Chapter 04

Introduction to **Web Design**
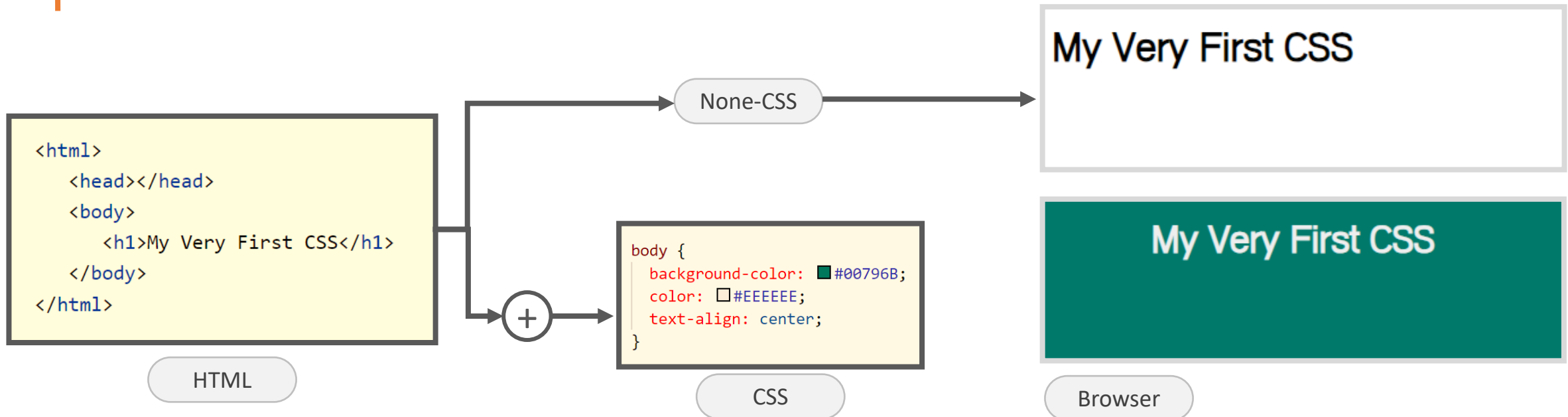
Basic CSS

Content

- ➢ CSS Fundamentals

- ➢ CSS Selectors and Styling

CSS Fundamentals

❑ **CSS** stands for **Cascading Style Sheets**

❑ What does it do? What is CSS and why use it?

➔ CSS *(Cascading Style Sheet)* is the **style language for the web**

- Every beautiful thing you see on the web is largely powered by CSS. That's the very simple way to put it

- However, CSS is not only used for the web. It may also be used to style any other documents written in a markup language

```
<html>
    <head></head>
    <body>
        <h1>My Very First CSS</h1>
    </body>
</html>
```

HTML

None-CSS

```
body {
    background-color: ■#00796B;
    color: □#EEEEEE;
    text-align: center;
}
```

CSS

My Very First CSS

My Very First CSS

Browser

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CSS Selectors and Styling

❑ **How CSS rules work**

Let's take a look at a very basic CSS rule. By "rule" I mean a piece of CSS code.

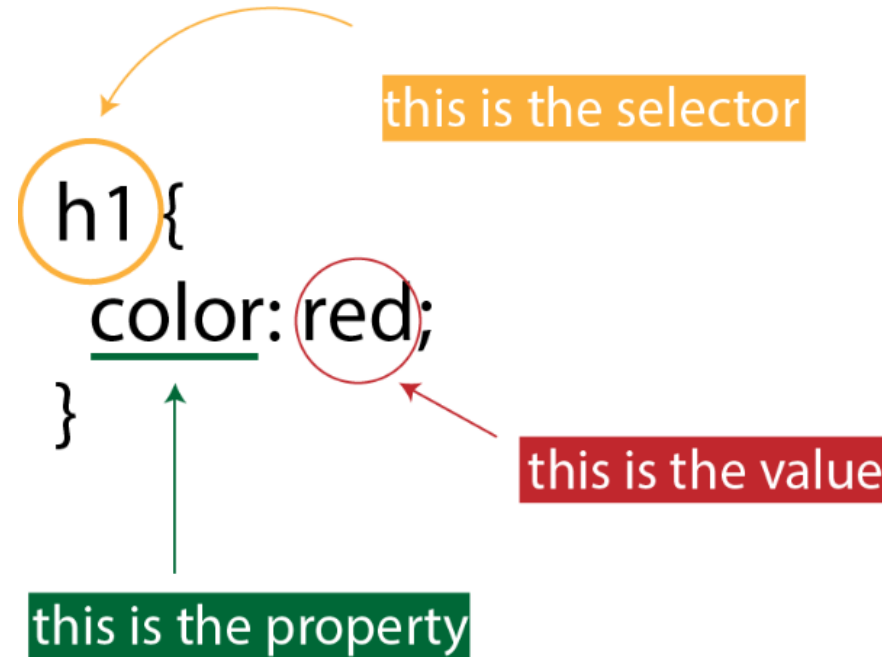The following code is to highlight a text in "H1" tag with "red" color

```
<html>
    <head></head>
    <body>
        <h1>My Very First CSS</h1>
    </body>
</html>
```

