



CSS3 Party 1

Fundamentals

Week 1 – Full-Stack DPP Course



Welcome

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Part 1 Outline

- CSS the basics
- CSS Selectors
- CSS Properties
- The BOX MODEL
- CSS Page Layout
- The CASCADE
- Introduction to CSS3
- CSS3 New Features



Part 1 Learning Objectives

- Learners would have a good understanding of:
 - What is CSS (Cascading Style Sheets)
 - The CSS Rule, Selectors, Declaration and Properties
 - The CSS Box Model
 - The CSS Page Layout
 - The Cascade
 - Introduction to CSS3
 - CSS3 Attribute Selectors, Pseudo Classes, Pseudo Elements



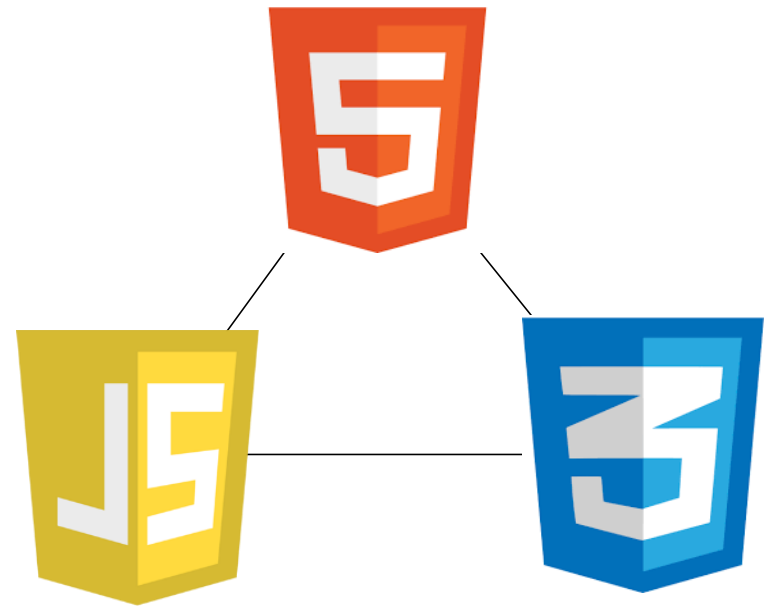
Part 1 Learning Objectives

- Learners would have a good understanding of:
 - CSS3 Borders and Backgrounds
 - CSS3 Gradients
 - CSS3 Transformations
 - CSS3 Transitions
 - CSS3 Animations
 - CSS3 Text Effects
 - CSS3 Fonts
 - CSS3 Page Layout



The Web Development Trifecta

- **HTML5** – structures and describes Web page content
- **CSS3** – provides the formatting and "look" of a Web page
- **JavaScript** – adds interactive, dynamic capabilities to Web pages



CSS the Basics

- **CSS: Cascading Style Sheets**
 - We can separate mark-up and styling code
 - Link our styles to our webpage
 - Manipulate the layout of our webpage
 - Style different elements within our webpage

CSS3 History



CSS the Basics

- **CSS: Cascading Style Sheets**
 - The best way to work with CSS is to link it into our head section of our HTML document.

```
<head>
```

