



# CSS3 Party 1

## Fundamentals

Week 1 – Full-Stack DPP Course



# Welcome

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# Part 1 Outline

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- 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

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- 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

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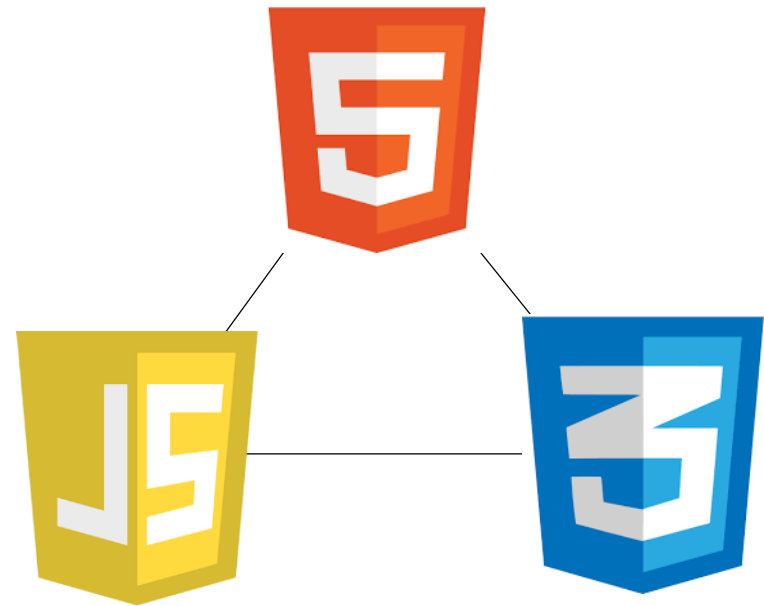
- Learners would have a good understanding of:
  - CSS3 Borders and Backgrounds
  - CSS3 Gradients
  - CSS3 Transformations
  - CSS3 Transitions
  - CSS3 Animations
  - CSS3 Text Effects
  - CSS3 Fonts
  - CSS3 Page Layout



# The Web Development Trifecta

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- **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

