn't support canvas.</canvas>

<button class="btn btn-default" onclick="evolve(1);" id="btnEvolve" disabled>Evolve</button>

<br/>

<img src="Images/evolution-grid.gif" alt="Evolution with Grid">

</div>

<script src="scripts/17-image-sprite.js"></script>

</body>

</html>

JS:

17-image-sprite.js

var img;

window.addEventListener("load", function () {

img = new Image();

img.src = 'Images/evolution.gif';

draw();

}, false);

function draw() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

var context = canvas.getContext("2d");

img.onload = function () {

context.drawImage(img, 10, 10, 60, 140, 60, 20, 60, 140); document.getElementById("btnEvolve").disabled = false;

}

}

}

function evolve(pic) {

var pics = [

{

"sx" : 10, "w" : 60,

},

{

"sx" : 74, "w" : 66

},

{

"sx" : 143, "w" : 60

},

{

"sx" : 217, "w" : 55

},

{

"sx" : 270, "w" : 55

},

{

"sx" : 324, "w" : 70

}

];

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

var context = canvas.getContext("2d");

context.clearRect(0, 0, 200, 200);

context.drawImage(img, pics[pic].sx, 10, pics[pic].w, 140, 60, 20, pics[pic].w, 140);

}

if (pic < 5) {

setTimeout(function () {

pic++;

evolve(pic);

}, 250);

}

}

18. Text:

HTML:

18-text.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Text</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css">

</head>

<body>

<div class="container">

<canvas id="my-canvas" height="200" width="400">Your browser doesn't support canvas.</canvas>

</div>

<script type="text/javascript" src="scripts/18-text.js"></script>

</body>

</html>

JS:

18-text.js

window.addEventListener("load", draw, false);

function draw() {

var canvas = document.getElementById("my-canvas");

if (canvas.getContext) {

var context = canvas.getContext("2d");

context.fillStyle = "red";

context.strokeStyle = "blue";

context.font = "italic small-caps bold 44pt 'Comic Sans MS'";

context.textAlign = "left";

context.strokeText("Hello", 10, 100);

context.fillText("World!", 10 + context.measureText("Hello ").width, 100);

}

}

Unit 8

Integrated APIs



1. Offline:

HTML:

01-offline.html

<!doctype html>

<html manifest="example.manifest">

<head>

<meta charset="UTF-8">

<title>Offline Application API</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/offline.css" rel="stylesheet">

</head>

<body>

<h1>No Heading</h1>

<ol id="output"></ol>

<img src="images/online.gif" alt="online/offline image">

<script src="scripts/01-offline.js" type="text/javascript"></script>

</body>

</html>

Example Manifest:

example.manifest

CACHE MANIFEST

#Version 1.2

01-offline.html

stylesheets/offline.css

scripts/offline.js

NETWORK:

\*

FALLBACK:

images/online.gif images/offline.gif

#COMMENTS

##We could use the following fallback settings to use

##a different stylesheet and script when offline

##style.css offline-style.css

##script.js offline-script.js

JS:

01-offline.js

window.addEventListener("load", function () {

document.getElementsByTagName("h1")[0].innerHTML = "Hello World";

}, false);

var appCache = window.applicationCache;

appCache.addEventListener("error", function () {

alert("Cache failed to update");

document.getElementById("output").innerHTML += "<li>a cache error has occurred</li>";

}, false);

appCache.addEventListener("updateready", function () {

var refresh = confirm("An updated version is ready. Press OK refresh your browser.");

if (refresh) {

location.reload();

}

document.getElementById("output").innerHTML += "<li>cache ready to be updated</li>";

}, false);

appCache.addEventListener("cached", function () {

document.getElementById("output").innerHTML += "<li>application cached</li>";

}, false);

appCache.addEventListener("checking", function () {

document.getElementById("output").innerHTML += "<li>checking cache</li>";

}, false);

appCache.addEventListener("downloading", function () {

document.getElementById("output").innerHTML += "<li>cache downloading</li>";

}, false);

appCache.addEventListener("noupdate", function () {

document.getElementById("output").innerHTML += "<li>no cache update</li>";

}, false);

appCache.addEventListener("obsolete", function () {

document.getElementById("output").innerHTML += "<li>manifest file returned a 404 or 410</li>";

}, false);

appCache.addEventListener("progress", function () {

document.getElementById("output").innerHTML += "<li>Resource being fetched from cache</li>";

}, false);

2. Drag and Drop:

HTML:

02-dragdrop.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Drag and Drop API</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/dragdrop.css" rel="stylesheet"/>

</head>

<body>

<div class="container">

<h1>Drag and Drop</h1>

<div id="dropzone">Last Dropped:

<time>never</time>

</div>

<div id="drag" draggable="true"></div>

<ol id="output"></ol>

</div>

</body>

<script src="scripts/dateFormat.js" type="text/javascript"></script>

<script src="scripts/02-dragdrop.js" type="text/javascript"></script>

</html>

JS:

02-dragdrop.js

var dropzone, drag;

window.addEventListener("load", dragDrop, false);

function dragDrop() {

dropzone = document.getElementById("dropzone");

drag = document.getElementById("drag");

drag.addEventListener("dragstart", handleDragStart, false);

drag.addEventListener("drag", handleDrag, false);

drag.addEventListener("dragend", handleDragEnd, false);

dropzone.addEventListener("dragenter", handleDragEnter, false);

dropzone.addEventListener("dragover", handleDragOver, false);

dropzone.addEventListener("dragleave", handleDragLeave, false);

dropzone.addEventListener("drop", handleDrop, false);

}

function handleDragStart(e) {

this.style.backgroundColor = "green";

document.getElementById("output").innerHTML += "<li>Dragging Started</li>";

e.dataTransfer.setData('Text', this.id);

}

var dragReported = false;

function handleDrag(e) {

if (!dragReported) document.getElementById("output").innerHTML += "<li>Dragging</li>";

dragReported = true;

}

function handleDragEnter(e) {

document.getElementById("output").innerHTML += "<li>Drag Enter</li>";

cancel(e);

}

var dragOverReported = false;

function handleDragLeave(e) {

document.getElementById("output").innerHTML += "<li>Drag Leave</li>";

dragOverReported = false;

}

function handleDragOver(e) {

if (!dragOverReported) document.getElementById("output").innerHTML += "<li>Dragging Over</li>";

dragOverReported = true;

cancel(e);

}

function handleDrop(e) {

var droppedElem = e.dataTransfer.getData('Text');

document.getElementById("output").innerHTML += "<li><strong>" + droppedElem + "</strong> dropped on <strong>" + this.id + "</strong></li>";

var now = new Date();

this.getElementsByTagName("time")[0].innerHTML = now.format("H:MM:ss");

cancel(e);

}

function handleDragEnd(e) {

document.getElementById("output").innerHTML += "<li>Dragging Ended</li>";

this.style.backgroundColor = "red";

}

function cancel(e) {

if (e.preventDefault) {

e.preventDefault();

}

return false;

}

3. Geolocation:

HTML:

03-geolocation.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Geolocation API</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link href="stylesheets/geolocation.css" rel="stylesheet">

</head>

<body>

<div class="container">

<h1>Geolocation API</h1>

<output id="mapToYou"><p>Searching for you...</p>

</output>

</div>

</body>

<script type="text/javascript" src="<http://maps.google.com/maps/api/js?sensor=false>"></script>

<script src="scripts/03-geolocation.js" type="text/javascript"></script>

</html>

JS:

03-geolocation.js

function success(position) {

var mapToYou = document.querySelector('#mapToYou');

alert("Gotcha!");

var latlng = new google.maps.LatLng(position.coords.latitude, position.coords.longitude);

var myOptions = {

zoom : 15,

center : latlng,

mapTypeControl : false,

navigationControlOptions : {

style : google.maps.NavigationControlStyle.SMALL

},

mapTypeId : google.maps.MapTypeId.ROADMAP

};

var googleMap = new google.maps.Map(mapToYou, myOptions);

var marker = new google.maps.Marker({

position : latlng,

map : googleMap,

title : "You are here!"

});

}

function error(msg) {

var mapToYou = document.querySelector('#mapToYou');

mapToYou.innerHTML = typeof msg == 'string' ? msg : "failed";

mapToYou.className = 'fail';

// console.log(arguments);

}

window.addEventListener("load", function () {

if (navigator.geolocation) {

navigator.geolocation.getCurrentPosition(success, error);

} else {

error('not supported');

}

}, false);

4. Weather:

HTML:

04-weather.html

<!doctype html>

<html lang="en">

<head>

<meta name="viewport" content="initial-scale=1.0">

<meta charset="UTF-8">

<title>Weather API</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" href="stylesheets/weather.css">

</head>

<body>

<div class="container">

<h1>Weather App</h1>

<hr>

<div class="well">

<p>

Toronto's weather is :

</p>

</div>

<div id="weather"></div>

<div id="temp"></div>

<br>

<button class="btn btn-default" onclick="getWeather()">GET</button>

</div>

<script type="text/javascript" src="scripts/04-weather.js"></script>

</body>

</html>

JS:

04-weather.js

function getWeather(){

var xhr = new XMLHttpRequest();

console.log('ready');

xhr.onreadystatechange = function() {

if (xhr.readyState == 4 && xhr.status == 200) {

var xDoc = JSON.parse(xhr.responseText);

var weather = JSON.stringify(xDoc.weather);

document.getElementById("weather").innerHTML = JSON.stringify(xDoc.weather[0].main);

var temp = xDoc.main.temp;

var celsius = temp - 273.15;

document.getElementById("temp").innerHTML = Math.round(celsius) + "&#176;" + "C";

console.log(xDoc);

}

};

xhr.open("GET", "http://api.openweathermap.org/data/2.5/weather?q=Toronto,on&appid=2de143494c0b295cca9337e1e96b00e0");

xhr.send();

}

Unit 9

CSS3



1. Selectors Attribute Matching:

HTML:

01-selectors-attribute-matching.html

<!doctype html>

<html>

<head>

<title>CSS3: attribute substring selectors</title>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/01-selectors-attribute-matching.css">

</head>

<body>

<div class="container">

<section>

<h1>begins with attribute selector</h1>

<p id="paragraph1">this paragraph's id = 'paragraph1'</p>

<p id="secondParagraph">this paragraph's id = 'secondParagraph'</p>

</section>

<section>

<h1>ends with attribute selector</h1>

<p id="abc">this paragraph's id = 'abc'</p>

<p id="\_abc">this paragraph's id = '\_abc'</p>

<p id="abc\_">this paragraph's id = 'abc\_'</p>

</section>

<section>

<h1>contains attribute selector</h1>

<p id="xyz">this paragraph's id = 'xyz'</p>

<p id="\_\_xyz">this paragraph's id = '\_\_xyz'</p>

<p id="xyz\_\_">this paragraph's id = 'xyz\_\_'</p>

<p id="\_x\_y\_z\_">this paragraph's id = '\_x\_y\_z\_'</p>

</section>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* the id must begin with 'paragraph' \*/

p[id^="paragraph"] {

color:red;

}

/\* the id must end with 'abc' \*/

p[id$="abc"] {

color:green;

}

/\* the id must contain 'xyz' \*/

p[id\*="xyz"] {

color:blue;

}

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

01-selectors-attribute-matching.css

/\* the id must begin with 'paragraph' \*/

p[id^="paragraph"] {

color:red;

}

/\* the id must end with 'abc' \*/

p[id$="abc"] {

color:green;

}

/\* the id must contain 'xyz' \*/

p[id\*="xyz"] {

color:blue;

}

section {

border: 1px solid black;

margin: 10px; padding: 10px;

}

code{

display: none;

}

JS:

This code is in Demos 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

displayStyleBlock.js

/\* this script does two things:

- uses prettify from google code to format sample code for readability

- enables the user to toggle the view of the sample style code on/off

\*/

// stuff the style block into a box on the page...

var str = '';

str += '<link type="text/css" rel="stylesheet" href="stylesheets/displayStyleBlock.css"/>';

str += '&lt;style&gt;' + document.getElementById('styleBlock').innerHTML + '&lt;/style&gt;';

document.getElementById('styleCodeBlock').innerHTML = str;

prettyPrint();

// ... and toggle the display of that box on and off (default: off)

function toggle() {

var displayMode = (document.getElementById('styleCodeBlock').style.display != 'block') ? 'display:block' : 'display:none';

document.getElementById('styleCodeBlock').setAttribute('style', displayMode);

}

2. Selectors nth Child:

HTML:

02-selectors-nth-child.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the nth child selector</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/02-selectors-nth-child.css">

</head>

<body>

<div class="container">

<p>p1</p>

<p>p2 this p is the second child of its parent</p>

<p>p3</p>

<p>p4</p>

<p>p5</p>

<div>div5 this div is the second last child of its parent</div>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* target the second paragraph \*/

p:nth-child(2) { color: red; }

/\* target the second last child, only if it's a div \*/

div:nth-last-child(2) { color: blue; }

/\* target all even numbered child elements, only if they are paragraphs \*/

p:nth-child(even) { text-decoration: underline; }

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

02-selectors-nth-child.html

/\* target the second paragraph \*/

p:nth-child(2) {

color: red;

}

/\* target the second last child, only if it's a div \*/

div:nth-last-child(2) {

color: blue;

}

/\* target all even numbered child elements, only if they are paragraphs \*/

p:nth-child(even) {

text-decoration: underline;

}

code{

display: none;

}

JS:

To see this code look in the first Demo in this Unit.