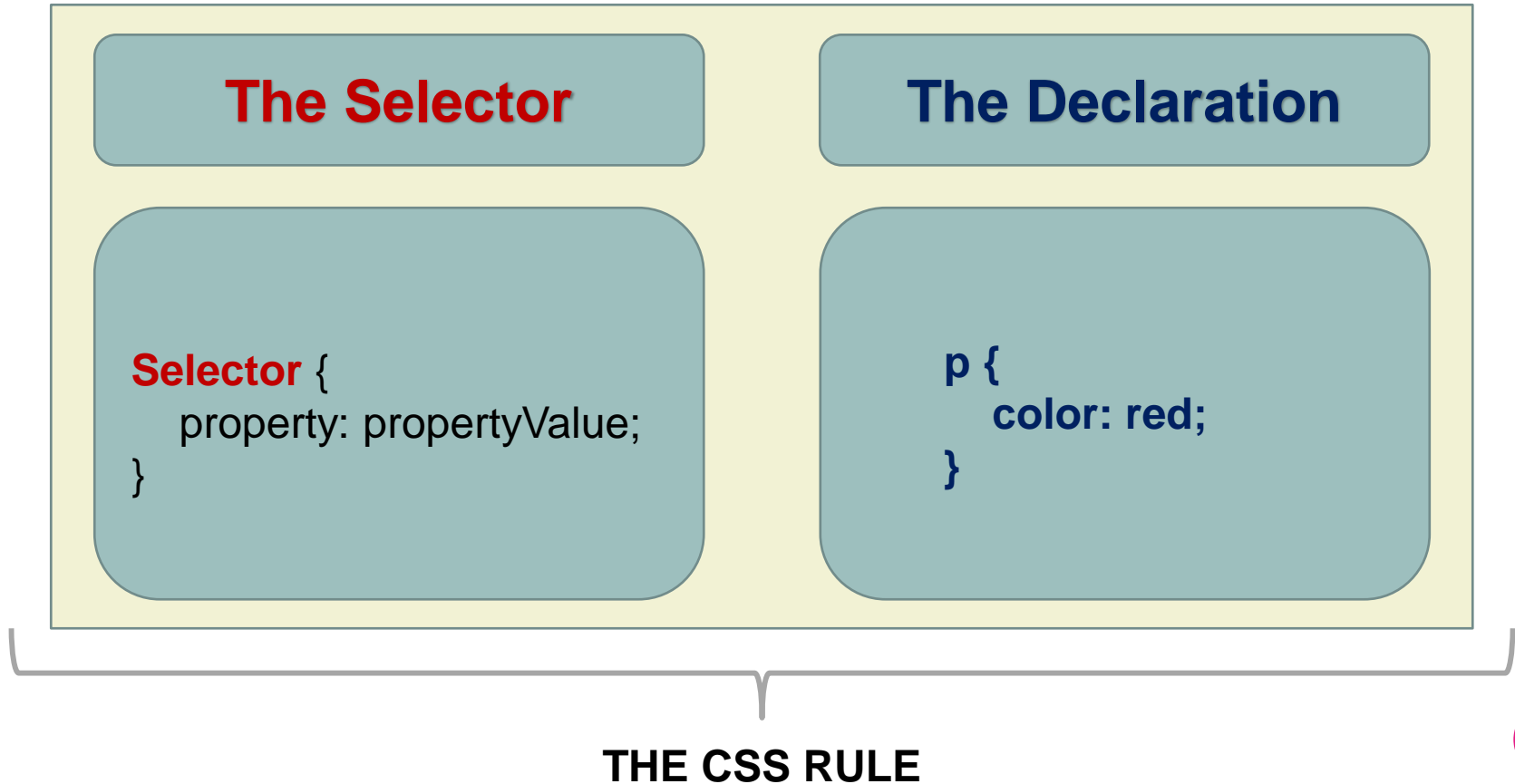
```
<link rel="stylesheet" type="text/css"  
      href="css/myStyles.css" />
```

```
</head>
```



CSS the Basics

- CSS is composed of **rules**:



CSS Selectors

- Tag name

```
p { color: red; }
```

- Class name

```
.productBox { width: 200px; }
```

- Element ID

```
#productID { font-size: 2em; }
```

- Combine selector

```
.p.productSize { font-size: 2em; }
```

- Child selector

```
.productSize a { font-size: 2em; }  
.productSize > a { font-size: 2em; }
```



CSS Selectors

- Pseudo classes

```
a: link { color: blue; }  
a: visited { color: yellow; }  
a: hover { color: brown; }  
a: active { color: white; }
```