HTML

```
h1 {
    color: ■red;
}
```

CSS

h1 {
color: red;
}

this is the selector

this is the value

this is the property

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CSS Selectors and Styling

❑ **The Element Selector**

If you take a look at the html responsible for the layout above, you'll notice we have a couple elements there.

HTML

```html
<html>
    <head></head>
    <body>
        <h1>My Very First CSS</h1>
    </body>
</html>
```

CSS

```css
body {
    background-color: ☐#ccc;
}
```

▪ In the code above, the "body" element is selected and styled. "body" could be substituted for any other html element.

➔ Most used HTML elements with CSS for styling your web page

Div (Division): <div>

Header Elements: <h1>, <h2>, <h3>, <h4>, <h5>, and <h6>

Paragraphs: <p>

Links: <a>

Lists: <ol>, <ul>,

Buttons: <button> or <input type="button">

Forms: <input type="text" >

Image: <img>

Table: <table>

Etc....

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CSS Selectors and Styling

❑ **The Class Selector**

A single class name can be applied to multiple elements.
In the example at the start of this lesson, we have the following:

HTML

```
<html lang="en">
<head>...</head>
<body>
  <p class="info">Some vital info</p>
  <p class="info">Some other vital info - really?</p>
  <p class="primary">Basic texts</p>
</body>
</html>
```

CSS

```
.info {
  color: □white;
}
```

- You add a "**.**" before the class name. Then style the selected class whichever way you like.
- The single declaration "*color: white*" will now be applied to *every element* with the class name, info.

CSS Selectors and Styling

❑ **The ID Selector**

Unlike classes which may be applied to as many elements as possible, an ID is specific to a single element. So how do you select an Id in CSS?

```
<html lang="en">
<head>...</head>
<body>
  <p class="info">Some vital info</p>
  <p class="info">Some other vital info - really?</p>
  <p id="warning">This is dangerous</p>
</body>
</html>
```

HTML

CSS

```
#warning {
  color: ☐white;
}
```

- ▪ You add the pound sign, "#" before the ID name.
- ▪ ID name is basically not designed to apply for several elements like Class selector. Thus, one element should have one ID selector.

❑ **The Grouping Selector**

We have seen how to individually target elements, classes, and IDs. What if you want to apply the same CSS declaration to 2 different classes?

CSS

```
<p class="info">Some vital info</p>
<p class="primary">Some other vital info - really?</p>
```

HTML

```
.info,
.primary {
  background-color: ■black;
}
```

- ▪ Just add a comma "," and you can group multiple selectors

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CSS Selectors and Styling

❏ **The Descendant Selectors**

Allow you to apply styles to elements that are descendants of another element, meaning they are nested within it

```html
<html>
<head></head>
<title>Descendant selectors</title>
<body>
  <div>
    <h1>DIV: Header 1</h1>
    <h2>DIV: Header 2</h2>
  </div>
  <section>
    <h1>Header 1</h1>
    <h2>Header 2</h2>
  </section>
</body>
</html>
```

HTML

```css
div h1 {
    color: blue;
}

div h2 {
    color: red;
}
```

CSS

```
DIV: Header 1

DIV: Header 2

Header 1

Header 2
```

Browser

SPACE!!!

parent selector   child selector

div h1 {
    color: red;
}

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CSS Selectors and Styling

❏ **The Pseudo-class Selectors**

Allow you to apply styles to elements that are descendants of another element, meaning they are nested within it

```html
<html>
  <head></head>
  <title>Descendant selectors</title>
  <body>
    <a href="www.google.com"> Click Me </a>
  </body>
</html>
```