3.

a. Selectors nth of Type:

HTML:

03a-selectors-nth-of-type.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the nth of type selectors</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/03a-selectors-nth-of-type.css">

</head>

<body>

<div class="container">

<br>

<div>div1</div>

<p>p1</p>

<p>p2 second element of type paragraph</p>

<p>p3 second last element of type paragraph</p>

<p>p4</p>

<div>div2</div>

<div>div3</div>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* target the second paragraph element \*/

p:nth-of-type(2) { color: red; }

/\* target the second last paragraph element \*/

p:nth-last-of-type(2) { color: blue; }

/\* target all odd numbered divs \*/

div:nth-of-type(odd) { color: green; }

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

03a-selectors-nth-of-type.css

/\* target the second paragraph element \*/

p:nth-of-type(2) {

color: red;

}

/\* target the second last paragraph element \*/

p:nth-last-of-type(2) {

color: blue;

}

/\* target all odd numbered divs \*/

div:nth-of-type(odd) {

color: green;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

b. Selectors Pseudo Selectors:

HTML:

03b-selectors-pseudo-selectors.html

<!doctype html>

<html>

<head>

<title>CSS3: pseudo classes</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/03b-selectors-pseudo-selectors.css">

</head>

<body>

<div class="container">

<br>

<article>

<section>

<div>

<code>&lt;div&gt;</code>

sample div in a section element

</div>

<p>

<code>&lt;p&gt;</code>

sample paragraph in a section element

</p>

<div>

<code>&lt;div&gt;</code>

third child of its parent, any element

</div>

<div>

<code>&lt;div&gt;</code>

this is the third (and also the second last) div in this section

</div>

<p>

<code>&lt;p&gt;</code>

second last child of its parent, any element

</p>

<div>

<code>&lt;div&gt;</code>

sample div in a section element

</div>

</section>

<p>

<code>&lt;p&gt;</code> 1:

</p>

<p>

<code>&lt;p&gt;</code> 2: third child of its parent, any element

</p>

<p>

<code>&lt;p&gt;</code> 3: this is the third element in this section but it isn't a div

</p>

<p>

<code>&lt;p&gt;</code> 4:

</p>

<p>

<code>&lt;p&gt;</code> 5: second last child of its parent, any element

</p>

<p>

<code>&lt;p&gt;</code> 6:

</p>

</article>

<aside>

<pre id="styleCodeBlock" class="prettyprint">

</pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* the third child of its parent, any element \*/

:nth-child(3) {

color: red;

}

/\* the second last element of any parent \*/

p:nth-last-child(2) {

color: blue;

}

/\* the second div element \*/

div:nth-of-type(3) {

color: green;

}

/\* the second last div element \*/

div:nth-last-of-type(2){

text-decoration: underline;

}

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

03b-selectors-pseudo-selectors.css

/\* the third child of its parent, any element \*/

:nth-child(3) {

color: red;

}

/\* the second last element of any parent \*/

p:nth-last-child(2) {

color: blue;

}

/\* the second div element \*/

div:nth-of-type(3) {

color: green;

}

/\* the second last div element \*/

div:nth-last-of-type(2){

text-decoration: underline;

}

section {

border: 1px solid black;

margin: auto; padding: 10px;

background-color: #ddd;

}

article {

border: 2px solid black;

margin: auto; padding: 10px;

background-color: #eee;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

4. Selectors First Last of Type:

HTML:

04-selectors-first-last-of-type.html

<!doctype html>

<html>

<head>

<title>CSS3: pseudo classes - first and last of type</title>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link type="text/css" rel="stylesheet" href="stylesheets/04-selectors-first-last-of-type.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<section>

<div>div1</div>

<div>div2</div>

</section>

<section>

<p>p1</p>

<p>p2</p>

</section>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* target any div that is the first child of its parent \*/

div:nth-of-type(1) { color: red; }

div:first-of-type { text-decoration: underline; }

/\* target any paragraph that is the last child of its parent \*/

p:nth-last-of-type(1) { color: green; }

p:last-of-type { text-decoration: underline; }

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

HTML:

04-selectors-first-last-of-type.css

/\* target any div that is the first child of its parent \*/

div:nth-of-type(1) {

color: red;

}

div:first-of-type {

text-decoration: underline;

}

/\* target any paragraph that is the last child of its parent \*/

p:nth-last-of-type(1) {

color: green;

}

p:last-of-type {

text-decoration: underline;

}

section {

border: 1px solid black;

margin: 10px; padding: 10px;

}

code {

display: none;

}

JS:

To see this code look in the first demo in this Unit.

5. Selectors Only Child:

HTML:

05-selectors-only-child.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the only child selector</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link type="text/css" rel="stylesheet" href="stylesheets/05-selectors-only-child.css">

</head>

<body>

<div class="container">

<section>

<p>p1</p>

</section>

<section>

<p>p2</p>

<p>p3</p>

</section>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* target any paragraph that is the only child of its parent \*/

p:only-child { color: red; }

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

05-selectors-only-child.css

/\* target any paragraph that is the only child of its parent \*/

p:only-child {

color: red;

}

section {

border: 1px solid black;

margin: 10px; padding: 10px;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

6. Selectors Only of Type:

HTML:

06-selectors-only-of-type.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the only of type selector</title>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" href="stylesheets/06-selectors-only-of-type.css">

</head>

<body>

<div class="container">

<section>

<p>p1</p>

</section>

<section>

<p>p2</p>

<p>p3</p>

<div>only div</div>

</section>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* target any div that is the only div-type child of its parent \*/

div:only-of-type { color: red; }

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

06-selectors-only-of-type.css

/\* target any div that is the only div-type child of its parent \*/

div:only-of-type {

color: red;

}

section {

border: 1px solid black;

margin: 10px; padding: 10px;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

7. Selectors Target:

HTML:

07-selectors-target.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the target selector</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/07-selectors-target.css">

</head>

<body>

<div class="container">

<a href="#a">Click to highlight A</a>

<a href="#b">Click to highlight B</a>

<a href="">Reload</a>

<p id="a">This is A. It will change when you click "highlight A" above.</p>

<p id="b">This is B. It will change when you click "highlight B" above.</p>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* select any paragraph that is the target of a link \*/

p:target { color: #eee; background-color: darkred; font-weight:700; }

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

07-selectors-target.css

/\* select any paragraph that is the target of a link \*/

p:target {

color: #eee;

background-color: darkred;

font-weight:700;

}

body {

margin: 10px;

padding: 10px;

}

a {

background-color: black;

color: white;

text-decoration: none;

padding: 10px;

}

p {

padding: 10px;

margin-top: 20px;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

8. Selectors Fragment:

HTML:

08-selectors-fragment.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the fragment selector</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" type="text/css" href="stylesheets/08-selectors-fragment.css">

</head>

<body>

<div class="container">

<p>Select a word or two from this paragraph</p>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* target the portion of the paragraph that is selected by the user \*/

p::selection { background-color: black; color: red; }

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

08-selectors-fragment.css

/\* target the portion of the paragraph that is selected by the user \*/

p::selection {

background-color:

black; color: red;

}

code{

display: none;

}

9. Selectors Element States:

HTML:

09-selectors-element-states.html

<!doctype html>

<html>

<head>

<title>CSS3: pseudo classes - element states</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" href="stylesheets/09-selectors-element-states.css">

</head>

<body>

<div class="container">

<form class="form-group">

<input class="form-control" type="text" placeholder="enter your first name" />

<input class="form-control" type="text" placeholder="middle name" disabled />

<input class="form-control" type="text" placeholder="enter your last name" />

</form>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* select any text input that is enabled \*/

input[type="text"]:enabled { font-weight: bold; color: blue; }

/\* select any text input that is disabled \*/

input[type="text"]:disabled { font-style: italic; }

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

09-selectors-element-states.css

/\* select any text input that is enabled \*/

input[type="text"]:enabled {

font-weight: bold;

color: blue;

}

/\* select any text input that is disabled \*/

input[type="text"]:disabled {

font-style: italic;

}

code {

display: none;

}

JS:

To see this code look in the first demo in this Unit.

10. Selectors Negation:

HTML:

10-selectors-negation.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the not selector</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" type="text/css" href="stylesheets/10-selectors-negation.css">

</head>

<body>

<div class="container">

<p class="styleMe">styled paragraph one - because class != 'styleMeNot'</p>

<p class="styleMe">styled paragraph two - because class != 'styleMeNot'</p>

<p class="styleMeNot">unstyled paragraph - because class = = 'styleMeNot'</p>

<p class="styleMe">styled paragraph three - because class != 'styleMeNot'</p>

<aside>

<pre id="styleCodeBlock" class="prettyprint"> </pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* target any paragraph whose class attribute is not set to styleMeNot \*/

p:not(.styleMeNot) { color: red; }

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

10-selectors-negation.css

/\* target any paragraph whose class attribute is not set to styleMeNot \*/

p:not(.styleMeNot) {

color: red;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

11. Selectors Negation:

HTML:

11-selectors-general-sibling.html

<!doctype html>

<html>

<head>

<title>CSS3: structural pseudo classes - the general sibling selector</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" type="text/css" href="stylesheets/11-selectors-general-sibling.css">

</head>

<body>

<div class="container">

<div>a div element</div>

<p>styled paragraph</p>

<section>

<p>unstyled paragraph, not preceded by a div in the parent section</p>

<div>this is a div but it appears after the p, not before it</div>

</section>

<p>styled paragraph</p>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* target any paragraph that is preceded by a div anywhere in the same parent \*/

div ~ p { color: red; }

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

11-selectors-general-sibling.css

/\* target any paragraph that is preceded by a div anywhere in the same parent \*/

div ~ p {

color: red;

}

section {

border: 1px solid black;

margin: 10px; padding: 10px;

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

12. Media Queries Orientation:

HTML:

12-media-queries-orientation.html

<!doctype html>

<html>

<head>

<title>CSS3: media queries - orientation</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/12-media-queries-orientation.css">

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

</head>

<script type="text/javascript" src="../../bower\_components/jquery/dist/jquery.min.js"></script>

<body>

<div class="container">

<h1 id="mobile">mobile mode</h1>

<h1 id="portrait">portrait mode</h1>

<h1 id="landscape">landscape mode</h1>

<p>Resize your browser or reorient your device to see the effect of the media query applied to this page.</p>

<aside>

<pre id="styleCodeBlock">

</pre>

<button class="btn btn-success" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* styles for portrait mode \*/

@media screen and (orientation: portrait) {

#landscape {

display: none;

}

#mobile {

display: none;

}

}

/\* styles for landscape mode \*/

@media screen and (orientation: landscape) {

#portrait {

display: none;

}

#mobile {

display: none;

}

}

/\* mobile views \*/

@media screen and (max-width: 480px) {

#portrait {

display: none;

}

#landscape {

display: none;

}

#mobile{

display: block;

}

}

</code>

</div>

<script ipt type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

12-media-queries-orientation.css

/\* styles for portrait mode \*/

@media screen and (orientation: portrait) {

#landscape {

display: none;

}

#mobile {

display: none;

}

}

/\* styles for landscape mode \*/

@media screen and (orientation: landscape) {

#portrait {

display: none;

}

#mobile {

display: none;

}

}

/\* mobile views \*/

@media screen and (max-width: 480px) {

#portrait {

display: none;

}

#landscape {

display: none;

}

#mobile{

display: block;

}

}

code{

display:none;

}

JS:

To see this code look in the first demo in this Unit.

13. Media Queries Viewport Dimensions:

HTML:

13-media-queries-viewport-dimensions.html

<!doctype html>

<html>

<head>

<title>CSS3: media queries - viewport dimensions</title>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/13-media-queries-viewport-dimensions.css">

</head>

<body>

<div class="container">

<table class="table" width="400" border="0" cellspacing="0" cellpadding="0">

<tr>

<td><p id="shortnarrow">narrow and short</p></td>

<td><p id="shortwide">wide and short</p></td>

</tr>

<tr>

<td><p id="tallnarrow">narrow and tall</p></td>

<td><p id="tallwide">wide and tall</p></td>

</tr>

<tr>

<td colspan="2"><p>Resize your browser (both width and height) to see the effect of the media query applied to this page.</p></td>

</tr>

</table>

<aside>

<pre id="styleCodeBlock" class="prettyprint">

</pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

/\* short and narrow \*/

@media screen and (max-height: 500px) and (max-width: 500px) {

#shortnarrow{ color:red; font-weight:900; background-color:#eee; }

}

/\* short and wide \*/

@media screen and (max-height: 500px) and (min-width: 500px) {

#shortwide{ color:red; font-weight:900; background-color:#eee; }

}

/\* tall and narrow \*/

@media screen and (min-height: 500px) and (max-width: 500px) {

#tallnarrow{ color:red; font-weight:900; background-color:#eee; }

}

/\* tall and wide\*/

@media screen and (min-height: 500px) and (min-width: 500px) {

#tallwide{ color:red; font-weight:900; background-color:#eee; }

}

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

12-media-queries-viewport-dimensions.html

@media screen and (max-height: 500px) and (max-width: 500px) {

#shortnarrow{

color:red;

font-weight:900;

background-color:#eee;

}

}

/\* short and wide \*/

@media screen and (max-height: 500px) and (min-width: 500px) {

#shortwide{

color:red;

font-weight:900;

background-color:#eee;

}

}

/\* tall and narrow \*/

@media screen and (min-height: 500px) and (max-width: 500px) {

#tallnarrow{

color:red;

font-weight:900;

background-color:#eee;

}

}

/\* tall and wide\*/

@media screen and (min-height: 500px) and (min-width: 500px) {

#tallwide{

color:red;

font-weight:900;

background-color:#eee;

}

}

code{

display: none;

}

JS:

To see this code look in the first demo in this Unit.