- Pseudo elements

```
p: first-child { color: red; }
```

CSS Selectors
w3schools

CSS Selectors
CSS Tricks

CSS Selectors
Pluralsight



Common CSS Properties

- Color

```
h2 { color: #444444; }
```

- Background

```
footer { background-color: black; }
```

- Background-colour
- Background-image
- Background-position
- Can use shorthand

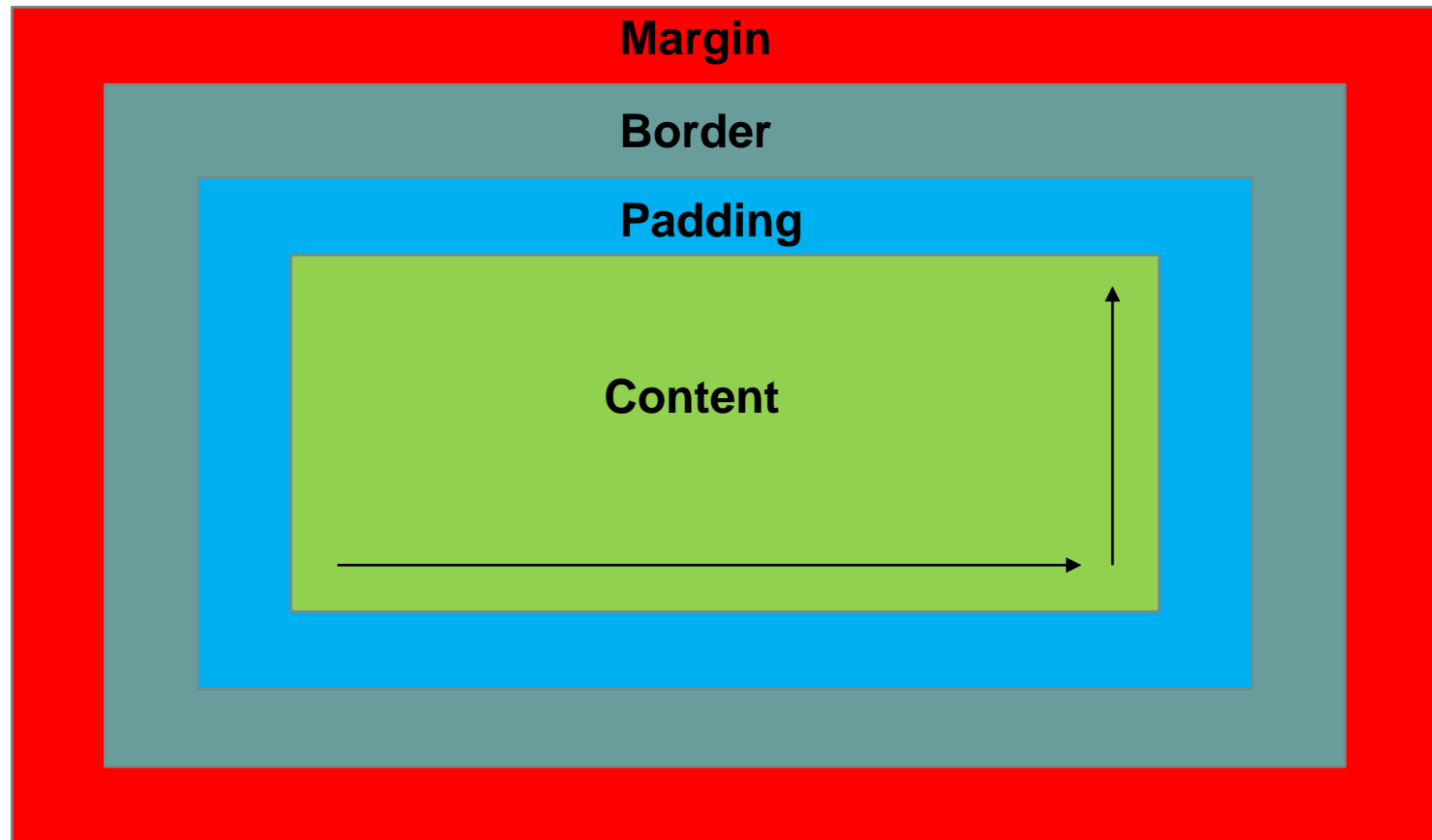
```
footer { background-color: black  
url("pic1.jpg") no-repeat fixed center; }
```

- Text and fonts

```
p { font-size: 2em; }
```



The CSS Box Model



Page Layout with CSS

- CSS can specify how an element will be positioned
- **Inline:**
 - The element should be displayed next to each other
 - ``, `
`, ``, `<a>`, `<td>`
- **Block:**
 - They start on a new line and will take all the space it can horizontally, new content goes beneath
 - `<div>`, `<h1>`, `<p>`, `<section>`, ``, `<article>`, `<nav>`



Page Layout with CSS cont.

- **Float:**
 - The browser will ignore the normal flow to place elements at the left or right of the content
 - It's value can be left, right or none
- **Clear:**
 - Stops the browser to set elements on the **left** or **right** of the content
 - Can also have the values **left**, **right** or **none**



Page Layout with CSS

Header (normal flow)

Content (float left)

**Sidebar
(float left)**

Footer (clear both)



Understanding The Cascade

- **CSS: Cascading** Style Sheets
 - The cascade is what determines which styles are applied to an element.

CAUSES OF CONFLITING SELECTORS

SPECIFICITY

SOURCE

INHERITANCE

IMPORTANT



Understanding The Cascade

Style Sources

- In a conflict, the last style declaration overwrites any previous conflicting selectors.