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- **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" />
```

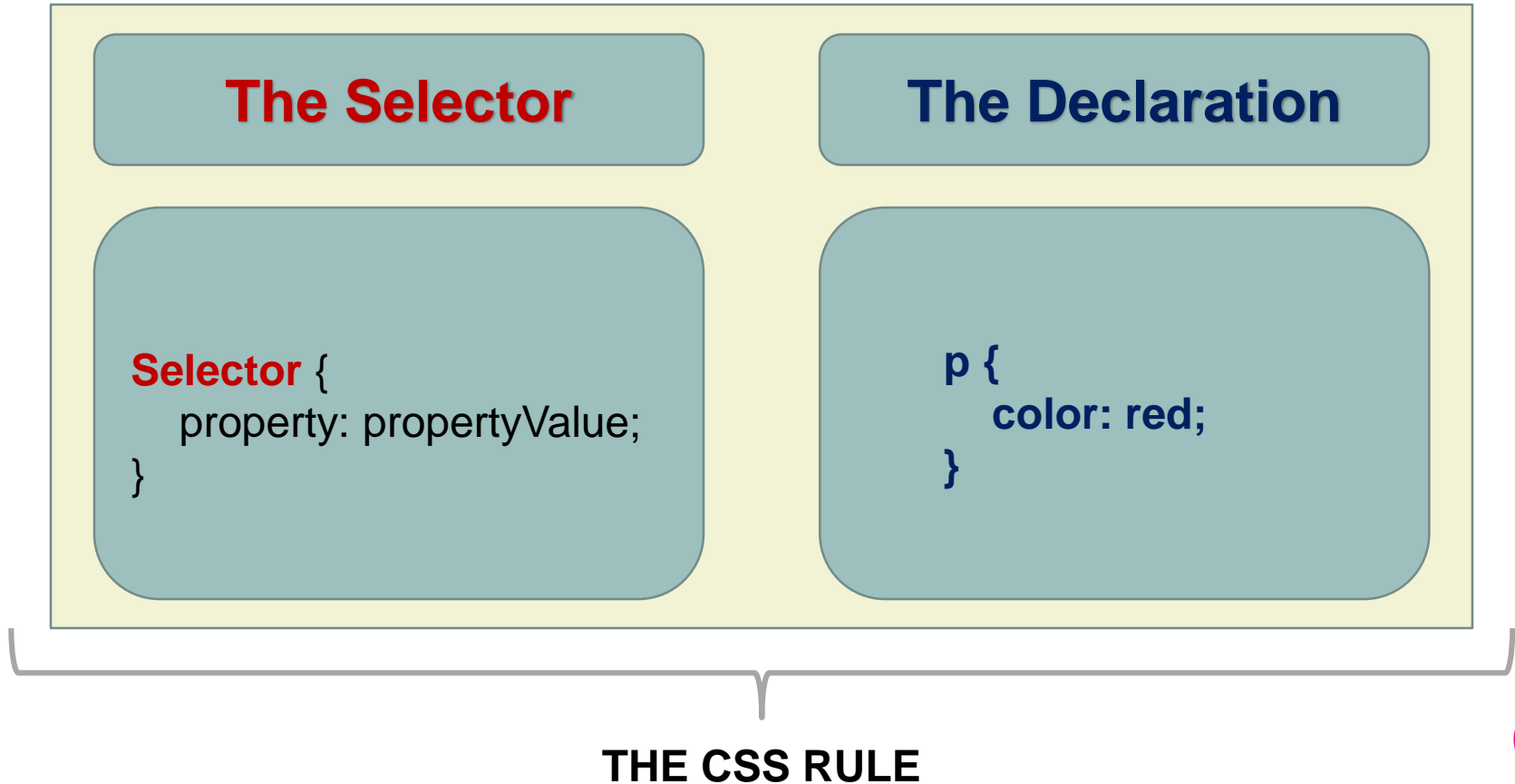
```
</head>
```





# 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

## **box-sizing : content-box;**

Content-box model exclude the border, padding and margin

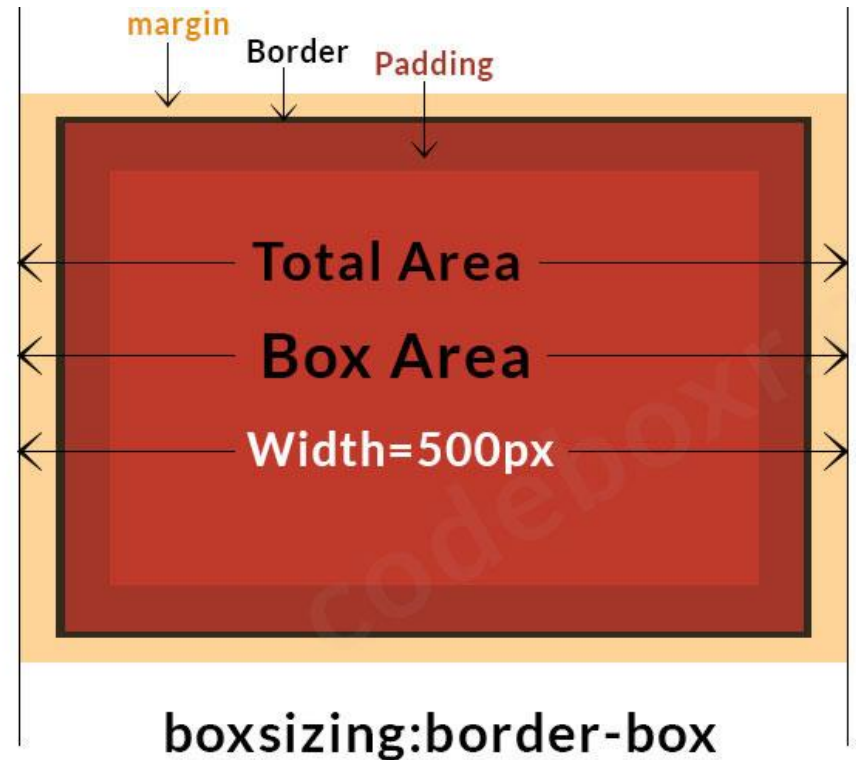
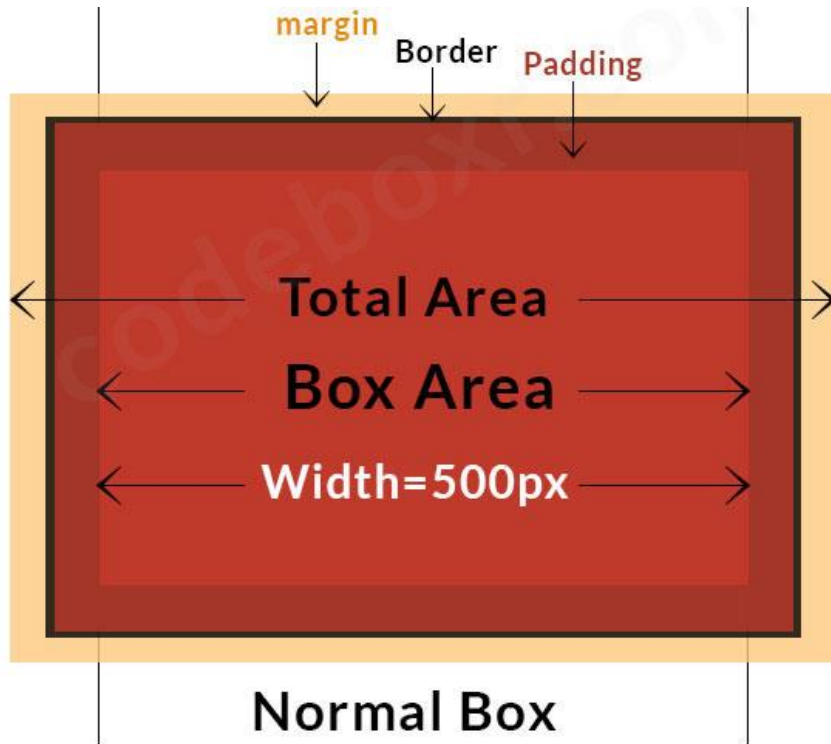