14. Media Queries IE Only:

HTML:

14-media-queries-ie-only.html

<!doctype html>

<html>

<head>

<title>CSS3: media queries - supporting older versions of Internet Explorer</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<p>This text will only be red when viewed in Internet Explorer versions lower than 9</p>

</div>

</body>

</html>

15. Linear Gradien Keywords:

HTML:

15-linear-gradient-keywords.html

<!doctype html>

<html>

<head>

<title>Gradient Angle Calculator Using Keywords</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/15-linear-gradient-keywords.css">

</head>

<body>

<div class="container">

<span id="frameContainer">

<table>

<tr>

<td><input id="tl" name="directionKeyword" type="radio" value="tl"></td>

<td align="center"><input id="top" name="directionKeyword" type="radio" value="top"></td>

<td><input id="tr" name="directionKeyword" type="radio" value="tr"></td>

</tr>

<tr>

<td><input id="left" name="directionKeyword" type="radio" value="left"></td>

<td><canvas id="canvas" width="250" height="250">No canvas support</canvas></td>

<td><input id="right" name="directionKeyword" type="radio" value="right"></td>

</tr>

<tr>

<td><input id="bl" name="directionKeyword" type="radio" value="bl"></td>

<td align="center"><input id="bottom" name="directionKeyword" type="radio" value="bottom"></td>

<td><input id="br" name="directionKeyword" type="radio" value="br"></td>

</tr>

</table>

<code>

<output id="styleCodeSnippet"></output>

</code>

</span>

<br>

<div id="div\_r">

<p>right</p>

</div>

<div id="div\_tr">

<p>top right</p>

</div>

<div id="div\_t">

<p>top</p>

</div>

<div id="div\_tl">

<p>top left</p>

</div>

<br>

<div id="div\_l">

<p>left</p>

</div>

<div id="div\_bl">

<p>bottom left</p>

</div>

<div id="div\_b">

<p>bottom</p>

</div>

<div id="div\_br">

<p>bottom right</p>

</div>

</div>

</body>

<script type="text/javascript" src="scripts/15-linear-gradient-keywords.js"></script>

</html>

CSS:

15-linear-gradient-keywords.css

/\*div {

width: 100px;

height: 100px;

}\*/

div[id^="div"]{

display: inline-block;

margin: 5px;

width: 100px;

height: 100px;

margin-left: auto;

margin-right: auto;

}

p {

font-size: 1em;

color: white;

padding: 10px

}

#frameContainer {

width: 600px;

height:600px;

padding: 10px;

}

#frame {

width: 600px;

height:600px;

border: none;

}

#divsContainer {

width: 455px;

height: 225px;

border: 5px solid black;

padding: 7px;

}

output {

width: 200px;

}

#div\_r {

background-colosr: red;

background-image: -webkit-linear-gradient(right, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(right, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(right, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(right, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to right, red, blue);

}

#div\_tr {

background-color: red;

background-image: -webkit-linear-gradient(top right, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(top right, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(top right, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(top right, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to top right, red, blue);

}

#div\_t {

background-color: red;

background-image: -webkit-linear-gradient(top, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(top, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(top, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(top, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to top, red, blue);

}

#div\_tl {

background-color: red;

background-image: -webkit-linear-gradient(top left, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(top left, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(top left, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(top left, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to top left, red, blue);

}

#div\_l {

background-color: red;

background-image: -webkit-linear-gradient(left, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(left, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(left, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(left, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to left, red, blue);

}

#div\_bl {

background-color: red;

background-image: -webkit-linear-gradient(bottom left, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(bottom left, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(bottom left, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(bottom left, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to bottom left, red, blue);

}

#div\_b {

background-color: red;

background-image: -webkit-linear-gradient(bottom, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(bottom, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(bottom, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(bottom, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to bottom, red, blue);

}

#div\_br {

background-color: red;

background-image: -webkit-linear-gradient(bottom right, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(bottom right, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(bottom right, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(bottom right, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to bottom right, red, blue);

}

JS:

15-linear-gradient-keywords.js

var canvas = document.getElementById("canvas");

var context = document.getElementById('canvas').getContext("2d");

var canvas\_w = canvas.width;

var canvas\_h = canvas.height;

var center\_point = {x:canvas\_w/2, y:canvas\_h/2}; // center of canvas

var end\_point = {x:0, y:0};

var gradient\_direction = '';

var ua\_prefix = '';

onload = doload;

function doload() {

drawCenterPoint(center\_point);

document.getElementById('tl').addEventListener("click", handleRadioClick);

document.getElementById('top').addEventListener("click", handleRadioClick);

document.getElementById('tr').addEventListener("click", handleRadioClick);

document.getElementById('left').addEventListener("click", handleRadioClick);

document.getElementById('right').addEventListener("click", handleRadioClick);

document.getElementById('br').addEventListener("click", handleRadioClick);

document.getElementById('bottom').addEventListener("click", handleRadioClick);

document.getElementById('bl').addEventListener("click", handleRadioClick);

if (navigator.userAgent.indexOf('WebKit') != -1) {

ua\_prefix = '-webkit-';

} else if (navigator.userAgent.indexOf('Opera') != -1) {

ua\_prefix = '-o-';

} else if (navigator.userAgent.indexOf('Firefox') != -1) {

ua\_prefix = '-moz-';

} else if (navigator.userAgent.indexOf('MSIE') != -1) {

ua\_prefix = '-ms-';

}

}

function handleRadioClick(\_event) {

context.clearRect (0, 0, canvas\_w, canvas\_h);

switch (\_event.target.id) {

case 'tl' :

end\_point = {x:0, y:0};

gradient\_direction = 'top left';

break;

case 'top' :

end\_point = {x:canvas\_w/2, y:0};

gradient\_direction = 'top';

break;

case 'tr' :

end\_point = {x:canvas\_w, y:0};

gradient\_direction = 'top right';

break;

case 'left' :

end\_point = {x:0, y:canvas\_h/2};

gradient\_direction = 'left';

break;

case 'right' :

end\_point = {x:canvas\_w, y:canvas\_h/2};

gradient\_direction = 'right';

break;

case 'bl' :

end\_point = {x:0, y:canvas\_h};

gradient\_direction = 'bottom left';

break;

case 'bottom' :

end\_point = {x:canvas\_w/2, y:canvas\_h};

gradient\_direction = 'bottom';

break;

case 'br' :

end\_point = {x:canvas\_w, y:canvas\_h};

gradient\_direction = 'bottom right';

break;

}

drawArrow();

var style\_value = 'background: ' + ua\_prefix + 'linear-gradient(' + gradient\_direction + ', red, blue );';

var style\_value\_display = 'background: ' + ua\_prefix + 'linear-gradient(<span id="gradDirection">' + gradient\_direction + '</span>, red, blue );';

document.getElementById("canvas").setAttribute('style', style\_value);

document.getElementById("styleCodeSnippet").innerHTML = "#canvas {<br>&nbsp;&nbsp;&nbsp;" + style\_value\_display + "<br>}";

}

// draws a circle at middle of the canvas

function drawCenterPoint() {

context.beginPath();

context.strokeStyle = "#000000";

context.arc(center\_point.x, center\_point.y, 5, 0, Math.PI\*2, true);

context.closePath();

context.fill();

}

function drawArrow() {

drawCenterPoint();

context.moveTo(center\_point.x, center\_point.y);

context.lineTo(end\_point.x, end\_point.y);

context.strokeStyle = "#000000";

context.stroke();

}

16. Linear Gradient Degrees:

HTML:

16-linear-gradient-degrees.html

<!doctype html>

<html>

<head>

<title>Gradient Angle Calculator Using Degrees</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/16-linear-gradient-degrees.css">

</head>

<body>

<span class="container">

<div id="frameContainer">

<canvas id="canvas" width="250" height="250">Your browser doesn't support &lt;canvas&gt;</canvas><br>

<code>

<output id="styleCodeSnippet"></output>

</code>

</div>

<br>

<table>

<tr>

<div id="div0"> <p>0/360 deg</p> </div>

<div id="div45"> <p>45 deg</p> </div>

<div id="div90"> <p>90 deg</p> </div>

<div id="div135"> <p>135 deg</p> </div> <br>

<div id="div180"> <p>180 deg</p> </div>

<div id="div225"> <p>225 deg</p> </div>

<div id="div270"> <p>270 deg</p> </div>

<div id="div315"> <p>315 deg</p> </div>

</tr>

</table>

<p id="website">demo <a href="<http://www.html5canvastutorials.com/tutorials/html5-canvas-arcs/>" target="\_blank">here</a>

</p>

</span>

<script type="text/javascript" src="scripts/16-linear-gradient-degrees.js"></script>

</body>

</body>

</html>

CSS:

16-linear-gradient-degrees.css

div{

width: 100px;

height: 100px;

}

div[id^="div"]{

display: inline-block;

margin: 5px;

}

p {

font-size: 1em;

color: white;

padding: 10px

}

#frameContainer {

width: 600px;

height:600px;

padding: 10px

}

#frame {

width: 600px;

height:600px;

border: none;

}

#divsContainer {

width: 455px;

height: 225px;

border: 5px solid black;

padding: 7px;

}

#div0 {

background-color: red;

background-image: -webkit-linear-gradient(0deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(0deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(0deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(0deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to right, red, blue);

}

#div45 {

background-color: red;

background-image: -webkit-linear-gradient(45deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(45deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(45deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(45deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to top right, red, blue);

}

#div90 {

background-color: red;

background-image: -webkit-linear-gradient(90deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(90deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(90deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(90deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to top, red, blue);

}

#div135 {

background-color: red;

background-image: -webkit-linear-gradient(135deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(135deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(135deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(135deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to top left, red, blue);

}

#div180 {

background-color: red;

background-image: -webkit-linear-gradient(180deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(180deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(180deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(180deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to left, red, blue);

}

#div225 {

background-color: red;

background-image: -webkit-linear-gradient(225deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(225deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(225deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(225deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to bottom left, red, blue);

}

#div270 {

background-color: red;

background-image: -webkit-linear-gradient(270deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(270deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(270deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(270deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to bottom, red, blue);

}

#div315 {

background-color: red;

background-image: -webkit-linear-gradient(315deg, red, blue); /\* Chrome 10+, Saf5.1+, iOS 5+ \*/

background-image: -moz-linear-gradient(315deg, red, blue); /\* FF3.6 \*/

background-image: -ms-linear-gradient(315deg, red, blue); /\* IE10 \*/

background-image: -o-linear-gradient(315deg, red, blue); /\* Opera 11.10+ \*/

background-image: linear-gradient(to bottom right, red, blue);

}

#website {

color: black;

}

JS:

16-linear-gradient-degrees.js

var canvas = document.getElementById("canvas");

var context = document.getElementById('canvas').getContext("2d");

var canvas\_x = canvas.offsetLeft;

var canvas\_y = canvas.offsetTop;

var canvas\_w = canvas.width;

var canvas\_h = canvas.height;

var origin = {x:canvas\_w/2, y:canvas\_h/2};

var ua\_prefix = '';

// draw the quadrants on load

onload = doload;

// update on mouse movement

canvas.onmousemove = onMouseMove;

// draws a small circle at the center of the canvas

function drawCenterPoint(origin){

context.beginPath();

context.strokeStyle = "#000000";

context.arc(origin.x, origin.y, 5, 0, Math.PI\*2, true);

context.closePath();

context.fill();

}

function onMouseMove(\_event){

// reset the canvas

canvas.width = canvas.width;

var mouse\_x = \_event.clientX;

var mouse\_y = \_event.clientY;

var origin\_x = origin.x;

var origin\_y = origin.y;

var cartesian\_angle = -(angleOfLine(origin\_x, origin\_y, mouse\_x, mouse\_y));

var display\_angle = Math.round(cartesian\_angle < 0 ? cartesian\_angle + 360 : cartesian\_angle);

var style\_value = 'background: ' + ua\_prefix + 'linear-gradient(' + display\_angle + 'deg, red, blue ); ';

style\_value += 'background: linear-gradient(' + display\_angle + 'deg, red, blue );';

var style\_value\_display = 'background: ' + ua\_prefix + 'linear-gradient(<span id="displayAngle">' + display\_angle + 'deg</span>, red, blue ); <br>&nbsp;&nbsp;&nbsp;';

style\_value\_display += 'background: linear-gradient(<span id="displayAngle">' + display\_angle + 'deg</span>, red, blue );';

// redraw the x and y axes

drawCenterPoint(origin);

// draw angled line from origin

context.moveTo(origin.x, origin.y);

context.lineTo(mouse\_x, mouse\_y);

context.strokeStyle = "#000000";

context.stroke();

// draw angle arc

context.beginPath();

context.strokeStyle = "#FF00FF";

context.arc(origin.x, origin.y, 75, degreesToRadians(360-display\_angle), 0, false);

context.stroke();

document.getElementById("canvas").setAttribute('style', style\_value);

document.getElementById("styleCodeSnippet").innerHTML = "#canvas {<br>&nbsp;&nbsp;&nbsp;" + style\_value\_display + "<br>}";