Developers

Authors

Online users

Users

Browsers

User Agents



Understanding The Cascade

Style Sources and Importance

- The Browser gives styles different “**weights**” by sorting and applying styles in the following order:

User Agent Declarations

User Normal Declarations

Author Normal Declarations

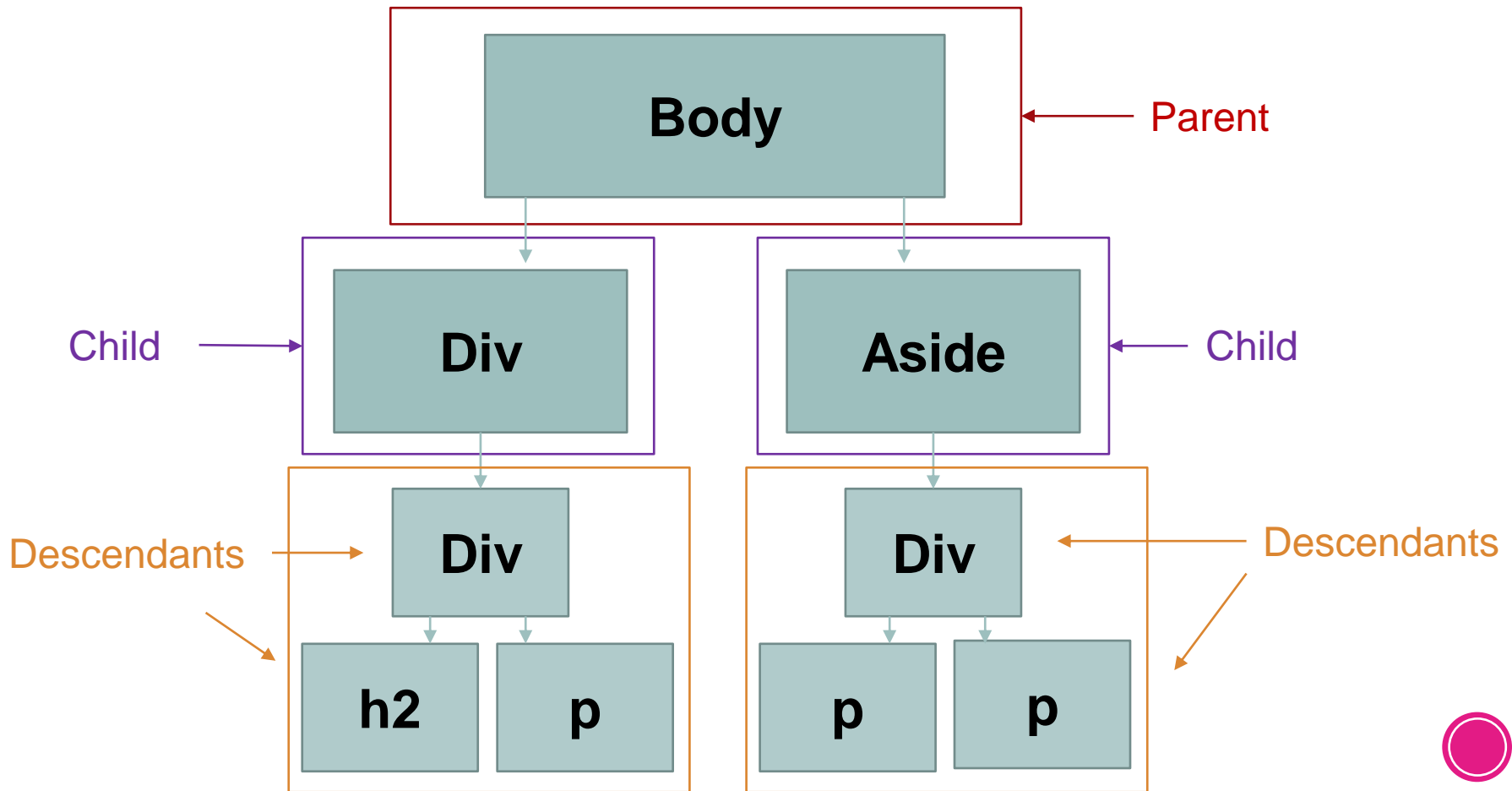
Author **Important** Declarations

User **Important** Declarations



Understanding The Cascade

Inheritance



Understanding The Cascade

Least Specific Which Selector is More Specific

Universal Selectors

*

Type Selectors

p, h1, ul, a, div, section

Class Selectors

.mainPage, .actionButton

Attribute Selectors

Input[type="text"]

Pseudo-Selectors

:hover, :active, :focus

ID Selectors

#myModal, #shopping

Inline Selectors

<p style="color=blue">

Most Specific



Understanding The Cascade

The Specificity

#myModal .mainPage nth-of-type(2) h2

121

#shopping #salesContainer div:first-child

211

Larger
number
wins

0

2

1

1

0

1

2

1

Inline styles

IDs

Classes,
attributes,
pseudo-classes

Elements and
pseudo-elements

The Specificity
Pluralsight Tutorial



CSS3

Style Sources

Is the latest and updated version of CSS2.1 and one of the three main building block of HTML5 New Web Standard.

