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# CODING 101

## Web Development Essentials

### HTML, CSS, Javascript

Session 3

# Today’s Agenda

- CSS Basics
- Classes & Selectors
- CSS Layout & Positions

# What is CSS?

- CSS stands for **C**ascading **S**tyle **S**heets
- CSS describes how HTML elements are to be displayed on screen
- CSS saves a lot of work. It can control the layout of multiple web pages all at once

# Why Use CSS?

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.(**Responsibility**)

- ★ CSS solved a Big Problem
- ★ CSS save a lot of work!

# CSS syntax


- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.
- Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

# All CSS Selectors

| Selector | Example | Example description |
|---|---|---|
| *#id* | #firstname | Selects the element with id="firstname" |
| *.class* | .intro | Selects all elements with class="intro" |
| *element.class* | p.intro | Selects only <p> elements with class="intro" |
| * | * | Selects all elements |
| *element* | p | Selects all <p> elements |
| *element,element,..* | div, p | Selects all  elements and all <p> elements |

# How To Add CSS

**There are three ways of inserting a style sheet:**

- Inline CSS
- Internal CSS
- External CSS

# Inline CSS

- An inline style may be used to apply a unique style for a single element.
- To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue; text-align:center;">Coding 101</h1>

<p style="color:#555; font-size:1.2rem;">Today is our 3rd session.</p>

</body>
</html>
```

# Internal CSS

- An internal style sheet may be used if one single HTML page has a unique style.
- The internal style is defined inside the **<style>** element, inside the head section.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}
h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>
<h1>Coding 101</h1>
<p>Today is our 3rd session.</p>
</body>
</html>
```

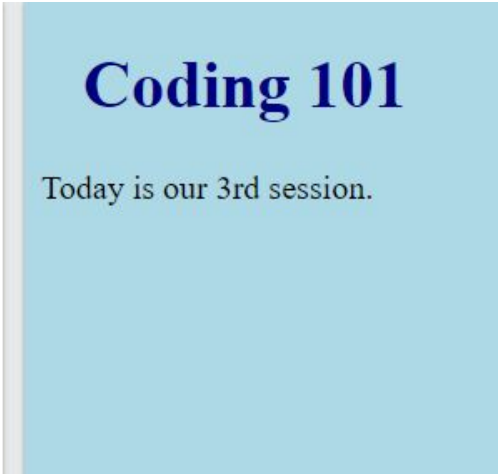
# External CSS

- With an external style sheet, you can change the look of an entire website by changing just one file!
- Each HTML page must include a reference to the external style sheet file inside the **<link>** element, inside the head section.

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>

<h1>Coding 101</h1>
<p>Today is our 3rd session.</p>

</body>
</html>
```



# CSS Units

There are two types of  length units:

- Absolute Lengths
- Relative Lengths

# Absolute Lengths

- The absolute length units are fixed and a length expressed in any of these will appear as exactly that size.
- Absolute length units are not recommended for use on screen, because screen sizes vary so much. However, they can be used if the output medium is known, such as for print layout.

| Unit | Description |
|---|---|
| cm | centimeters |
| mm | millimeters |
| in | inches (1in = 96px = 2.54cm) |
| px * | pixels (1px = 1/96th of 1in) |
| pt | points (1pt = 1/72 of 1in) |
| pc | picas (1pc = 12 pt) |

# Relative Lengths

- Relative length units specify a length relative to another length property. Relative length units scale better between different rendering medium.

| Unit | Description |
|---|---|
| em | Relative to the font-size of the element (2em means 2 times the size of the current font) |
| ex | Relative to the x-height of the current font (rarely used) |
| ch | Relative to the width of the "0" (zero) |
| rem | Relative to font-size of the root element |
| vw | Relative to 1% of the width of the viewport* |
| vh | Relative to 1% of the height of the viewport* |
| vmin | Relative to 1% of viewport's* smaller dimension |
| vmax | Relative to 1% of viewport's* larger dimension |
| % | Relative to the parent element |

# CSS Layout - The position property

The position property specifies the type of positioning method used for an element.

There are five different position values:

- Static — HTML elements are positioned static by default.
- Relative — An element with `position:relative;` is positioned relative to its normal position.
- Fixed — An element with `position:fixed;` is positioned relative to the viewport.
- Absolute — An element with `position: absolute;` is positioned relative to the nearest positioned ancestor
- Sticky — An element with `position: sticky;` is positioned based on the user's scroll position.

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# Thank you!

## Let’s get in touch!

- Discord channels
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