};

// returns an angle in degrees for a single point

function atan2Degrees(y, x){

return Math.atan2(y, x) \* (180/Math.PI);

}

// returns an angle in degrees given 2 points

function angleOfLine(x1, y1, x2, y2){

return atan2Degrees(y2 - y1, x2 - x1);

}

// do UA sniffing

function doload() {

drawCenterPoint(origin);

if (navigator.userAgent.indexOf('WebKit') != -1) {

ua\_prefix = '-webkit-';

} else if (navigator.userAgent.indexOf('Opera') != -1) {

ua\_prefix = '-o-';

} else if (navigator.userAgent.indexOf('Firefox') != -1) {

ua\_prefix = '-moz-';

} else if (navigator.userAgent.indexOf('MSIE') != -1) {

ua\_prefix = '-ms-';

}

}

//

function degreesToRadians(degrees) {

return (Math.PI/180)\*degrees;

}

17. Radial Gradient:

HTML:

17-radial-gradient.html

<!doctype html>

<html>

<head>

<title>Radial Gradient</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/17-radial-gradient.css">

</head>

<body>

<div class="container">

<br>

<h1>Radial Gradient</h1>

<canvas id="canvas" width="250" height="250">Your browser doesn't support &lt;canvas&gt;</canvas><br>

<output id="styleCodeSnippet"></output>

<script type="text/javascript" src="scripts/17-radial-gradient.js"></script>

</div>

</body>

</html>

CSS:

17-radial-gradient.css

html, body {

margin:0;

padding:0;

}

#canvas {

background: -webkit-radial-gradient(circle, red, yellow, green);

}

JS:

17-radial-gradient.js

var canvas = document.getElementById("canvas");

var context = document.getElementById('canvas').getContext("2d");

var canvas\_x = canvas.offsetLeft;

var canvas\_y = canvas.offsetTop;

var canvas\_w = canvas.width;

var canvas\_h = canvas.height;

var origin = {x:canvas\_w/2, y:canvas\_h/2};

var ua\_prefix = '';

function onMouseMove(\_event){

document.getElementById("canvas").setAttribute('style', style\_value);

document.getElementById("styleCodeSnippet").innerHTML = "#canvas {<br>&nbsp;&nbsp;&nbsp;" + style\_value\_display + "<br>}";

}

//

function doload() {

if (navigator.userAgent.indexOf('WebKit') != -1) {

ua\_prefix = '-webkit-';

} else if (navigator.userAgent.indexOf('Opera') != -1) {

ua\_prefix = '-o-';

} else if (navigator.userAgent.indexOf('Firefox') != -1) {

ua\_prefix = '-moz-';

}

}

18. 2D Transforms

HTML:

18-2DTransforms.html

<!doctype html>

<html>

<head>

<title>CSS3 Transforms</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link type="text/css" rel="stylesheet" href="stylesheets/displayStyleBlock.css">

<link rel="stylesheet" type="text/css" href="stylesheets/18-2DTransforms.css">

</head>

<body>

<span class="container">

<aside id="styleRule">

<code id="code-top">

<pre>

transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

transform-origin: 0% 0%;

</pre>

</code>

</aside>

<form>

<button class="btn btn-danger" id="resetBtn">Reset</button>

<hr>

<table class="table" id="t1" border="1" cellspacing="0" cellpadding="5">

<tr>

<td><label for="originX">Origin X</label></td>

<td class="min">0</td>

<td><input id="originX" type="range" min="0" max="100" value="0" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="originXO">0</output></td>

</tr>

<tr>

<td><label for="originY">Origin Y</label></td>

<td class="min">0</td>

<td><input id="originY" type="range" min="0" max="100" value="0" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="originYO">0</output></td>

</tr>

<tr>

<td><label for="skewDegrees">Skew Degrees</label></td>

<td class="min">-45</td>

<td><input id="skewDegrees" type="range" min="-45" max="45" value="0" step="15"></td>

<td class="max">45</td>

<td class="currVal" width="30"><output id="skewDegreesO">0</output></td>

</tr>

<tr>

<td><label for="rotateDegrees">Rotate Degrees</label></td>

<td class="min">-360</td>

<td><input id="rotateDegrees" type="range" min="-360" max="360" value="0" step="15"></td>

<td class="max">360</td>

<td class="currVal"><output id="rotateDegreesO">0</output></td>

</tr>

</table>

<table class="table" id="t2" border="1" cellspacing="0" cellpadding="5">

<tr>

<td><label for="scaleX">ScaleX</label></td>

<td class="min">.5</td>

<td><input id="scaleX" type="range" min=".5" max="2" value="1" step=".5"></td>

<td class="max">2</td>

<td class="currVal" width="30"><output id="scaleXO">1</output></td>

</tr>

<tr>

<td><label for="scaleY">ScaleY</label></td>

<td class="min">.5</td>

<td><input id="scaleY" type="range" min=".5" max="2" value="1" step=".5"></td>

<td class="max">2</td>

<td class="currVal"><output id="scaleYO">1</output></td>

</tr>

<tr>

<td><label for="translateX">TranslateX</label></td>

<td class="min">0</td>

<td><input id="translateX" type="range" min="0" max="200" value="0" step="10"></td>

<td class="max">200</td>

<td class="currVal"><output id="translateXO">0</output></td>

</tr>

<tr>

<td><label for="translateY">TranslateY</label></td>

<td class="min">0</td>

<td><input id="translateY" type="range" min="0" max="200" value="0" step="10"></td>

<td class="max">200</td>

<td class="currVal"><output id="translateYO">0</output></td>

</tr>

</table>

<hr>

</form>

<div id="original">the<br>original<br>element</div>

<div id="transformed">experiment with the controls above to transform this</div>

<aside>

<pre id="styleCodeBlock">

</pre>

<button class="btn btn-success" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</span>

<code id="styleBlock">

#transformed, #original {

transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-webkit-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-moz-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-o-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-ms-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

transform-origin: 0% 0%;

-webkit-transform-origin: 0% 0%;

-moz-transform-origin: 0% 0%;

-o-transform-origin: 0% 0%;

-ms-transform-origin: 0% 0%;

}

</code>

<script type="text/javascript" src="scripts/18-2DTransforms.js"></script>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

18-2DTransforms.css

body {

margin: 10px;

padding: 10px;

}

#t1 {

float: left;

}

.min, .max {

color: #33F;

}

.min {

text-align:right;

}

.currVal, .min, .max {

text-align:center;

}

label {

font-family: Verdana, Geneva, sans-serif;

}

output {

font-weight:700;

color: #F00;

width:50px;

}

#code-top {

color: red;

font: 1.5em sans-serif;

}

div {

position:absolute;

width: 250px;

padding: 20px;

margin:auto;

margin-top: 50px;

border:solid thick blue;

font-size: 2em;

background-color: #eee;

color: blue;

text-align:center;

}

#original {

opacity:0.4;

}

#styleBlock{

display: none;

}

#transformed, #original {

transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-webkit-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-moz-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-o-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

-ms-transform: skew(0deg) scale(1, 1) rotate(0deg) translate(0px, 0px);

transform-origin: 0% 0%;

-webkit-transform-origin: 0% 0%;

-moz-transform-origin: 0% 0%;

-o-transform-origin: 0% 0%;

-ms-transform-origin: 0% 0%;

}

JS:

18-2DTransforms.js

window.addEventListener('load', function () {

document.getElementById('skewDegrees').addEventListener('change', updateDivStyles);

document.getElementById('scaleX').addEventListener('change', updateDivStyles);

document.getElementById('scaleY').addEventListener('change', updateDivStyles);

document.getElementById('rotateDegrees').addEventListener('change', updateDivStyles);

document.getElementById('translateX').addEventListener('change', updateDivStyles);

document.getElementById('translateY').addEventListener('change', updateDivStyles);

document.getElementById('originX').addEventListener('change', updateDivStyles);

document.getElementById('originY').addEventListener('change', updateDivStyles);

document.getElementById('resetBtn').addEventListener('click', doReset);

});

function updateDivStyles(event) {

var prefixW = '-webkit-';

var prefixM = '-moz-';

var prefixO = '-o-';

var prefixI = '-ms-';

var targetOutput = event.target.id+'O';

var targetValue = document.getElementById(event.target.id).value;

var skewDegrees = document.getElementById('skewDegrees').value;

var scaleX = document.getElementById('scaleX').value;

var scaleY = document.getElementById('scaleY').value;

var rotateDegrees = document.getElementById('rotateDegrees').value;

var translateX = document.getElementById('translateX').value;

var translateY = document.getElementById('translateY').value;

var originX = document.getElementById('originX').value;

var originY = document.getElementById('originY').value;

var transformStyleValue = 'skew(' + skewDegrees + 'deg) ';

transformStyleValue += 'scale(' + scaleX + ', ' + scaleY + ') ';

transformStyleValue += 'rotate(' + rotateDegrees + 'deg) ';

transformStyleValue += 'translate(' + translateX + 'px, ' + translateY + 'px)';

var baseTransformRule = 'transform: ' + transformStyleValue + '; ';

var webkitTransformRule = prefixW + 'transform: ' + transformStyleValue + '; ';

var mozTransformRule = prefixM + 'transform: ' + transformStyleValue + '; ';

var operaTransformRule = prefixO + 'transform: ' + transformStyleValue + '; ';

var ieTransformRule = prefixI + 'transform: ' + transformStyleValue + '; ';

var transformStyleRuleToApply = baseTransformRule + webkitTransformRule + mozTransformRule + operaTransformRule + ieTransformRule;

var transformOriginStyleValue = originX + '% ' + originY + '%';

var baseTransformOriginRule = 'transform-origin: ' + transformOriginStyleValue + '; ';

var webkitTransformOriginRule = prefixW + 'transform-origin: ' + transformOriginStyleValue + '; ';

var mozTransformOriginRule = prefixM + 'transform-origin: ' + transformOriginStyleValue + '; ';

var operaTransformOriginRule = prefixO + 'transform-origin: ' + transformOriginStyleValue + '; ';

var ieTransformOriginRule = prefixI + 'transform-origin: ' + transformOriginStyleValue + '; ';

var transformOriginStyleRuleToApply = baseTransformOriginRule + webkitTransformOriginRule + mozTransformOriginRule + operaTransformOriginRule + ieTransformOriginRule;

var styleRuleToDisplay = '<code><pre>' + baseTransformRule + '<br>' + baseTransformOriginRule + '</pre></code>';

var styleRuleToApply = transformStyleRuleToApply + transformOriginStyleRuleToApply;

document.getElementById(targetOutput).innerHTML = targetValue;

document.getElementById('styleRule').innerHTML = styleRuleToDisplay;

document.getElementById('transformed').setAttribute('style', styleRuleToApply);

}

function doReset() {

document.getElementById('skewDegrees').value = 0;

document.getElementById('scaleX').value = 0;

document.getElementById('scaleY').value = 0;

document.getElementById('rotateDegrees').value = 0;

document.getElementById('translateX').value = 0;

document.getElementById('translateY').value = 0;

document.getElementById('originX').value = 0;

document.getElementById('originY').value = 0;

}

19. 3D Transforms Perspective

HTML:

19-3DTransforms-Perspective.html

<!doctype html>

<html>

<head>

<title>CSS3 3D Transforms - Perspective</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" href="stylesheets/19-3DTransforms-Perspective.css">

</head>

<body>

<div id="parentBox">

Perspective

<form>

100 <input id="perspective" type="range" min="100" max="900" value="500" step="25"> 900<br>

<output id="perspectiveOD">[not applied]</output><br>

<button id="reset">reset</button>

</form>

<div id="childBox">

rotateX(<output id="rotateXO">15</output>deg);<br>

rotateY(<output id="rotateYO">15</output>deg);<br>

rotateZ(<output id="rotateZO">15</output>deg);

</div>

</div>

<script src="scripts/19-3DTransforms-Perspective.js"></script>

</body>

</html>

CSS:

19-3DTransforms-Perspective.css

div {

width: 350px;

padding: 20px;

font-size: 1.5em;

text-align:center;

margin-left: auto;

margin-right: auto;

}

#parentBox {

border:dashed thin black;

background-color: white;

/\* withough perspective, 3d is meaningless

-webkit-perspective: 500px; \*/

}

#childBox {

border:solid thick blue;

background-color:lightblue;

margin-top: 50px;

-webkit-transform: rotateX(15deg) rotateY(15deg) rotateZ(15deg);

}

JS:

19-3DTransforms-Perspective.js

window.addEventListener('load', function () {

document.getElementById('perspective').addEventListener('change', updateParentPerspective);

document.getElementById('reset').addEventListener('change', doReset);

});

function updateParentPerspective() {

var targetValue = document.getElementById('perspective').value;

document.getElementById('perspectiveOD').innerHTML = targetValue;

document.getElementById(event.target.id+'OD').innerHTML = targetValue;

document.getElementById('parentBox').style['webkitPerspective']=targetValue+'px';

}

function doReset() {

document.getElementById('parentBox').style['webkitPerspective']='';

}

20. 3D Transforms Skew

HTML:

20-3DTransforms-Skew.html

<!doctype html>

<html>

<head>

<title>CSS3 3D Transforms - Skew</title>

<link rel="stylesheet" type="text/css" href="stylesheets/3D-stylesheet.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/20-3DTransforms-Skew.css"/>