## **box-sizing : border-box;**

In border-box model all included inside with (margin, padding, border)



# The CSS Box Model cont.



# Page Layout with CSS

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- CSS can specify how an element will be positioned
- **Inline:**
  - The element should be displayed next to each other
  - `<span>`, `<br>`, `<img>`, `<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>`, `<ul>`, `<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

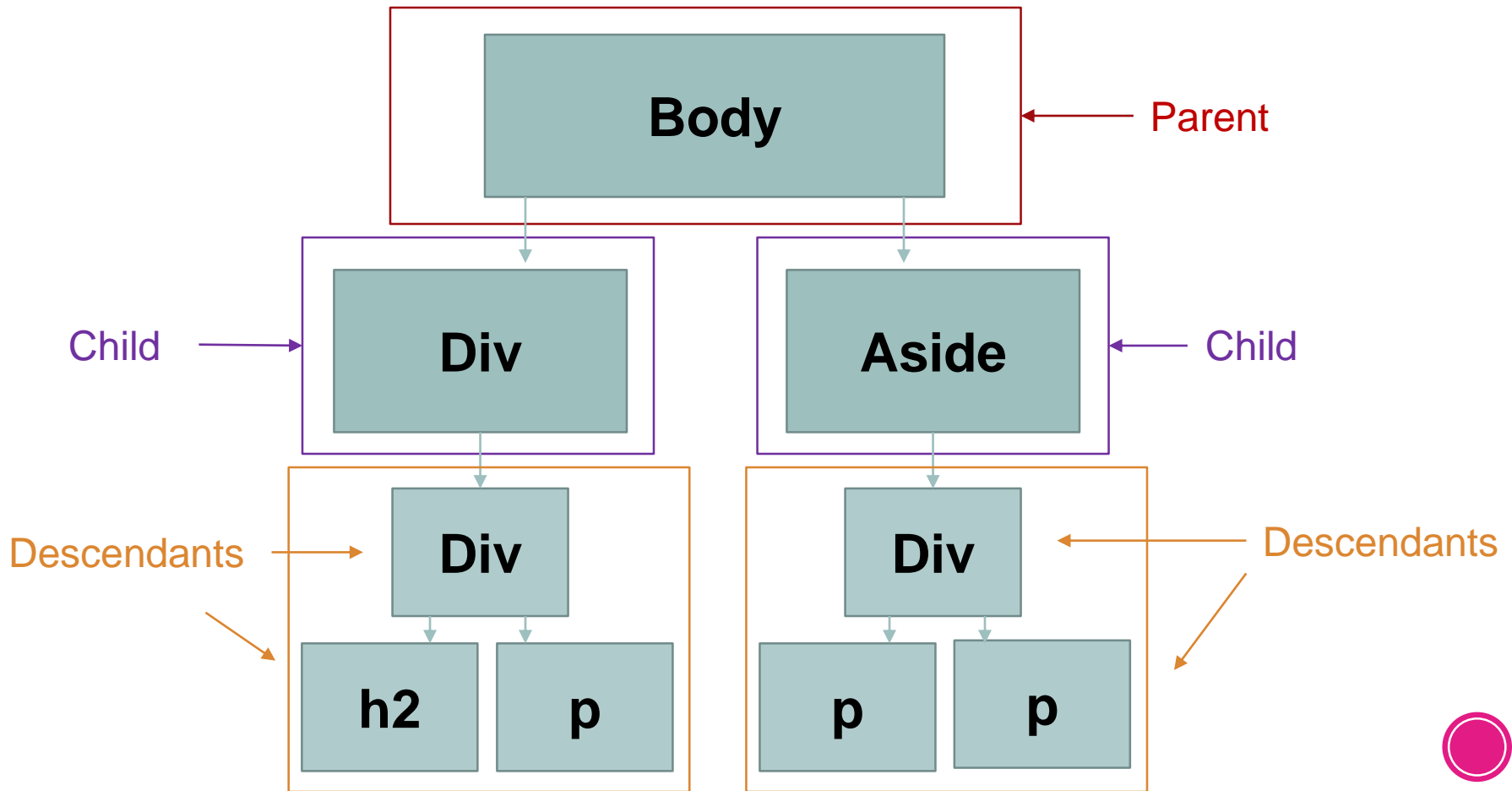
Author **Important** Declarations

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

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Selectors

Box model

Background and border changes

Text effects

2D and 3D transformations

Animations

Column-based layout

User interface changes



# CSS3 New Modules

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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%;}  
}
```