**Part of HTML5
web standard**

**Split into
modules**

**Independent
evolution**



CSS3 New Features



Selectors

Box model

Background and border changes

Text effects

2D and 3D transformations

Animations

Column-based layout

User interface changes



CSS3 New Modules



The modules info

CSS3 - background

CSS3-fonts-3

CSS3-color

CSS3-box

CSS3-layout

CSS3-content

CSS3-media queries

CSS3-page

CSS3-selectors

CSS3-ui



CSS3 Selectors

CSS3 extends the selector options of CSS2.1

Selectors are now an independent specification and a CSS3 module.

New options:

**Attribute
Selectors**

**Pseudo
Classes**

**Pseudo
Elements**



New Attribute Selector: Starts With

- Now is possible to make selections on the DOM on attributes. Click the links below for a full list of CSS3 Attribute Selectors and more in-depth explanations.

```
a[href^="tel"] {  
    color: blue;  
}
```

Attribute Selector
w3schools

Attribute Selector
CSS Tricks

Attribute Selector
Pluralsight



New Attribute Selector: Ends With

- Now is possible to make selections on the DOM on attributes. Click the links below for a full list of CSS3 Attribute Selectors and more in-depth explanations.

```
a[href$=".com"] {  
    color: blue;  
}
```

Attribute Selector
w3schools

Attribute Selector
CSS Tricks

Attribute Selector
Pluralsight



New Attribute Selector: **Contains**

- Now is possible to make selections on the DOM on attributes. Click the links below for a full list of CSS3 Attribute Selectors and more in-depth explanations.

```
input[type*="text"] {  
    border: 2px solid red;  
}
```

Attribute Selector
w3schools

Attribute Selector
CSS Tricks

Attribute Selector
Pluralsight



Pseudo Class Selector: :nth-child Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
nav li:nth-child(even) {  
    background: green;  
}
```

Pseudo Class
Selector
[w3schools](#)

Pseudo Class
Selector
[CSS Tricks](#)

Pseudo Class
Selector
[Pluralsight](#)



Pseudo Class Selector: **:nth-last-child** Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
nav li:nth-last-child(2) {  
    background: red;  
}
```

Pseudo Class
Selector
[w3schools](#)

Pseudo Class
Selector
[CSS Tricks](#)

Pseudo Class
Selector
[Pluralsight](#)



Pseudo Class Selector: :nth-of-type-Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
nav li:nth-of-type(2n) {  
    background: red;  
}
```

Pseudo Class
Selector
[w3schools](#)

Pseudo Class
Selector
[CSS Tricks](#)

Pseudo Class
Selector
[Pluralsight](#)



Pseudo Class Selector: :first-of-type Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
nav li:first-of-type {  
    background: red;  
}
```

Pseudo Class
Selector
[w3schools](#)

Pseudo Class
Selector
[CSS Tricks](#)

Pseudo Class
Selector
[Pluralsight](#)



Pseudo Class Selector: **:last-child** Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
nav li:last-child {  
    background: red;  
}
```

Pseudo Class
Selector
[w3schools](#)

Pseudo Class
Selector
[CSS Tricks](#)

Pseudo Class
Selector
[Pluralsight](#)



Pseudo Class Selector: **:only-child** Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
nav ul:only-child {  
    background: red;  
}
```

Attribute Selector
w3schools

Attribute Selector
CSS Tricks

Attribute Selector
Pluralsight



Pseudo Class Selector: **:not Selector**

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

```
:not(p) {  
    background: red;  
}
```

Pseudo Class
Selector
[w3schools](#)

Pseudo Class
Selector
[CSS Tricks](#)

Pseudo Class
Selector
[Pluralsight](#)



Pseudo Class Selector

- A pseudo-class is used to define a special state of an element. Click the links below for a full list and more in-depth explanations.

There are other pseudo class selectors, use the links below to learn about them.

::active

::checked

::required

::root

and many more...