</head>

<body>

<form>

<table class="table" border="1" cellspacing="0" cellpadding="5">

<tr>

<th>property</th>

<th>min</th>

<th>change it here</th>

<th>max</th>

<th>current</th>

</tr>

<tr>

<td><label for="perspective">perspective</label></td>

<td class="min">100</td>

<td><input id="perspective" type="range" min="100" max="900" value="500" step="25"></td>

<td class="max">900</td>

<td class="currVal"><output id="perspectiveOT">500</output></td>

</tr>

<tr>

<td><label for="transformOriginX">transform origin X</label></td>

<td class="min">0</td>

<td><input id="transformOriginX" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginXOT">50%</output></td>

</tr>

<tr>

<td><label for="transformOriginY">transform origin Y</label></td>

<td class="min">0</td>

<td><input id="transformOriginY" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginYOT">50%</output></td>

</tr>

<tr>

<td><label for="skewX">skewX</label></td>

<td class="min">-30</td>

<td><input id="skewX" type="range" min="-30" max="30" value="5" step="5"></td>

<td class="max">30</td>

<td class="currVal" bgcolor="orange"><output id="skewXOT">5deg</output></td>

</tr>

<tr>

<td><label for="skewY">skewY</label></td>

<td class="min">-30</td>

<td><input id="skewY" type="range" min="-30" max="30" value="5" step="5"></td>

<td class="max">30</td>

<td class="currVal" bgcolor="yellow"><output id="skewYOT">5deg</output></td>

</tr>

<tr>

<td colspan="4"></td>

<td><button class="btn btn-default" id="resetBtn">Reset</button></td>

</tr>

</table>

</form>

<h4>Perspective: </h4><output id="perspectiveOD">500</output>

<div id="childBox">

skewX(<output id="skewXO">5deg</output>);<br>

skewY(<output id="skewYO">5deg</output>);

</div>

<script type="text/javascript" src="scripts/20-3DTransforms-Skew.js"></script>

</body>

</html>

CSS:

20-3DTransforms-Skew.css

#skewXO {

background-color: orange;

margin-left: auto;

margin-right: auto;

}

#skewYO {

background-color: yellow;

margin-left: auto;

margin-right: auto;

}

#childBox {

-webkit-transform: skew(5deg, 5deg);

}

JS:

20-3DTransforms-Skew.js

window.addEventListener('load', function () {

document.getElementById('resetBtn').addEventListener('click', doReset);

document.getElementById('perspective').addEventListener('change', updateParentPerspective);

document.getElementById('skewX').addEventListener('change', updateChildSkew);

document.getElementById('skewY').addEventListener('change', updateChildSkew);

document.getElementById('transformOriginX').addEventListener('change', updateChildTransformOrigin);

document.getElementById('transformOriginY').addEventListener('change', updateChildTransformOrigin);

});

function updateParentPerspective(event) {

var targetValue = document.getElementById(event.target.id).value;

document.getElementById(event.target.id+'OT').innerHTML = targetValue;

document.getElementById(event.target.id+'OD').innerHTML = targetValue;

document.getElementById('parentBox').style['webkitPerspective']=targetValue+'px';

}

function updateChildTransformOrigin(event) {

var xOutputT = document.getElementById('transformOriginXOT');

var yOutputT = document.getElementById('transformOriginYOT');

var xValue = document.getElementById('transformOriginX').value+'%';

var yValue = document.getElementById('transformOriginY').value+'%';

xOutputT.innerHTML = xValue;

yOutputT.innerHTML = yValue;

document.getElementById('childBox').style['webkitTransformOriginX'] = xValue;

document.getElementById('childBox').style['webkitTransformOriginY'] = yValue;

}

function updateChildSkew(event) {

if (event.target.type == 'range') {

var xOutput = document.getElementById('skewXO');

var xOutputT = document.getElementById('skewXOT');

var yOutput = document.getElementById('skewYO');

var yOutputT = document.getElementById('skewYOT');

var xValue = document.getElementById('skewX').value;

var yValue = document.getElementById('skewY').value;

xOutput.innerHTML = xValue;

xOutputT.innerHTML = xValue;

yOutput.innerHTML = yValue;

yOutputT.innerHTML = yValue;

document.getElementById('childBox').style['webkitTransform'] = 'skew(' + xValue + 'deg ,' + yValue + 'deg)';

// document.getElementById('childBox').style['webkitTransform'] = 'skewX(' + xValue + 'deg) skewY(' + yValue + 'deg)';

}

}

function doReset() {

document.getElementById('perspective').value = 500;

document.getElementById('transformOriginX').value = 50;

document.getElementById('transformOriginY').value = 50;

document.getElementById('skewX').value = 10;

document.getElementById('skewY').value = 10;

document.getElementById('preserve3d').value = 1;

}

21.

a. 3D Transforms Rotate

HTML:

21a-3DTransforms-Rotate.html

<!doctype html>

<html>

<head>

<title>CSS3 3D Transforms - Rotate</title>

<link rel="stylesheet" type="text/css" href="stylesheets/3D-stylesheet.css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/21a-3DTransforms-Rotate.css">

</head>

<body>

<span class="container">

<form class="form-group">

<table class="table" border="1" cellspacing="0" cellpadding="5">

<tr>

<th>property</th>

<th>min</th>

<th>change it here</th>

<th>max</th>

<th>current</th>

</tr>

<tr>

<td><label for="perspective">perspective</label></td>

<td class="min">100</td>

<td><input id="perspective" type="range" min="100" max="900" value="500" step="25"></td>

<td class="max">900</td>

<td class="currVal"><output id="perspectiveOT">500</output></td>

</tr>

<tr>

<td><label for="transformOriginX">transform origin X</label></td>

<td class="min">0</td>

<td><input id="transformOriginX" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginXOT">50%</output></td>

</tr>

<tr>

<td><label for="transformOriginY">transform origin Y</label></td>

<td class="min">0</td>

<td><input id="transformOriginY" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginYOT">50%</output></td>

</tr>

<tr>

<td><label for="rotateX">rotateX</label></td>

<td class="min">-90</td>

<td><input id="rotateX" type="range" min="-90" max="180" value="10" step="5"></td>

<td class="max">180</td>

<td class="currVal" bgcolor="orange"><output id="rotateXOT">10</output></td>

</tr>

<tr>

<td><label for="rotateY">rotateY</label></td>

<td class="min">-90</td>

<td><input id="rotateY" type="range" min="-90" max="180" value="10" step="5"></td>

<td class="max">180</td>

<td class="currVal" bgcolor="yellow"><output id="rotateYOT">10</output></td>

</tr>

<tr>

<td><label for="rotateZ">rotateZ</label></td>

<td class="min">-90</td>

<td><input id="rotateZ" type="range" min="-90" max="180" value="10" step="5"></td>

<td class="max">180</td>

<td class="currVal" bgcolor="lightgray"><output id="rotateZOT">10</output></td>

</tr>

<tr>

<td><label for="backface">backface visible</label></td>

<td colspan="3"><input id="backface" type="checkbox" value="1" checked></td>

<td class="currVal"><output id="backfaceOT">visible</output></td>

</tr>

<tr>

<td colspan="4"></td>

<td><button class="btn btn-default" id="resetBtn">Reset</button></td>

</tr>

</table>

</form>

<h4>Perspective:</h4>

<output id="perspectiveOD">500</output>

<div id="childBox">

rotateX(<output id="rotateXO">10</output>deg);<br>

rotateY(<output id="rotateYO">10</output>deg);<br>

rotateZ(<output id="rotateZO">10</output>deg);

</div>

</span>

<script type="text/javascript" src="scripts/21a-3DTransforms-Rotate.js"></script>

</body>

</html>

CSS:

21a-3DTransforms-Rotate.css

#rotateXO {

background-color: orange;

margin-left: auto;

margin-right: auto;

}

#rotateYO {

background-color: yellow;

margin-left: auto;

margin-right: auto;

}

#rotateZO {

background-color: lightgray;

margin-left: auto;

margin-right: auto;

}

#childBox {

-webkit-transform: rotateX(10deg) rotateY(10deg) rotateZ(10deg);

}

JS:

21a-3DTransforms-Rotate.js

window.addEventListener('load', function () {

document.getElementById('resetBtn').addEventListener('click', doReset);

document.getElementById('perspective').addEventListener('change', updateParentPerspective);

document.getElementById('rotateX').addEventListener('change', updateChildRotation);

document.getElementById('rotateY').addEventListener('change', updateChildRotation);

document.getElementById('rotateZ').addEventListener('change', updateChildRotation);

document.getElementById('backface').addEventListener('change', updateChildBackface);

document.getElementById('transformOriginX').addEventListener('change', updateChildTransformOrigin);

document.getElementById('transformOriginY').addEventListener('change', updateChildTransformOrigin);

});

function updateParentPerspective(event) {

var targetValue = document.getElementById(event.target.id).value;

document.getElementById(event.target.id+'OT').innerHTML = targetValue;

document.getElementById(event.target.id+'OD').innerHTML = targetValue;

document.getElementById('parentBox').style['webkitPerspective']=targetValue+'px';

}

function updateChildTransformOrigin(event) {

var xOutputT = document.getElementById('transformOriginXOT');

var yOutputT = document.getElementById('transformOriginYOT');

var xValue = document.getElementById('transformOriginX').value+'%';

var yValue = document.getElementById('transformOriginY').value+'%';

xOutputT.innerHTML = xValue;

yOutputT.innerHTML = yValue;

document.getElementById('childBox').style['webkitTransformOriginX'] = xValue;

document.getElementById('childBox').style['webkitTransformOriginY'] = yValue;

}

function updateChildRotation(event) {

if (event.target.type == 'range') {

var xOutput = document.getElementById('rotateXO');

var xOutputT = document.getElementById('rotateXOT');

var yOutput = document.getElementById('rotateYO');

var yOutputT = document.getElementById('rotateYOT');

var zOutput = document.getElementById('rotateZO');

var zOutputT = document.getElementById('rotateZOT');

var xValue = document.getElementById('rotateX').value;

var yValue = document.getElementById('rotateY').value;

var zValue = document.getElementById('rotateZ').value;

xOutput.innerHTML = xValue;

xOutputT.innerHTML = xValue;

yOutput.innerHTML = yValue;

yOutputT.innerHTML = yValue;

zOutput.innerHTML = zValue;

zOutputT.innerHTML = zValue;

document.getElementById('childBox').style['webkitTransform'] = 'rotateX(' + xValue + 'deg) rotateY(' + yValue + 'deg) rotateZ(' + zValue + 'deg)';

}

}

function updateChildBackface(event) {

var visibilityPropertyValue = document.getElementById('backface').checked ? 'visible' : 'hidden';

document.getElementById('backfaceOT').innerHTML = visibilityPropertyValue;

document.getElementById('childBox').style['webkitBackfaceVisibility'] = visibilityPropertyValue;

}

function doReset() {

document.getElementById('perspective').value = 500;

document.getElementById('transformOriginX').value = 50;

document.getElementById('transformOriginY').value = 50;

document.getElementById('rotateX').value = 10;

document.getElementById('rotateY').value = 10;

document.getElementById('rotateZ').value = 10;

document.getElementById('backface').value = 1;

document.getElementById('preserve3d').value = 1;

}

b. 3D Transforms Rotate 3d

HTML:

21b-3DTransforms-Rotate3d.html

<!doctype html>

<html>

<head>

<title>CSS3 3D Transforms - Rotate3D</title>

<link rel="stylesheet" type="text/css" href="stylesheets/3D-stylesheet.css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/21b-3DTransforms-Rotate3d.css">

</head>

<body>

<span class="container">

<form>

<table class="table" border="1" cellspacing="0" cellpadding="5">

<tr>

<th>property</th>

<th>min</th>

<th>change it here</th>

<th>max</th>

<th>current</th>

</tr>

<tr>

<td><label for="perspective">perspective</label></td>

<td class="min">100</td>

<td><input id="perspective" type="range" min="100" max="900" value="500" step="25"></td>

<td class="max">900</td>

<td class="currVal"><output id="perspectiveOT">500</output></td>

</tr>

<tr>

<td><label for="transformOriginX">transform origin X</label></td>

<td class="min">0</td>

<td><input id="transformOriginX" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginXOT">50%</output></td>

</tr>

<tr>

<td><label for="transformOriginY">transform origin Y</label></td>

<td class="min">0</td>

<td><input id="transformOriginY" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginYOT">50%</output></td>

</tr>

<tr>

<td><label for="multiplierX">multiplierX</label></td>

<td class="min">0</td>

<td><input id="multiplierX" type="range" min="0" max="10" value="0" step="1"></td>

<td class="max">1</td>

<td class="currVal" bgcolor="orange"><output id="multiplierXOT">0</output></td>

</tr>

<tr>

<td><label for="multiplierY">multiplierY</label></td>

<td class="min">0</td>

<td><input id="multiplierY" type="range" min="0" max="10" value="0" step="1"></td>

<td class="max">1</td>

<td class="currVal" bgcolor="yellow"><output id="multiplierYOT">0</output></td>

</tr>

<tr>

<td><label for="multiplierZ">multiplierZ</label></td>

<td class="min">0</td>

<td><input id="multiplierZ" type="range" min="0" max="10" value="0" step="1"></td>

<td class="max">1</td>

<td class="currVal" bgcolor="lightgray"><output id="multiplierZOT">0</output></td>

</tr>

<tr>

<td><label for="rotateDeg">rotateDeg</label></td>

<td class="min">-100</td>

<td><input id="rotateDeg" type="range" min="-100" max="100" value="0" step="5"></td>

