

Web Technologies

Week # 6: Introduction to CSS

Spring 2023



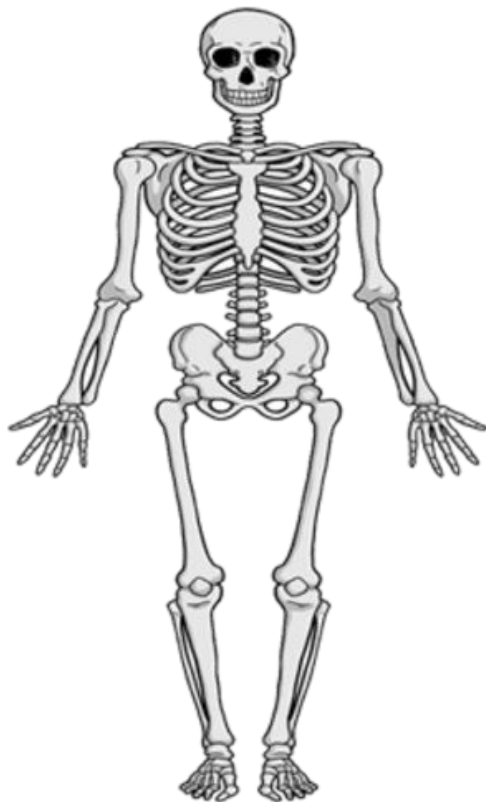
Today's Objective

- Recap
- Introduction
- Types of CSS
- CSS Selectors
- Text properties
- Background
- Colors

Introduction to CSS

- CSS stands for “Cascading Style Sheets”
- It describes how HTML elements are to be displayed
- Able to control the layout of multiple web pages all at once
- Used to define the styles of website, including elements, design, layout and variety for display sizes.
- **HTML** is used for **structure**, while **CSS** is used for **styling**

HTML



STRUCTURE

HTML + CSS



Vs.

PRESENTATION

CSS Syntax

- CSS has **selector** which have **properties**, each property has some **value**.
- Selector: An HTML tag to which style has to be applied like **H2, TR, INPUT** etc.
- Property: The attribute of an HTML tag to which style has to be applied like **COLOR**
- Value: the value is given to a property like **#2ACDFE**
- Example:

```
H2{color: #2ACDFE; font-size: 26px; text-align: center}
```



Selector

Property

Value

How to use CSS

- CSS can be used in **three ways**.
 - Inline
 - Internal
 - External
- Inline CSS: Embedding the CSS code within the HTML tag

```
<h2 style="color: ■ #C32DF5;">Let's start some CSS!</h2>
```

- Internal CSS: We use style tag in HTML head tag and apply all the CSS

```
1 <HEAD>
2   <STYLE>
3     p { font-size: 10px;
4         color: ■ gold;
5     }
6   </STYLE>
7 </HEAD>
```

How to use CSS

- External CSS
 - We will write the CSS code in a **separate** file and **attach** the file in our HTML file.
 - Use `<link>` tag to attach the CSS file.
 - The file extension will be (.css)
 - Which style to execute if all three are given???

```
<html>
  <head>
    <title>A test of CSS!</title>
    <link rel="stylesheet" type="text/css" href="style.css" />
  </head>

  <body>
    <h2 style="color: #C32DF5;">Let's start some CSS!</h2>
  </body>
</html>
```

```
1  v h2{
2    color: gold;
3    font-family: 'Lucida Sans';
4  }
5
```

CSS Selectors

- There are different types of selectors in CSS.
- The most common types are:
 - Element selector - based on element name
 - ID selector - uses the HTML id attribute to select a unique element, a # symbol is used to give an id selector.
 - Class selector - uses the HTML class attribute to select multiple elements with same class, use a . symbol to identify a class
 - Universal Selector - select all the HTML elements - *

CSS Selectors

- The most common types are:
 - Group selector - selects all HTML elements with same style use comma , to select multiple elements (H2, P)
 - Descendant selector - select all elements which are descendant of another element. (P A)
 - Child selector - select all elements which are child (element inside an element) of element (P > H1)
 - Pseudo selector - used to define a special state of an element (a:link{ } a:hover{ })

```

h2{
  color: gold;
  font-family: 'Lucida Sans';
}

#tmp{
  color: antiquewhite;
}

.tmp_cls{
  color: royalblue;
}

*{
  color: greenyellow;
  background-color: black;
  font-family: 'Courier New', Courier, monospace;
}

h1, h2, p{
  background-color: royalblue;
}

div p{
  font-family: Georgia, 'Times New Roman', Times, serif;
  font-weight: bold;
}

div > a{
  color: yellow;
  font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
}

```

```

<html>
  <head>
    <title>A test of CSS!</title>
    <link rel="stylesheet" type="text/css" href="style.css">
    <style>
      h2{
        color: powderblue;
      }
    </style>
  </head>

  <body>
    <h2 style="color: #C32DF5;">Let's start some CSS!</h2>
    <p>This is a new paragraph</p>
    <div>
      <p>This is a child of div</p>
      <span><a href="#"> THIS IS A LINK </a></span>
      <br>
      <a href="#">THIS IS DESCENDENT OF DIV</a>
    </div>
  </body>
</html>

```

Let's start some CSS!

This is a new paragraph

This is a child of div

THIS IS A LINK

THIS IS DESCENDENT OF DIV

Span and Div tags

- Inline and Block Elements???
- A ` ... ` element defines an **inline** structure, i.e. it simply defines a stretch of text. Thus it can be used within a paragraph or table element without affecting the flow of the text.
- A `<div> ... </div>` element defines a **block** structure. Usually the browser will place line breaks before and after this element, but otherwise it has no effect itself.

CSS font properties

- The following properties are of font of HTML element:
 - The **font-family** property is used to change the face of a font.
 - The **font-style** property is used to make a font italic or oblique.
 - The **font-variant** property is used to create a small-caps effect.
 - The **font-weight** property is used to increase or decrease how bold or light a font appears.
 - The **font-size** property is used to increase or decrease the size of a font.

CSS Text Properties

- Following are the text properties of an HTML element:
 - The **color** property is used to set the color of a text.
 - The **letter-spacing** property is used to add or subtract space between the letters.
 - The **word-spacing** property is used to add or subtract space between the words.
 - The **text-indent** property is used to indent the text of a paragraph.
 - The **text-align** property is used to align the text of a document.
 - The **text-decoration** property is used to underline, overline and strikethrough text.
 - The **text-transform** property is used to capitalize text or convert text to uppercase or lowercase letters.
 - The **text-shadow** property is used to set the text shadow around a text.
 - The **white-space** property is used to control the flow and formatting of text.

CSS Background Properties

- Following background properties can be applied to various HTML elements:
 - The **background-color** property is used to set the background color of an element.
 - The **background-image** property is used to set the background image of an element.
 - The **background-repeat** property is used to control the repetition of an image in the background.
 - The **background-position** property is used to control the position of an image in the background.
 - The **background-attachment** property is used to control the scrolling of an image in the background.

CSS Border Properties

- Following border properties can be applied to an element:
 - The **border-color** property is used to set the color of the border.
 - The **border-style** property is used to set the style of border.
 - The **border-width** property is used to set .
 - The **border** property is used to set the width, style and color of the border in one declaration.

CSS Colors

- Colors in CSS can be defined using:
 - Names - LightGray, PowderBlue
 - RGB - rgb(0-255, 0-255, 0-255)
 - HEX - #AABBC9
 - RGBA - Alpha to add some transparency (0-1)
 - HSL - Hue (0-360) Saturation (0-100) Lightness (0-100)

That's all for today...!