Pseudo Class
Selector
w3schools

Pseudo Class
Selector
CSS Tricks

Pseudo Class
Selector
Pluralsight



Pseudo Element Selector: **::before**

- A CSS pseudo-element is used to style specified parts of an element. Click the links below for a full list and more in-depth explanations.

```
figcaption::before {  
    content: "ADD TO CART";  
}
```

Pseudo Element
Selector
[w3schools](#)

Pseudo Element
Selector
[CSS Tricks](#)

Pseudo Element
Selector
[Pluralsight](#)



Pseudo Element Selector: **::after**

- A CSS pseudo-element is used to style specified parts of an element. Click the links below for a full list and more in-depth explanations.

```
figcaption::after {  
  content: url(img/favicon.png);  
}
```

Pseudo Element
Selector
[w3schools](#)

Pseudo Element
Selector
[CSS Tricks](#)

Pseudo Element
Selector
[Pluralsight](#)



Pseudo Element Selector

- A CSS pseudo-element is used to style specified parts of an element. Click the links below for a full list, more in-depth explanations and code examples.
- The **double dots** indicates that is a pseudo element, but in production you will use single dot because of **IE**.

Other Pseudo Element Selectors:

::first-letter

::first-line

::selection

Pseudo Element
Selector
w3schools

Pseudo Element
Selector
CSS Tricks

Pseudo Element
Selector
Pluralsight



Borders Radius

- CSS3 brings native support for rounded corners on elements.

```
. newCollectionB {  
    border-radius: 5px;  
}
```

Borders Radius
w3schools

Borders Radius
CSS Tricks

Borders Radius
Pluralsight



Borders Image

- CSS3 Border image property allows you to specify an image to be used instead of a border around an element.

```
#myBImage {  
    border: 10px solid transparent;  
    padding: 15px;  
    border-image: url(border.png) 30 stretch;  
    -webkit-border-image: url(border.png) 30 stretch;  
    -o-border-image: url(border.png) 30 stretch;  
}
```

Borders Image
w3schools

Borders Image
CSS Tricks

Borders Image
Pluralsight



Multiple Background Images

- CSS3 also offers the ability to specify more than one background image in one container.
- **Remember the first image define is the last in the stack**

```
.body {  
    background: url(firstImage.png),  
                url(secondImage.png);  
}
```

Background
Images
w3schools

Background
Images
CSS Tricks

Background
Images
Pluralsight



CSS3 Backgrounds

- CSS3 offers other Backgrounds properties, respectively:
 1. Background size
 2. Background origin
 3. Background clip and more...

Use the links below for explanations, examples and sample code

**Borders and
Backgrounds
w3schools**

**Borders and
Backgrounds
CSS Tricks**

**Borders and
Backgrounds
Pluralsight**



Linear Gradients

- Gradients are built with the purpose to allow us to apply colour flow from one colour to other inside elements.

```
.myButton {  
    background: linear-gradient(blue,  
    white);  
}
```

Linear Gradients
w3schools

Linear Gradients
CSS Tricks

Linear Gradients
Pluralsight



Radial Gradients

- Gradients are built with the purpose to allow us to apply colour flow from one colour to other inside elements..

```
.myButton {  
    background: radial-gradient(blue,  
    white, red);  
}
```

Linear Gradients
w3schools

Linear Gradients
CSS Tricks

Linear Gradients
Pluralsight



CSS3 Transformations

- Allow us to alter the properties of an element, to change its visual representation.

CSS3 includes support for 2D and 3D Transformations

We have control over size, shape and position

Previously could only be done with Plug-ins

Supported transformations:

1. Translate
2. Rotate
3. Scale
4. Skew
5. Matrix

**CSS3 2D
Transforms
w3schools**

**CSS3 2D & 3D
Transforms
CSS Tricks**

**CSS3 3D
Transforms
w3schools**

**CSS3 2D & 3D
Transforms
Pluralsight**

The rotate() Transform

```
.priceLabel {  
    transform: rotate(45deg);  
}
```

CSS3 Transform
w3schools

CSS3 Transform
CSS Tricks

CSS3 Transform
Pluralsight



The skew() Transform

```
.priceLabel {  
    transform: skew(30deg, 20deg);  
}
```

CSS3 Transform
w3schools

CSS3 Transform
CSS Tricks

CSS3 Transform
Pluralsight



CSS3 Transformations

To see code examples of other supported transformations, click the links below.

Supported transformations:

1. Translate
2. Rotate
3. Scale
4. Skew
5. Matrix

CSS3 Transform
w3schools

CSS3 Transform
CSS Tricks

CSS3 Transform
Pluralsight



CSS3 Transitions

CSS3 transitions allows you to change an element property values smoothly animated over a given duration.

```
nav a {  
    transition: all 0.5s ease;  
}
```

CSS3 Transitions
w3schools

CSS3 Transitions
CSS Tricks

CSS3 Transitions
Pluralsight



CSS3 Animations

With CSS3 it is now possible to embed simple animation directly in CSS3. **Animation** is a change of a value of the property overtime, basically going from one style to another overtime.