<td class="max">100</td>

<td class="currVal" bgcolor="darkgray"><output id="rotateDegOT">0</output></td>

</tr>

<tr>

<td><label for="backface">backface visible</label></td>

<td colspan="3"><input id="backface" type="checkbox" value="1" checked></td>

<td class="currVal"><output id="backfaceOT">visible</output></td>

</tr>

<tr>

<td colspan="4"></td>

<td><button id="resetBtn">Reset</button></td>

</tr>

</table>

</form>

<h4>Perspective: <output id="perspectiveOD">500</output></h4>

<div id="childBox">

rotate3d(<output id="multiplierXO">0</output>, <output id="multiplierYO">0</output>, <output id="multiplierZO">0</output>, <output id="rotateDegO">0</output>deg);

</div>

</span>

<script type="text/javascript" src="scripts/21b-3DTransforms-Rotate3d.js"></script>

</body>

</html>

CSS:

21b-3DTransforms-Rotate3d.css

#multiplierXO {

background-color: orange;

margin-left: auto;

margin-right: auto;

}

#multiplierYO {

background-color: yellow;

margin-left: auto;

margin-right: auto;

}

#multiplierZO {

background-color: lightgray;

margin-left: auto;

margin-right: auto;

}

#rotateDegO {

background-color: darkgray;

margin-left: auto;

margin-right: auto;

}

#childBox {

-webkit-transform: rotate3d(0, 0, 0, 0deg);

}

JS:

21b-3DTransforms-Rotate3d.js

window.addEventListener('load', function () {

document.getElementById('resetBtn').addEventListener('click', doReset);

document.getElementById('perspective').addEventListener('change', updateParentPerspective);

document.getElementById('multiplierX').addEventListener('change', updateChildRotation);

document.getElementById('multiplierY').addEventListener('change', updateChildRotation);

document.getElementById('multiplierZ').addEventListener('change', updateChildRotation);

document.getElementById('rotateDeg').addEventListener('change', updateChildRotation);

document.getElementById('backface').addEventListener('change', updateChildBackface);

document.getElementById('transformOriginX').addEventListener('change', updateChildTransformOrigin);

document.getElementById('transformOriginY').addEventListener('change', updateChildTransformOrigin);

});

function updateParentPerspective(event) {

var targetValue = document.getElementById(event.target.id).value;

document.getElementById(event.target.id+'OT').innerHTML = targetValue;

document.getElementById(event.target.id+'OD').innerHTML = targetValue;

document.getElementById('parentBox').style['webkitPerspective']=targetValue+'px';

}

function updateChildTransformOrigin(event) {

var xOutputT = document.getElementById('transformOriginXOT');

var yOutputT = document.getElementById('transformOriginYOT');

var xValue = document.getElementById('transformOriginX').value+'%';

var yValue = document.getElementById('transformOriginY').value+'%';

xOutputT.innerHTML = xValue;

yOutputT.innerHTML = yValue;

document.getElementById('childBox').style['webkitTransformOriginX'] = xValue;

document.getElementById('childBox').style['webkitTransformOriginY'] = yValue;

}

function updateChildRotation(event) {

if (event.target.type == 'range') {

var xOutput = document.getElementById('multiplierXO');

var xOutputT = document.getElementById('multiplierXOT');

var yOutput = document.getElementById('multiplierYO');

var yOutputT = document.getElementById('multiplierYOT');

var zOutput = document.getElementById('multiplierZO');

var zOutputT = document.getElementById('multiplierZOT');

var degOutput = document.getElementById('rotateDegO');

var degOutputT = document.getElementById('rotateDegOT');

var xValue = document.getElementById('multiplierX').value / 10;

var yValue = document.getElementById('multiplierY').value / 10;

var zValue = document.getElementById('multiplierZ').value / 10;

var degValue = document.getElementById('rotateDeg').value;

xOutput.innerHTML = xValue;

xOutputT.innerHTML = xValue;

yOutput.innerHTML = yValue;

yOutputT.innerHTML = yValue;

zOutput.innerHTML = zValue;

zOutputT.innerHTML = zValue;

degOutput.innerHTML = degValue;

degOutputT.innerHTML = degValue;

document.getElementById('childBox').style['webkitTransform'] = 'rotate3d(' + xValue + ', ' + yValue + ', ' + zValue + ', ' + degValue + 'deg)';

}

}

function updateChildBackface(event) {

var visibilityPropertyValue = document.getElementById('backface').checked ? 'visible' : 'hidden';

document.getElementById('backfaceOT').innerHTML = visibilityPropertyValue;

document.getElementById('childBox').style['webkitBackfaceVisibility'] = visibilityPropertyValue;

}

function doReset() {

document.getElementById('perspective').value = 500;

document.getElementById('transformOriginX').value = 50;

document.getElementById('transformOriginY').value = 50;

document.getElementById('multiplierX').value = 10;

document.getElementById('multiplierY').value = 10;

document.getElementById('multiplierZ').value = 10;

document.getElementById('backface').value = 1;

document.getElementById('preserve3d').value = 1;

}

22. 3D Transforms Translate

HTML:

22-3DTransforms-Translate.html

<!doctype html>

<html>

<head>

<title>CSS3 3D Transforms - Translation</title>

<link rel="stylesheet" type="text/css" href="stylesheets/3D-stylesheet.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/22-3DTransforms-Translate.css">

</head>

<body>

<form>

<table class="table" border="1" cellspacing="0" cellpadding="5">

<tr>

<th>property</th>

<th>min</th>

<th>change it here</th>

<th>max</th>

<th>current</th>

</tr>

<tr>

<td><label for="perspective">perspective</label></td>

<td class="min">100</td>

<td><input id="perspective" type="range" min="100" max="900" value="500" step="25"></td>

<td class="max">900</td>

<td class="currVal"><output id="perspectiveOT">500</output></td>

</tr>

<tr>

<td><label for="translateX">translateX</label></td>

<td class="min">-200</td>

<td><input id="translateX" type="range" min="-200" max="200" value="10" step="5"></td>

<td class="max">200</td>

<td class="currVal" bgcolor="orange"><output id="translateXOT">10</output></td>

</tr>

<tr>

<td><label for="translateY">translateY</label></td>

<td class="min">-200</td>

<td><input id="translateY" type="range" min="-200" max="200" value="10" step="5"></td>

<td class="max">200</td>

<td class="currVal" bgcolor="yellow"><output id="translateYOT">10</output></td>

</tr>

<tr>

<td><label for="translateZ">translateZ</label></td>

<td class="min">-200</td>

<td><input id="translateZ" type="range" min="-200" max="200" value="10" step="5"></td>

<td class="max">200</td>

<td class="currVal" bgcolor="lightgray"><output id="translateZOT">10</output></td>

</tr>

<tr>

<td colspan="4"></td>

<td><button class="btn btn-default" id="resetBtn">Reset</button></td>

</tr>

</table>

</form>

<h4>Perspective: </h4><output id="perspectiveOD">500</output>

<div id="childBox">

translateX(<output id="translateXO">10</output>px);<br>

translateY(<output id="translateYO">10</output>px);<br>

translateZ(<output id="translateZO">10</output>px);

</div>

<script type="text/javascript" src="scripts/22-3DTransforms-Translate.js"></script>

</body>

</html>

CSS:

22-3DTransforms-Translate.css

#translateXO {

background-color: orange;

margin-left: auto;

margin-right: auto;

}

#translateYO {

background-color: yellow;

margin-left: auto;

margin-right: auto;

}

#translateZO {

background-color: lightgray;

margin-left: auto;

margin-right: auto;

}

#childBox {

-webkit-transform: translateX(10px) translateY(10px) translateZ(10px);

}

JS:

22-3DTransforms-Translate.js

window.addEventListener('load', function () {

document.getElementById('resetBtn').addEventListener('click', doReset);

document.getElementById('perspective').addEventListener('change', updateParentPerspective);

document.getElementById('translateX').addEventListener('change', updateChildTranslation);

document.getElementById('translateY').addEventListener('change', updateChildTranslation);

document.getElementById('translateZ').addEventListener('change', updateChildTranslation);

});

function updateParentPerspective(event) {

var targetValue = document.getElementById(event.target.id).value;

document.getElementById(event.target.id+'OT').innerHTML = targetValue;

document.getElementById(event.target.id+'OD').innerHTML = targetValue;

document.getElementById('parentBox').style['webkitPerspective']=targetValue+'px';

}

function updateChildTranslation(event) {

if (event.target.type == 'range') {

var xOutput = document.getElementById('translateXO');

var xOutputT = document.getElementById('translateXOT');

var yOutput = document.getElementById('translateYO');

var yOutputT = document.getElementById('translateYOT');

var zOutput = document.getElementById('translateZO');

var zOutputT = document.getElementById('translateZOT');

var xValue = document.getElementById('translateX').value;

var yValue = document.getElementById('translateY').value;

var zValue = document.getElementById('translateZ').value;

xOutput.innerHTML = xValue;

xOutputT.innerHTML = xValue;

yOutput.innerHTML = yValue;

yOutputT.innerHTML = yValue;

zOutput.innerHTML = zValue;

zOutputT.innerHTML = zValue;

var styleValue = 'translateX(' + xValue + 'px) translateY(' + yValue + 'px) translateZ(' + zValue + 'px)';

//var styleValue = 'translate3d(' + xValue + 'px, ' + yValue + 'px, ' + zValue + 'px)';

document.getElementById('childBox').style['webkitTransform'] = styleValue;

}

}

function doReset() {

document.getElementById('perspective').value = 500;

document.getElementById('translateX').value = 10;

document.getElementById('translateY').value = 10;

document.getElementById('translateZ').value = 10;

}

23. 3D Transforms Scale

HTML:

23-3DTransforms-Scale.html

<!doctype html>

<html>

<head>

<title>CSS3 3D Transforms - Scale</title>

<link rel="stylesheet" type="text/css" href="stylesheets/3D-stylesheet.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/23-3DTransforms-Scale.css">

</head>

<body>

<span class="container">

<form>

<table class="table" border="1" cellspacing="0" cellpadding="5">

<tr>

<th>property</th>

<th>min</th>

<th>change it here</th>

<th>max</th>

<th>current</th>

</tr>

<tr>

<td><label for="perspective">perspective</label></td>

<td class="min">100</td>

<td><input id="perspective" type="range" min="100" max="900" value="500" step="25"></td>

<td class="max">900</td>

<td class="currVal"><output id="perspectiveOT">500</output></td>

</tr>

<tr>

<td><label for="transformOriginX">transform origin X</label></td>

<td class="min">0</td>

<td><input id="transformOriginX" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginXOT">50%</output></td>

</tr>

<tr>

<td><label for="transformOriginY">transform origin Y</label></td>

<td class="min">0</td>

<td><input id="transformOriginY" type="range" min="0" max="100" value="50" step="10"></td>

<td class="max">100</td>

<td class="currVal"><output id="transformOriginYOT">50%</output></td>

</tr>

<tr>

<td><label for="scaleX">scaleX</label></td>

<td class="min">0.5</td>

<td><input id="scaleX" type="range" min="5" max="20" value="10" step="1"></td>

<td class="max">2</td>

<td class="currVal" bgcolor="orange"><output id="scaleXOT">1</output></td>

</tr>

<tr>

<td><label for="scaleY">scaleY</label></td>

<td class="min">0.5</td>

<td><input id="scaleY" type="range" min="5" max="20" value="10" step="1"></td>

<td class="max">2</td>

<td class="currVal" bgcolor="yellow"><output id="scaleYOT">1</output></td>

</tr>

<tr>

<td><label for="scaleZ">scaleZ</label></td>

<td class="min">0.5</td>

<td><input id="scaleZ" type="range" min="5" max="20" value="10" step="1"></td>

<td class="max">2</td>

<td class="currVal" bgcolor="lightgray"><output id="scaleZOT">1</output></td>

</tr>

<tr>

<td colspan="4"></td>

<td><button class="btn btn-default" id="resetBtn">Reset</button></td>

</tr>

</table>

</form>

<h4>Perspective: </h4><output id="perspectiveOD">500</output>

<div id="childBox">

scaleX(<output id="scaleXO">1</output>);<br>

scaleY(<output id="scaleYO">1</output>);<br>

scaleZ(<output id="scaleZO">1</output>);

</div>

</span>

<script type="text/javascript" src="scripts/23-3DTransforms-Scale.js"></script>

</body>

</html>

CSS:

23-3DTransforms-Scale.css

#scaleXO {

background-color: orange;

margin-left: auto;

margin-right: auto;

}

#scaleYO {

background-color: yellow;

margin-left: auto;

margin-right: auto;

}

#scaleZO {

background-color: lightgray;

margin-left: auto;

margin-right: auto;

}

#childBox {

-webkit-transform: scaleX(10deg) scaleY(10deg) scaleZ(10deg);

}

JS:

23-3DTransforms-Scale.js

window.addEventListener('load', function () {

document.getElementById('resetBtn').addEventListener('click', doReset);

document.getElementById('perspective').addEventListener('change', updateParentPerspective);

document.getElementById('scaleX').addEventListener('change', updateChildScale);

document.getElementById('scaleY').addEventListener('change', updateChildScale);

document.getElementById('scaleZ').addEventListener('change', updateChildScale);

document.getElementById('transformOriginX').addEventListener('change', updateChildTransformOrigin);

document.getElementById('transformOriginY').addEventListener('change', updateChildTransformOrigin);