HTML

```css
a:link {
    color:  #0000ff;
}
a:visited {
    color:  #ff00ff;
}
a:hover {
    color:  #00ccff;
}
a:active {
    color:  #ff0000;
}
```

CSS

Click Me Click Me Too Click Me Too Click Me Too Click Me Too

- **a:link** will target and style every tag with an href attribute
- **a:visited** will target every anchor tag, a that has already been visited (clicked) on the page
- **a:hover** will target every link as you hover over them
- **a:active** will style the link, just when you click on it

CSS Selectors and Styling

❑ **Other Pseudo-classes you should be aware of**

- First Child

```
div p:first-child {
    color:  ■red
}
```

```
li:nth-child(1) {
    color:  ■red
}
```

- Last Child

```
div p:last-child {
    color:  ■red;
}
```

- On child

```
li:only-child {
    color:  ■red;
}
```

- Even/odd child

```
li:nth-child(odd) {
    color:  ■red;
}
```

```
li:nth-child(even) {
    color:  ■red;
}
```

```
li:nth-child(2n) {
    color:  ■red;
}
```
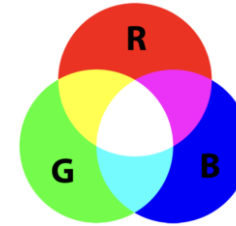
```
li:nth-child(2n+1) {
    color:  ■red;
}
```

CSS Selectors and Styling

❑ **Making sense of Colors in CSS**

Colors make up beautiful designs -

We can use names such as **red**, **blue**, **green**, and etc.

```
1  body {
2      background-color: ■red;
3  }
```

▪ **RGB values**

```
1 body {
2   background-color: rgb(0,0,0);
3 }
4
5 body {
6   background-color: rgb(255,255,255)
7 }
```

red → green → blue

▪ **RGBA Values (Alpha, opacity, or transparency)**

The "A" after "RGB" in "RGBA" stands represents the color's alpha channel

```
p {
      background-color: rgba(0,255,0,0.8)
}
```

▪ **The HEX Value**

Color is defined using something referred to as *HEX values*

This would give a red color:

```
p {
      background-color: #FF0000
}
```

➢ **Practical Color Tools**

MaterialUI.co
Coolors.co
Colorhunt.co

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CSS Selectors and Styling

❑ **Units in CSS**

▪ **Pixels (px)**

Many designers are very familiar with the pixels

```
1  p {
2      font-size: 10px
3  }
```

▪ **Ems (em)**

The **em** is a relative font measurement

```
1em = 16px
```

```
1  p {
2      font-size: 2em; /*This is equal to 16px * 2*/
3  }
```

▪ **Percentages (%)**

```
1  p {
2      font-size: 100%
3  }
```

▪ **vh and vw** (screen size, window size)

The vh and vw units are based on the user's viewport height and width

```
1  .entire-size {
2      height: 100vh;
3      width: 100vw;
4  }
```

Below are the units we can also use:

▪ **Points (pts)**
▪ **Picas (pc)**
▪ **Rems (rem)**
▪ **Exes (ex)**
▪ **vmin and vmax**

CSS Selectors and Styling

❑ **Linear Gradients**

A linear gradient is a gradient that fades from one color
to another **over a line**

```
1   <html>
2     <head></head>
3     <body>
4       <div></div>
5     </body>
6   </html>
```

```
1   body {
2     width: 100%;
3     height: 100%;
4   }
5
6   div {
7     width: 100%;
8     height: 100%;
9     background-image: linear-gradient(☐yellow, ■red)
10  }
```

▪ **Using Directions**

```
#element {
    background-image: linear-gradient(to top, yellow, red)
}
```

The available keywords include: **to top**, **to bottom**, **to right** and **to left**

CSS Selectors and Styling

❑ **Fonts in CSS**

Generally speaking, fonts have more generic family names. So, you can specify that a certain family of a font be used.

```
1  p {
2       font-family: Verdana
3  }
```

The more generic names that the CSS Specification allows are:

- serif
- sans-serif
- monospace
- cursive
- fantasy

Let me show you what a more practical font-family declaration would look like:

```
1  p {
2       font-family: Verdana, Geneva, Arial, Helvetica, sans-serif;
3  }
```

Good luck 👌

References

1. https://www.educative.io/ (**The Complete Advanced Guide to CSS**)