- Simple animation without JavaScript and Plug-ins
- Based @keyframes rule which defines the animation
 - Define **identifier** for the animation, **start** and **end** points

```
@keyframes handPointer {  
    0%    {left:30%;}  
    50%   {left:40%;}  
    100%  {left:30%;}  
}
```



CSS3 Animations

```
.actionB:hover + .hand {  
  animation: handPointer 2s ease 0s;  
  animation-iteration-count: infinite;  
}  
  
@keyframes handPointer {  
  0%    {left:30%;}  
  50%   {left:40%;}  
  100%  {left:30%;}  
}
```

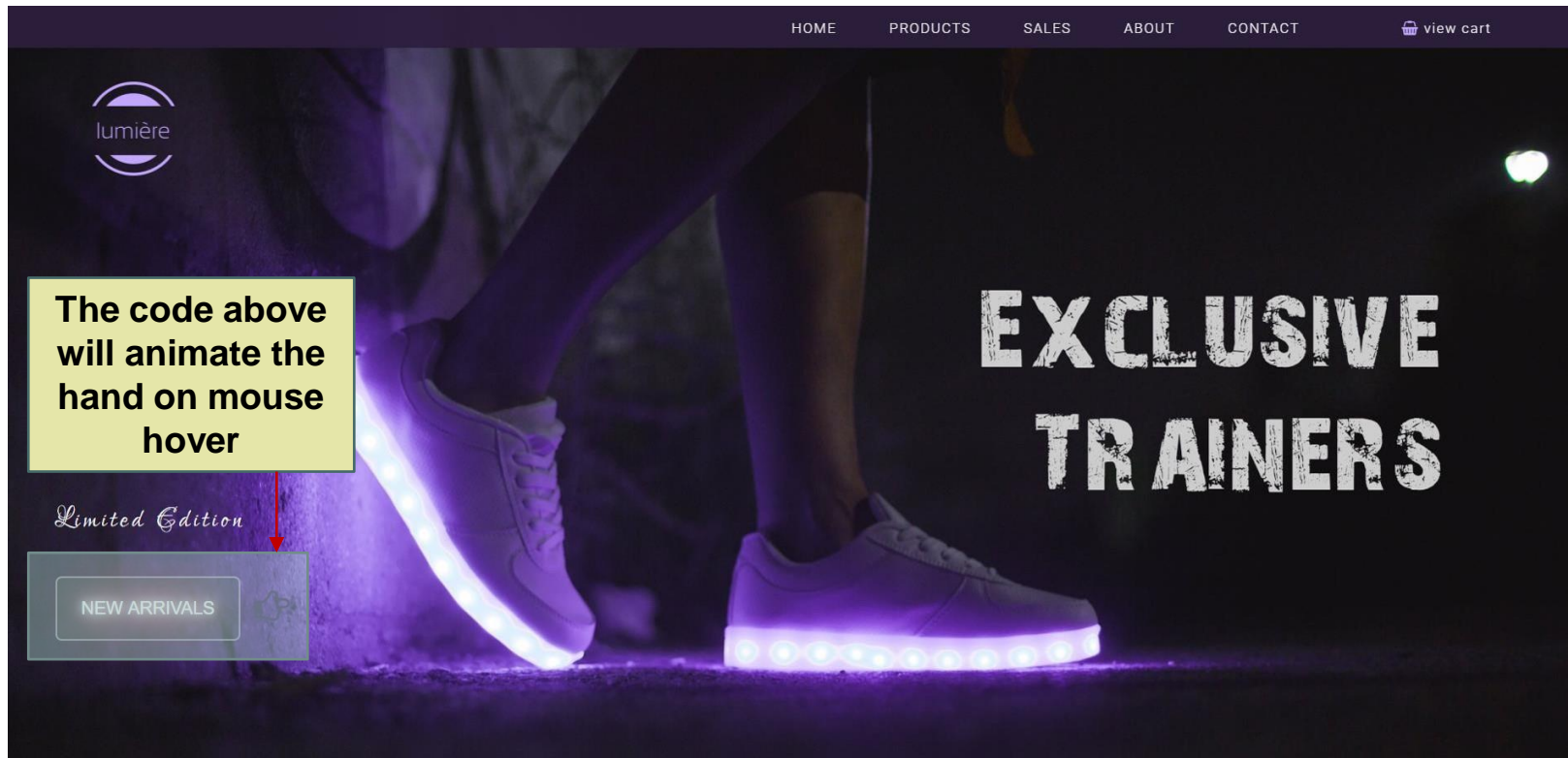
CSS3 Animations
w3schools

CSS3 Animations
CSS Tricks

CSS3 Animations
Pluralsight



CSS3 Animations



CSS3 Animations

CSS3 animations are quite an extended topic, so here are other properties we can use with CSS3 animations. For sample code, examples and get familiar with the properties, use the links below and CSS animate website.