});

function updateParentPerspective(event) {

var targetValue = document.getElementById(event.target.id).value;

document.getElementById(event.target.id+'OT').innerHTML = targetValue;

document.getElementById(event.target.id+'OD').innerHTML = targetValue;

document.getElementById('parentBox').style['webkitPerspective']=targetValue+'px';

}

function updateChildTransformOrigin(event) {

var xOutputT = document.getElementById('transformOriginXOT');

var yOutputT = document.getElementById('transformOriginYOT');

var xValue = document.getElementById('transformOriginX').value+'%';

var yValue = document.getElementById('transformOriginY').value+'%';

xOutputT.innerHTML = xValue;

yOutputT.innerHTML = yValue;

document.getElementById('childBox').style['webkitTransformOriginX'] = xValue;

document.getElementById('childBox').style['webkitTransformOriginY'] = yValue;

}

function updateChildScale(event) {

if (event.target.type == 'range') {

var xOutput = document.getElementById('scaleXO');

var xOutputT = document.getElementById('scaleXOT');

var yOutput = document.getElementById('scaleYO');

var yOutputT = document.getElementById('scaleYOT');

var zOutput = document.getElementById('scaleZO');

var zOutputT = document.getElementById('scaleZOT');

var xValue = document.getElementById('scaleX').value / 10;

var yValue = document.getElementById('scaleY').value / 10;

var zValue = document.getElementById('scaleZ').value / 10;

xOutput.innerHTML = xValue;

xOutputT.innerHTML = xValue;

yOutput.innerHTML = yValue;

yOutputT.innerHTML = yValue;

zOutput.innerHTML = zValue;

zOutputT.innerHTML = zValue;

document.getElementById('childBox').style['webkitTransform'] = 'scaleX(' + xValue + ') scaleY(' + yValue + ') scaleZ(' + zValue + ')';

}

}

function doReset() {

document.getElementById('perspective').value = 500;

document.getElementById('transformOriginX').value = 50;

document.getElementById('transformOriginY').value = 50;

document.getElementById('scaleX').value = 10;

document.getElementById('scaleY').value = 10;

document.getElementById('scaleZ').value = 10;

}

24. Transitions

HTML:

24-transitions.html

<!doctype html>

<html>

<head>

<title>CSS3 Transitions - single property</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/24-transitions.css">

</head>

<body>

<div class="container">

<code>&lt;p&gt;</code>

<p>hover here to switch<br><u>instantly</u></p>

<code>&lt;p class="transitionable"&gt;</code>

<p id="p2" class="transitionable">hover here to switch<br><u>gradually</u></p>

<code>&lt;p class="transitionable" onMouseOver="..." onMouseOut="..."&gt;</code>

<br>

<p id="p3" class="transitionable" onMouseOver="this.style.marginLeft=300" onMouseOut="this.style.marginLeft=100">hover here to switch <u>gradually</u><br>uses javascript</p>

<aside id="styleRule"><code><pre>

.transitionable { -webkit-transition: opacity 0.5s ease-in 0s; }

</pre></code></aside>

Adjust these settings and hover over the second paragraph

<form>

<table class="table" id="t1" border="1" cellspacing="0" cellpadding="5">

<tr>

<td><label for="durationSeconds">Duration</label></td>

<td><input id="durationSeconds" type="range" min="0.5" max="3" value="0.5" step=".5"></td>

<td class="currVal"><output id="durationSecondsO">0.5</output></td>

</tr>

<tr>

<td><label for="easingFunction">Timing</label></td>

<td>

<select id="easingFunction">

<option>linear</option>

<option>ease</option>

<option selected>ease-in</option>

<option>ease-out</option>

<option>ease-in-out</option>

<option>step-start</option>

<option>step-end</option>

<option>steps</option>

<option>cubic-bezier</option>

</select>

</td>

<td class="currVal"><output id="easingFunctionO">ease-in</output></td>

</tr>

<tr>

<td><label for="delaySeconds">Delay</label></td>

<td><input id="delaySeconds" type="range" min="0" max="2" value="0" step=".5"></td>

<td class="currVal"><output id="delaySecondsO">0</output></td>

</tr>

</table>

</form>

<code id="styleBlock">

/\* starting state \*/

p { margin-left: 100px; }

/\* ending state \*/

p:hover { margin-left: 300px;}

/\* HOW the margin-left property changes \*/

.transitionable {

-webkit-transition: margin-left 0.5s ease-in 0s;

}

</code>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

<script type="text/javascript" src="scripts/24-transitions.js"></script>

</body>

</html>

CSS:

24-transitions.css

body {

margin: 10px;

padding: 10px;

}

p {

margin-top: -10px

margin-bottom: 40px;

font-size: 1.5em;

border:solid thick blue;

background-color: #eee;

text-align:center;

}

code {

color: red;

font-size:1.25em;

}

/\* starting state \*/

p {

margin-left: 100px;

}

/\* ending state \*/

p:hover {

margin-left: 300px;

}

/\* HOW the margin-left property changes \*/

.transitionable {

-webkit-transition: margin-left 0.5s ease-in 0s;

}

#styleBlock{

display: none;

}

JS:

24-transitions.js

window.addEventListener('load', function () {

document.getElementById('durationSeconds').addEventListener('change', updateStyles);

document.getElementById('delaySeconds').addEventListener('change', updateStyles);

document.getElementById('easingFunction').addEventListener('change', updateStyles);

});

function updateStyles(event) {

var targetOutput = event.target.id+'O';

var targetValue = document.getElementById(event.target.id).value;

var easingFunction = document.getElementById('easingFunction').value;

var durationSeconds = document.getElementById('durationSeconds').value;

var delaySeconds = document.getElementById('delaySeconds').value;

var transitionStyleValue = 'margin-left ' + durationSeconds + 's ' + easingFunction + ' ' + delaySeconds + 's';

var transitionRule = '-webkit-transition: ' + transitionStyleValue + '; ';

document.getElementById(targetOutput).innerHTML = targetValue;

document.getElementById('styleRule').innerHTML = '<code><pre>.transitionable { ' + transitionRule + '}</pre></code>';

document.getElementById('p2').setAttribute('style', transitionRule);

}

25. Transitions Multiple

HTML:

25-transitions-multiple.html

<!doctype html>

<html>

<head>

<title>CSS3 Transitions - multiple properties</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/25-transitions-multiple.css">

</head>

<body>

<code>&lt;p&gt;</code>

<p>hover here to switch two property values<br><u>instantly</u></p>

<code>&lt;p class="transitionable"&gt;</code>

<p class="transitionable">hover here to switch two property values<br><u>gradually</u></p>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

p {

/\* starting state \*/

margin-left: 100px; opacity: .25;

}

p:hover {

/\* ending state \*/

margin-left: 300px; opacity: 1;

}

.transitionable {

/\* HOW the margin-left property changes \*/

-webkit-transition: margin-left 0.5s ease-in 0.5s, opacity 0.5s ease-in 1s;

}

</code>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

25-transitions-multiple.css

body {

margin: 10px;

padding: 10px;

}

p {

margin-top: -10px;

margin-bottom: 40px;

font-size: 1.5em;

border:solid thick blue;

background-color: #eee;

text-align:center;

}

code {

color: red;

font-size:1.25em;

}

p {

/\* starting state \*/

margin-left: 100px; opacity: .25;

}

p:hover {

/\* ending state \*/

margin-left: 300px; opacity: 1;

}

.transitionable {

/\* HOW the margin-left property changes \*/

-webkit-transition: margin-left 0.5s ease-in 0.5s, opacity 0.5s ease-in 1s;

}

#styleBlock{

display: none;

}

26. Transitions States

HTML:

26-transitions-states.html

<!doctype html>

<html>

<head>

<title>CSS3 Transitions - triggering transitions with css and javascript</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css"/>

<link type="text/css" rel="stylesheet" href="stylesheets/prettify.css">

<link rel="stylesheet" href="stylesheets/26-transitions-states.css">

</head>

<body>

<div class="container">

<code>&lt;p id="cssTransition"&gt;</code>

<p id="cssTransition">hover here<br>

<u>trigger the switch using a dynamic pseudo class: CSS</u>

</p>

<code>&lt;p id="jsTransition" onMouseOver="this.className='transitionable'" onMouseOut="this.className=''&gt;</code>

<p id="jsTransition" onMouseOver="this.className='transitionable'" onMouseOut="this.className=''">hover here<br>

<u>trigger the switch by setting this element's class property: JavaSript</u>

</p>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

</div>

<code id="styleBlock">

/\* define HOW the margin-left property changes \*/

p { -webkit-transition: margin-left 0.5s; }

/\* trigger the switch to the ending state using a dynamic pseudo class \*/

#cssTransition:hover {

margin-left: 100px;

}

/\* trigger the switch to the ending state using a class selector that can be applied in JavaScript \*/

#jsTransition.transitionable {

margin-left: 100px;

}

</code>

<script type="text/javascript" src="scripts/26-transitions-states.js"></script>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

26-transitions-states.css

body {

margin: 10px;

padding: 10px;

}

p {

margin-top: -10px

margin-bottom: 40px;

font-size: 1.5em;

border:solid thick blue;

background-color: #eee;

text-align:center;

}

code {

color: red;

font-size:1.25em;

}

/\* define HOW the margin-left property changes \*/

p {

-webkit-transition: margin-left 0.5s;

}

/\* trigger the switch to the ending state using a dynamic pseudo class \*/

#cssTransition:hover {

margin-left: 100px;

}

/\* trigger the switch to the ending state using a class selector that can be applied in JavaScript \*/

#jsTransition.transitionable {

margin-left: 100px;

}

#styleBlock{

display: none;

}

27. Font Face

HTML:

27-font-face.html

<!doctype html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Font Face Demo</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" href="stylesheets/27-font-face.css">

</head>

<body class="container">

<div>

<h1>I am written with no @font-face specifications</h1>

<br>

<h1 id="hp">I am written with HennyPenny</h1>

<br>

<h1 id="ls">I am written with Londrina Shadow</h1>

<aside>

<pre id="styleCodeBlock" class="prettyprint"></pre>

<button class="btn btn-default" id="toggleBtn" onClick="toggle()">toggle style code</button>

</aside>

<code id="styleBlock">

@font-face{

font-family: 'Henny Penny';

src: url('../fonts/HennyPenny-Regular.ttf');

}

@font-face{

font-family: 'Londrina Shadow';

src: url('../fonts/LondrinaShadow-Regular.ttf');

}

#hp{

font-family: 'Henny Penny';

}

#ls{

font-family: 'Londrina Shadow';

}

</code>

</div>

<script type="text/javascript" src="scripts/prettify.js"></script>

<script src="scripts/displayStyleBlock.js"></script>

</body>

</html>

CSS:

27-font-face.css

@font-face{

font-family: 'Henny Penny';

src: url('../fonts/HennyPenny-Regular.ttf');

}

@font-face{

font-family: 'Londrina Shadow';

src: url('../fonts/LondrinaShadow-Regular.ttf');

}

#hp{

font-family: 'Henny Penny';

}

#ls{

font-family: 'Londrina Shadow';

}

code{

display: none;

}

28. Google Web Fonts

HTML:

28-google-web-fonts.html

<!doctype html>

<html>

<head>

<title>Google Web Fonts</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

<link rel="stylesheet" type="text/css" href="stylesheets/28-google-web-fonts.css">

<!-- Henny Penny -->

<link href='<https://fonts.googleapis.com/css?family=Henny+Penny'> rel='stylesheet' type='text/css'/>

<!-- Leckerli One -->

<link href='https://fonts.googleapis.com/css?family=Leckerli+One' rel='stylesheet' type='text/css'>

<!-- PT Mono -->

<link href='https://fonts.googleapis.com/css?family=PT+Mono' rel='stylesheet' type='text/css'>

</head>

<body>

<div class="container">

<br>

<h1>I am written with no Google Font specifications.</h1>

<br>

<div id="hp">I am written with Google font's Henny Penny!</div>

<br>

<div id="ls">I am written with a Google Font...</div>

<br>

<div id="pt">Me too!</div>

</div>

</body>

</html>

CSS:

28-google-web-fonts.css

#hp {

font-family: 'Henny Penny', cursive;

font-size: 48px;

text-shadow: 4px 4px 4px #aaa;

font-weight: 400;

}

#ls {

font-family: 'Leckerli One', cursive;

font-size: 48px;

}

#pt {

font-family: 'PT Mono';

font-size: 48px;

text-shadow: 2px 2px 2px #aaa;

}

Unit 10

CSS3



1. Local Storage

HTML:

01-local-storage.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>localStorage</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<div class="form-group">

<br>

<label for="key">Key:</label>

<input class="form-control" type="text" id="key" autofocus autocomplete="off">

<label for="value">Value:</label>

<input class="form-control" type="text" id="value" autocomplete="off">

<br>

<button class="btn btn-default" onclick="save()">Save</button>

</div>

<hr>

<table class="table">

<thead>

<tr>

<th>#</th>

<th>key</th>

<th>value</th>

<th>Delete</th>

</tr>

</thead>

<tbody id="output">

<tr>

<td colspan="4">Nothing to Show</td>

</tr>

</tbody>

</table>

<br>

<button class="btn btn-default" onclick="clearStorage()">Clear All</button>

</div>

<script src="scripts/01-local-storage.js"></script>

</body>

CSS:

This is the base styling for all of the demos in this unit.

style.css

input:invalid {

color: red;

}

#questions {

display: block;

width: 300px;

overflow: visible;

}

#questions li img {

cursor: pointer;

position: relative;

top: 3px;

}

table, th, td {

border: 1px solid black;

padding: 2px;

}

td img {

cursor: pointer;

display: block;

margin: auto;

}

JS:

01-local-storage.js

window.addEventListener("load", updateTable, false);

function updateTable() {

var tbody = document.getElementById("output");

while (tbody.getElementsByTagName("tr").length > 0) {

tbody.deleteRow(0);

}

var row;

if (localStorage.length == 0) {

row = tbody.insertRow(i);

cell = row.insertCell(0);

cell.colSpan = "4";

cell.innerHTML = "Nothing to Show";

}

for (var i = 0; i < localStorage.length; ++i) {

row = tbody.insertRow(i);

cell = row.insertCell(0);

cell.innerHTML = i;

cell = row.insertCell(1);

cell.innerHTML = localStorage.key(i);

cell = row.insertCell(2);

cell.innerHTML = localStorage.getItem(localStorage.key(i));

cell = row.insertCell(3);

cell.innerHTML = "<img src='Images/delete.png' onclick='deleteItem(\"" + localStorage.key(i) + "\")'>";

}

}

function deleteItem(key) {

if (!confirm("Are you sure you want to delete this item?")) return;

localStorage.removeItem(key);

updateTable();

}

function clearStorage() {

if (!confirm("Are you sure you want to delete all local storage for this domain?")) return;

localStorage.clear();

updateTable();

}

function save() {

var key = document.getElementById("key").value;

var value = document.getElementById("value").value;

localStorage.setItem(key, value);

updateTable();

}

2. Session Storage

HTML:

02-session-storage.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>sessionStorage</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<br>

<div class="form-group">

<label for="key">Key:</label>

<input class="form-control" type="text" id="key" autofocus autocomplete="off">

<label for="value">Value:</label>

<input class="form-control" type="text" id="value" autocomplete="off">

<br>

<button class="btn btn-primary" onclick="save()">Save</button>

</div>

<hr>

<table class="table">

<thead>

<tr>

<th>#</th>

<th>key</th>

<th>value</th>

<th>Delete</th>

</tr>

</thead>

<tbody id="output">

<tr>

<td colspan="4">Nothing to Show</td>

</tr>

</tbody>

</table>

<button class="btn btn-warning" onclick="clearStorage()">Clear All</button>

</div>

<script src="scripts/02-session-storage.js"></script>

</body>

</html>

CSS:

For the styling look at Demo 1’s CSS

style.css

HTML:

02-session-storage.html

window.addEventListener("load", updateTable, false);

function updateTable() {

var tbody = document.getElementById("output");

while (tbody.getElementsByTagName("tr").length > 0) {

tbody.deleteRow(0);

}

var row;

if (sessionStorage.length == 0) {

row = tbody.insertRow(i);

row = tbody.insertRow(0);

cell = row.insertCell(0);

cell.colSpan = "4";

cell.innerHTML = "Nothing to Show";

}

for (var i = 0; i < sessionStorage.length; ++i) {

row = tbody.insertRow(i);

cell = row.insertCell(0);

cell.innerHTML = i;

cell = row.insertCell(1);

cell.innerHTML = sessionStorage.key(i);

cell = row.insertCell(2);

cell.innerHTML = sessionStorage.getItem(sessionStorage.key(i));

cell = row.insertCell(3);

cell.innerHTML = "<img src='Images/delete.png' onclick='deleteItem(\"" + sessionStorage.key(i) + "\")'>";

}

}

function deleteItem(key) {

if (!confirm("Are you sure you want to delete this item?")) return;

sessionStorage.removeItem(key);

updateTable();

}

function clearStorage() {

if (!confirm("Are you sure you want to delete all session storage for this domain?")) return;

sessionStorage.clear();

updateTable();

}

function save() {

var key = document.getElementById("key").value;

var value = document.getElementById("value").value;

sessionStorage.setItem(key, value);

updateTable();

}

3. Questions

HTML:

03-questions.html

<!doctype html>

<html>

<head>

<meta charset="UTF-8">

<title>Questions</title>

<link href="stylesheets/style.css" rel="stylesheet" type="text/css"/>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.css"/>

</head>

<body>

<div class="container">

<label for="q">Question:</label>

<input class="form-control" type="text" id="q" autofocus autocomplete="off">

<label for="a">Answer:</label>

<input class="form-control" type="text" id="a" autocomplete="off">

<br>

<button class="btn btn-primary" onclick="save()">Save</button>

<output id="questions"></output>

<menu>

<button class="btn btn-success" onclick="revealLocalStorage()">Show All Local Storage</button>

<button class="btn btn-success" onclick="updateList()">Show Questions</button>

<button class="btn btn-warning" onclick="deleteQuestions()">Delete All Questions</button>

</menu>

</div>

<script src="scripts/03-questions.js"></script>

</body>

</html>

CSS:

For the styling look at Demo 1’s CSS

style.css

JS:

03-questions.js

window.addEventListener("load", updateList, false);

var prefix = "q-";

function updateList() {

var questions = "<ol>";

for (var i = 0; i < localStorage.length; ++i) {

if (localStorage.key(i).substring(0, prefix.length) == prefix) {

questions += "<li>" + localStorage.key(i).substring(prefix.length) + " <img onclick=\"showAnswer('" + localStorage.key(i) + "')\" src='Images/find.png'> <img onclick=\"deleteQuestion('" + localStorage.key(i) + "')\" src='Images/delete.png'></li>";

}

}

questions += "</ol>";

document.getElementById("questions").innerHTML = questions;

}

function save() {

var q = prefix + document.getElementById("q").value;

var a = document.getElementById("a").value;

localStorage.setItem(q, a);

document.getElementById("q").value = "";

document.getElementById("a").value = "";

document.getElementById("q").focus();

updateList();

}

function revealLocalStorage() {

var questions = "<ol>";

for (var i = 0; i < localStorage.length; ++i) {

questions += "<li>" + localStorage.key(i) + ": " + localStorage.getItem(localStorage.key(i)) + "</li>";

}

questions += "</ol>";

document.getElementById("questions").innerHTML = questions;

}

function showAnswer(key) {

alert(localStorage.getItem(key));

}

function deleteQuestion(key) {

if (!confirm("Are you sure you want to delete this question?")) return;

localStorage.removeItem(key);

updateList();

}

function deleteQuestions() {

if (!confirm("Are you sure you want to delete all questions?")) return;

var numItems = localStorage.length;

for (var i = numItems - 1; i >= 0; --i) {

if (localStorage.key(i).substring(0, prefix.length) == prefix) {

localStorage.removeItem(localStorage.key(i));

}

}

updateList();

}

Unit 11

Bootstrap



1. Basic Template

HTML:

01-basic-template.html

<!doctype html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap 101 Template</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css">

</head>

<body>

<code>.container</code>

<div class="container">

<h1>Hello world!</h1>

</div>

<script src="<https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js>"></script>

<script src="<https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/js/bootstrap.min.js>">

</script>

</body>

</html>

2. Basic Navbar

HTML:

02-basic-navbar.html

<!doctype html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap 101 Template</title>

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css">

</head>

<body>

<div class="container">

<nav class="navbar navbar-default">

<div class="container-fluid">

<!-- Brand and toggle get grouped for better mobile display -->

<div class="navbar-header">

<button type="button" class="navbar-toggle collapsed" data-toggle="collapse" data-target="#bs-example-navbar-collapse-1" aria-expanded="false">

<span class="sr-only">Toggle navigation</span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

</button>

<a class="navbar-brand" href="#">Brand</a>

</div>

<!-- Collect the nav links, forms, and other content for toggling -->

<div class="collapse navbar-collapse" id="bs-example-navbar-collapse-1">

<ul class="nav navbar-nav">

<li class="active"><a href="#">Link <span class="sr-only">(current)</span></a></li>

<li><a href="#">Link</a></li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-haspopup="true" aria-expanded="false">Dropdown <span class="caret"></span></a>

<ul class="dropdown-menu">

<li><a href="#">Action</a></li>

<li><a href="#">Another action</a></li>

<li><a href="#">Something else here</a></li>

<li role="separator" class="divider"></li>

<li><a href="#">Separated link</a></li>

<li role="separator" class="divider"></li>

<li><a href="#">One more separated link</a></li>

</ul>

</li>

</ul>

<form class="navbar-form navbar-left" role="search">

<div class="form-group">

<input type="text" class="form-control" placeholder="Search">

</div>

<button type="submit" class="btn btn-default">Submit</button>

</form>

<ul class="nav navbar-nav navbar-right">

<li><a href="#">Link</a></li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-haspopup="true" aria-expanded="false">Dropdown <span class="caret"></span></a>

<ul class="dropdown-menu">

<li><a href="#">Action</a></li>

<li><a href="#">Another action</a></li>

<li><a href="#">Something else here</a></li>

<li role="separator" class="divider"></li>

<li><a href="#">Separated link</a></li>

</ul>

</li>

</ul>

</div><!-- /.navbar-collapse -->

</div><!-- /.container-fluid -->

</nav>

</div>

<script src="../../bower\_components/jquery/dist/jquery.min.js"></script>

<script src="../../bower\_components/bootstrap/dist/js/bootstrap.min.js">

</script>

</body>

</html>

3. Basic Grid Settings

HTML:

03-basic-grind-settings.html

<!doctype html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>Bootstrap 101 Template</title>

<link rel="stylesheet" href="stylesheets/03-basic-grid-settings.css">

<link rel="stylesheet" href="../../bower\_components/bootstrap/dist/css/bootstrap.min.css">

</head>

<body>

<code>.container</code>

<div class="container">

<div class="col-md-12">

<code>.col-md-12</code>

<div class="show-grid">

<br>

<code>.row</code>

<div class="row">

<h3>Column Example 1</h3>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

<div class="col-md-1">.col-md-1</div>

</div>

<br>

<code>.row</code>

<div class="row">

<h3>Column Example 2</h3>

<div class="col-md-8">.col-md-8</div>

<div class="col-md-4">.col-md-4</div>

</div>

<br>

<code>.row</code>

<div class="row">

<h3>Column Example 3</h3>

<div class="col-md-6">.col-md-6</div>

<div class="col-md-6">.col-md-6</div>

</div>

<br>

<code>.row</code>

<div class="row">

<h3>Column Example 4</h3>

<div class="col-md-4">.col-md-4</div>

<div class="col-md-4">.col-md-4</div>

<div class="col-md-4">.col-md-4</div>

</div>

<br>

<code>.row</code>

<div class="row">

<h3>Column Example 5</h3>

<div class="col-xs-9">.col-xs-9</div>

</div>

<br>

<code>.row</code>

<div class="row">

<div class="col-xs-4">.col-xs-4</div>

<div class="col-xs-6">.col-xs-6</div>

</div>

<br>

<code>.row</code>

<div class="row">

<h3>Column Example 6</h3>

<div class="col-sm-9">.col-sm-9

<div id="level2" class="col-xs-8 col-sm-6">.col-xs-8 .col-sm-6</div>

<div id="level2" class="col-xs-4 col-sm-6">.col-xs-4 .col-sm-6</div>

</div>

</div>

</div>

</div>

</div>

<script src="../../bower\_components/jquery/dist/jquery.min.js"></script>

<script src="../../bower\_components/bootstrap/dist/js/bootstrap.min.js">

</script>

</body>

</html>

CSS:

03-basic-grind-settings.css

.show-grid [class^=col-] {

padding-top: 10px;

padding-bottom: 10px;

background-color: #CCFF99;

border: 1px solid #009900;

border: 1px solid rgba(86,61,124,.2);

}

#level2 {

background-color: #009900;

}

AngularJS - Build Your Own App Lab

This lab is a guided walkthrough of building a web based calculator application in AngularJS.

It covers the basics of controllers, scopes, services, filters, data binding and dependency injection, and also some basic templating skills. The goal of this lab is to show how AngularJS solves common problems in web application development.

Assuming that your computer already has Node.js and git installed:

*What is Grunt:*

Grunt is a powerful, feature rich task runner for Javascript. In brief, it lets you automate repetitive tasks like compiling Coffeescript, minifying css, code validation etc. We’ll be using it to do all of that as well as prepare our code for development and deployment.

*What is Yeoman:*

Work flow and Scaffolding for Web Apps conforms to best practices in the industry for building apps

*What is Bower:*

Package Manager for Web Apps

Install Node.js

<http://nodejs.org/download/>

Install Yeoman, Grunt, and Bower

$ <sudo> npm install -g yo grunt-cli bower

Install Angular Generator

$ <sudo> npm install -g generator-angular

Generate Angular Scaffolding site

$ yo angular {App Name}

Build the site:

$ grunt

If you get errors: Take a look if you are missing dependancies (eg. Karma) install them using npm: ex: $ npm install karma –save-dev

Serve the Site :

grunt serve

Add some objects:

Note what happens on the server! Tests run and files are added!

Some common commands:

yo angular:controller {name}

yo angular:directive {name}

yo angular:filter {name}

yo angular:route {name}

yo angular:service {name}

yo angular:provider {name}

yo angular:factory {name}

yo angular:value {name}

yo angular:constant {name}

yo angular:decorator {name}

yo angular:view {name}

Bower:

bower install bootstrap --save