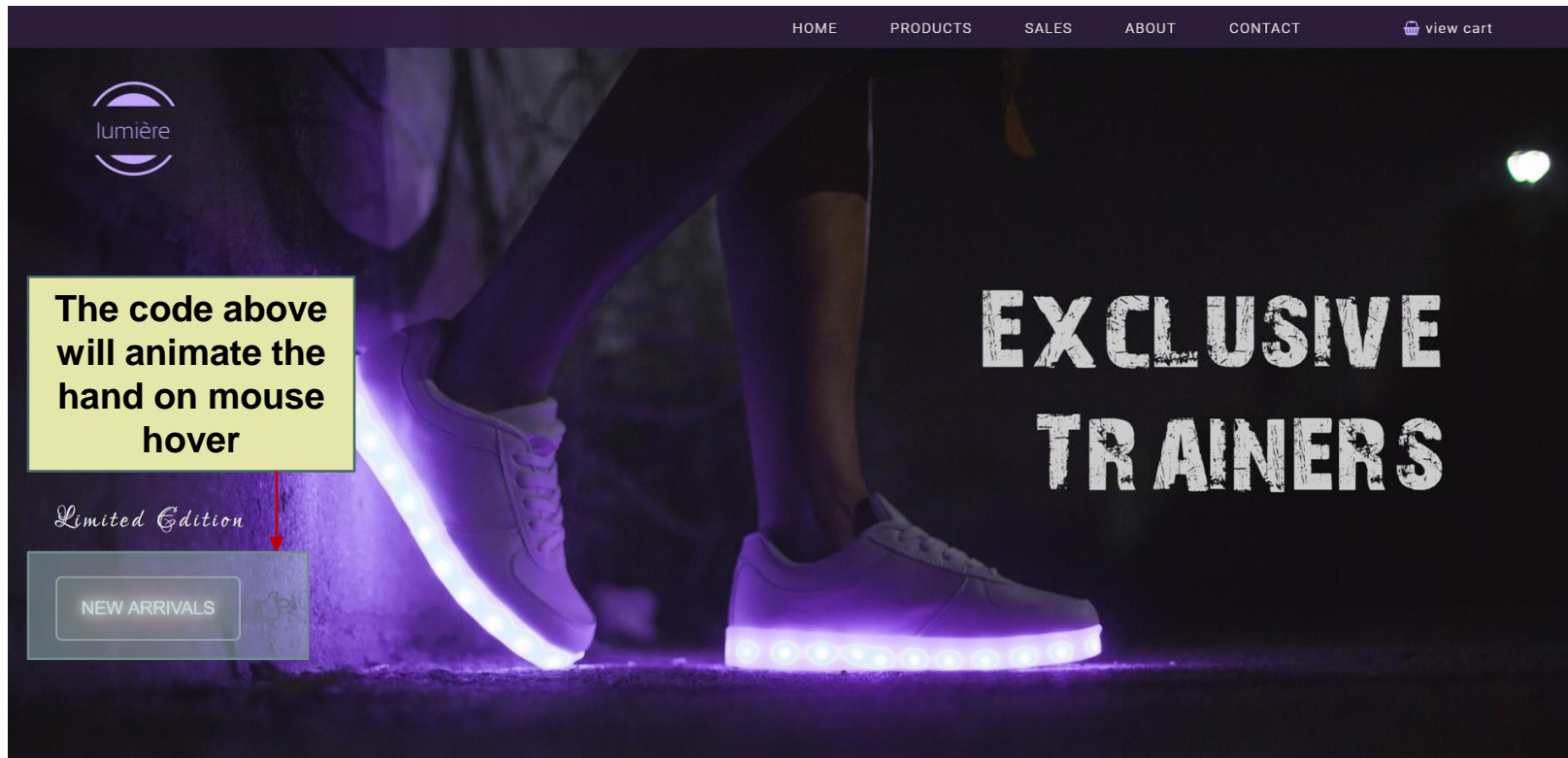
CSS3 Animations  
w3schools

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-duration

animation-name

animation

animation-fill-mode

animation-play-state

animation-delay

animation-iteration-count

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



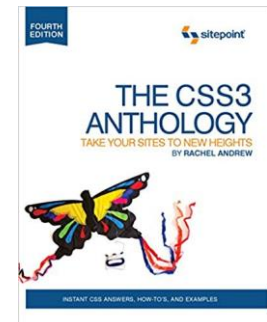
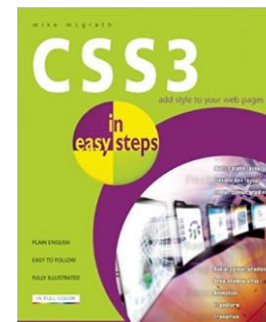
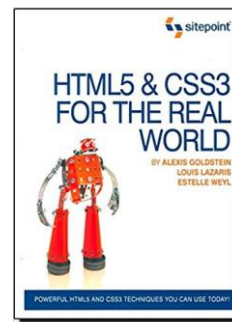
# Resources

- 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

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