greatlearning
Power Ahead

# Front End Development - CSS

# Table of Content

# What is CSS

- CSS stands for Cascading Style Sheets
- If HTML is the structure of the house then CSS is the look and feel of the house
- It’s the language to make our web pages presentable
- Designed to make style sheets for web
- Now let’s try to break the acronym:

    Cascading: Falling of Styles

    Style: Adding designs/Styling our HTML tags

    Sheets: Writing our style in different documents

# History

- 1994 : First Proposed by Hakon Wium Lie on 10th October
- 1996: CSS was published on 17th November with influencer Bert Bos
- Later he became co-author of CSS
- 1996 : CSS became official with CSS was published in December
- 1997 : Created CSS level 2 on 4th November
- 1998: Published on 12th May

# CSS Editors

- Atom
- Brackets
- Espresso(Mac user)
- Notepad++(Great for HTML & CSS)
- Komodo Edit (Simple)
- Sublime Text

# Basic Structure

```
Selector {
                    Property1 : value;
        Property2 : value;
        Property3 : value;
    }
```

- Selector: selects the element you want to target
- There are few basic selectors like tags, id's, and classes
- All forms this key - value pair
- Keys : properties(attributes) like color, font-size, background, width, height,etc
- Value : values associated with these properties
- Always remains same whether we apply internal or external styling

# Comments

- Comments don’t render on the browser
- Helps to understand our code better and makes it readable.
- Helps to debugging our code
- Two ways to  comment:
  - Single line
  - Multiple line

# Different ways to Write CSS

- There are 3 ways to write Css in our HTML file.
  - Inline Css
  - Internal Css
  - External Css
- Priority order
  - Inline > Internal > External

# Inline CSS

- Before Css this was the only way to apply styles
- Not an efficient way to write as it has lot a redundancy
- Self contained
- Uniquely applied on each element
- Idea of separation of concerns was lost
- Example:

```
<h3 style=” color:red”> Have a great day </h3>

<p  style =” color: green”> I did this , I did that </p>
```

# Internal CSS

- With the help of style tag we can apply styles within the HTML file
- Redundancy is removed
- But idea of separation of concerns still lost
- Uniquely applied on single document
- Example:

```
< style>
        h1{
            color:red;
          }
 </style>
<h3> Have a great day </h3>
```

# External CSS

- With the help of <link> tag in head tag we can apply styles
- Reference is added
- File saved with .css extension
- Redundancy is removed
- Idea of separation of concerns is maintained
- Uniquely applied on each document
- Example:

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

h1{
    color:red;        //.css file
}
```

# CSS Selectors

- Selector are used target elements and apply Css
- Three simple selectors
    - Element Selector
    - Id Selector
    - Class Selector

- Priority of Selectors

    Id > Class>Element

# Element Selector

- Used to select HTML elements by its name
- How we do it

```
h1
        {
                Color: red;
        }
```

We selected the heading tag and then changed the color property i.e text color to red. Now whatever is written in this tag (content) will have the text color as red

# ID Selector

- Id attribute is used to select HTML element
- Used to target specific or unique element
- How we do it

```
#unique
        {
                Color: red;
        }
<p id=”unique”> Hi </p>
```

We selected id and then changed the color property i.e text color to red. Now whatever is written in this tag (content) will have the text color as red

# Class Selector

- Class attribute is used to select HTML element
- Used to target specific class of element
- How we do it

```
.group
        {
                Color: red;
        }
<p class=”group”> Hi </p>
```

We selected class and then changed the color property i.e text color to red. Now whatever is written in this tag (content) will have the text color as red

# Universal Selector

- Wild card character
- Used to target specific all the elements
- How we do it

```
*
        {
                Color: red;
        }
<h1> Hi </h1>
<p> Bye </p>
```

We selected all the elements then change the color property i.e text color to red. Now whatever is written in all the tags (content) will have the text color as red

# Group Selector

- Group selector minimizes code
- Used to target specific group of elements
- How we do it