@keyframes

animation

animation-delay

animation-duration

animation-fill-mode

animation-iteration-count

animation-name

animation-play-state

animation-timing-function

CSS3 Animations
w3schools

CSS3 Animations
CSS Tricks

CSS3 Animations
Pluralsight



CSS3 Text Shadow

CSS3 text effects are a small new feature, but if we think about what we can do with them, they might be one of the very important ones. For instance, **text shadows property** eliminated the need for images when applying shadow effect to text and other elements.

text-shadow: h-shadow v-shadow blur-radius color|none|initial|inherit;

```
h1 {  
    text-shadow: 2px 2px 2px #ccc;  
}
```

CSS3 Text Shadow
w3schools

CSS3 Text Shadow
CSS Tricks

CSS3 Text Shadow
Pluralsight



CSS3 Fonts

CSS3 comes with build in support for using **custom fonts**. We are no longer limited to using system fonts, we can use just about any font.

- @font-face allows using embedded fonts in the page
- Support for TTF, OTF, WOFF and SVG(browser-dependant!)

```
@font-face {  
    font-family: salesFont;  
    src: url(embedFonts/HelsinkiXXL-Black.woff);  
}
```

CSS3 Fonts
w3schools

CSS3 Fonts
CSS Tricks

CSS3 Fonts
Pluralsight



CSS3 Fonts

```
@font-face {  
    font-family: salesFont;  
    src: url(embedFonts/HelsinkiXXL-Black.woff);  
}  
.shoppingText {  
    font-family: salesFont;  
}
```

FREE Fonts
Google fonts

FREE Fonts
Font Squirrel

FREE Fonts
1001 FREE Fonts



CSS3 Multi-Column

- CSS3 page layout support for better display and organise your page content in columns.

```
.featuredP {  
    -webkit-column-count: 3;  
    -moz-column-count: 3;  
    column-count: 3;  
}
```

CSS3 Multi-Column
w3schools

CSS3 Multi-Column
CSS Tricks

CSS3 Multi-Column
Pluralsight



CSS3 Multi-Column

- CSS3 page layout support for better display and organise your page content in columns.

They are other CSS3 properties we can use:

`column-width: 15em;`

`column-gap: 25px;`

and more...

CSS3 Multi-Column
w3schools

CSS3 Multi-Column
CSS Tricks

CSS3 Multi-Column
Pluralsight



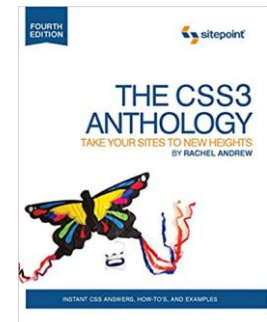
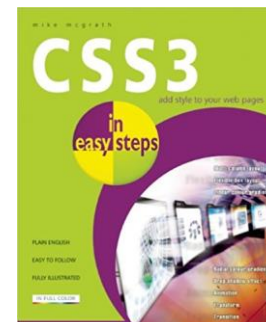
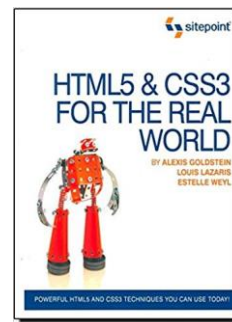
Resources

- Pluralsight video tutorials

CSS3 In-Depth
Intermediate - Pluralsight

CSS3 From Scratch
Beginner - Pluralsight

- HTML5 & CSS3 (Note: The books are only suggestions)



Resources cont.

- Relevant CSS3 websites for sample codes, examples and general information.

CSS3 w3schools

CSS3 CSS Tricks

CSS3 Info

Stack Overflow

Can I Use

Awwwards



Download Files

Login into your VLE, look for HTML5 and CSS3 folder.
Inside the folder click on CSS3 Part 1.

or

Access my GitHub account and download the
CSS3 Part1 folder.

GitHub Account



Apply CSS3 to our Case Study