```
h1,p   {
            color: red;
        }
<h1> Hi </h1>
<p> Bye </p>
```

We selected these elements and then changed the color property i.e text color to red. Now whatever is written in these tags (content) will have the text color as red

# Descendant Combinator Selector

- Combine two or more selectors
- How we do it

```
<div id="out">
    <div class="in“>Hi </div>
</div>
```

We selected class inside id then changed the color property i.e text color to red. Now whatever is written (content) will have the text color as red

```
#out .in {
    color: red;
}
```

# Child Combinator Selector

- Combine two or more selectors like Descendant
- It only targets immediate child.
- How we do it

```
<div id="out">
        <div class="in“>Hi </div>
</div>
```

We selected class inside id then changed the color property i.e text color to red. Now whatever is written (content) will have the text color as red

```
#out > .in {
        color: red;
}
```

# Pseudo-class Selector

- Used to target state of element
- How we do it

```
p : hover
        {
                Color: red;
        }
<p> Hi </p>
```

We selected element and then changed the color property i.e text color to red. Now whatever is written in this tag (content) will have the text color as red

# CSS Color

- There are different colouring schemes in CSS
- 2 widely used techniques are as follows
    - **RGB**
        - This starts with rgb and takes 3 parameter
        - 3 parameter basically corresponds to red, green and blue
        - Value of each parameter may vary from 0 to 255.
        - Eg: rgb(255,0,0); means color red
    - **HEX**
        - Hex code starts with # and comprises of 6 numbers which is further divided into 3 sets
        - Sets basically corresponds to Red, Green and Blue
        - A single set value can vary from 00 to ff
        - Eg: #ff0000 ; means color red

# CSS Background

- There are different ways by which CSS can have effect on HTML elements
- Few of them are as follows:
    - Color - used to set the color of the background
    - Repeat - used to determine if image has to repeat or not and if it is repeating then how it should do that
    - Image - used to set image as the background
    - Position - used to determine the position of the image
    - Attachment - It basically helps in controlling the mechanism of scrolling

# CSS Background Demo

```
html{
	background: #ff9900;
}

p{
	background: url("https://encrypted-
tbn0.gstatic.com/images?q=tbn%3AANd9GcRT8t-o6oUJ-
E9YRhimOvTU2TSH7vlBnRWBN554_rX30dZah466&usqp=CAU");

	background-position: left;
	background-repeat: no-repeat;
	background-attachment: fixed;
}
```

# CSS Border

- Helps in setting up the border for HTML elements
- There are 4 properties that can help in setting up of border:
    - Width - sets the width of the border
    - Style - sets the style of border; Eg: solid, dashed etc.
    - Color - sets the color of the border
    - Radius - determines the roundness of the border

- You can set the border for specifically top, right, bottom and left
- We can also club top and bottom together and same goes for left and right
    - Eg: border-width: 2px 5px;  sets top and bottom 2px; left and right 5px
- Border can also be set in a single line
    - Eg: border : 2px solid blue;

# CSS Border Example

```
p{
        border-style: solid;
        border-color: blue;
        border-width: 2px 5px;
        border-radius: 10%;
}
```

# Box Model

- Every element in CSS can be represented using BOX model
- It helps developer to develop and manipulate the elements
- It consist of 4 edges
  - Content edge - It comprises of the actual content
  - Padding edge - It lies in between content and border edge
  - Border edge - Padding is followed by the border edge
  - Margin edge - It is outside border and controls margin of the element
- Example:

```
#styled{
        border: 2px solid blue;
        margin: 5px;
        padding: 20px;
        width:20px;
        height:20px;
}
```

# Conclusion

- Introduction to CSS
- CSS Basic Structure
- Different ways to write CSS
- CSS Selectors
- Color Property
- Background Property
- Border Property
- Box Model

greatlearning
Power Ahead

# Thank You