CSS

Introduction to CSS

* CSS - Cascading Style Sheets
* Describes how HTML elements are displayed on media
* CSS style rule is made up of 3 parts
  + Selector - HTML element that style is applied
  + Property - Attribute of HTML tag
  + Value - Values are assigned to properties
  + Ex: selector - table, property - border, values - 1px solid #C00
* Ways to insert style sheet
  + External CSS
    - Can write in any text editor, must save with .css extension
    - External CSS file can’t have any HTML tags
    - Ex:

body {

    background-color: lightblue;

}

* + - HTML file should be linked to css file using <link> tag in <head> section
    - Ex:

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <link rel="stylesheet" href="Mystyle.css">

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Internal CSS
    - Define using <style> tag inside HTML file inside head or body section
    - Ex:

<!DOCTYPE html>

<html>

<head>

<title> Best Website in the West </title>

<style>

body {

background-color: lightgreen;

}

</style>

</head>

<header>

<h1> Welcome to the Website </h1>

</header>

<body>

<p> Getting started with CSS3 </p>

</body>

<footer>

<p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Inline CSS
    - Used for single HTML element
    - Use <style> tag for inline element
    - Ex:

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p style = "color: lightseagreen;"> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Style precedence: inline style (inside HTML element) > External and internal (head section) > Browser default

Basic properties of CSS

* CSS property is used to style HTML elements
* Ex: Color, size, border, text
* CSS property has a property name and property value
* To specify more than one CSS property, semicolon is used

Text properties of CSS

* Font family - Choosing font size
* Font size - Use pixels (px) unit
* Font weight - Change thickness of text

Color properties of CSS

* Color
* Background color

Spacing properties of CSS

* Padding - Space around out content
* Margin - Spacing around the content
* Border - In between padding and margin

CSS background styling

* Background color
  + Valid color name - Ex: Blue
  + Hex value - Ex: #00ff00
  + RGB value - Ex: rgb(255,0,0)

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        body {

            background-color: blue;

        }

        h1 {

            background-color: #00ff00;

        }

        p {

            background-color: rgb(255,0,0);

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p style = "color: lightseagreen;"> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* Background image

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        body {

            background-image: url("Sample.jpg");

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p style = "color: lightseagreen;"> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* Background repeat
  + Default - Background image property repeats the image both horizontally and vertically
  + Background repeat can control the repeating properly
  + Use ‘repeat-x’, ‘repeat-y’, ‘no-repeat’

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        body {

            background-image: url("Sample.jpg");

            background-repeat: repeat-x;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p style = "color: lightseagreen;"> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* Background attachment
  + Determines if the image should scroll or be fixed
  + Use ‘scroll’ or ‘fixed’

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        body {

            background-image: url("Sample.jpg");

            background-attachment: fixed;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p style = "color: lightseagreen;"> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* Background position
  + Use ‘left’, ‘right’, ‘bottom’, ‘center’ for positioning

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        body {

            background-image: url("Sample.jpg");

            background-position: right;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <p style = "color: lightseagreen;"> Getting started with CSS3 </p>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

CSS navigation bar

* It’s a UI element on web page
* Consists of list of links
  + Horizontal navibar

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        ul {

            list-style-type: none; → To remove bullets from the list

            margin: 0; → To remove the margin

            padding: 10px; → To increase gap between list elements

            background-color: burlywood; → To set background color

        }

        li {

            display: inline; → To make list horizontal

        }

        li a{

            padding: 10px;

            color: beige;

            text-decoration:none;

        }

        .active{

            background-color: chartreuse; → To set active tab color

        }

        li a:hover {

            background-color: rgb(28, 56, 56); → To set color when

hovering

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <ul>

        <li><a class = "active" href = "#">Home</a></li>

        <li><a href = "#">HTML5</a></li>

        <li><a href = "#">CSS</a></li>

        <li><a href = "#">JavaScript</a></li>

        <li><a href = "#">Contact</a></li>

    </ul>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Vertical navibar
    - The default setting is a vertical navigation bar

Handling multimedia with CSS

* Styling images

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        img {

            border: 1px solid #ddd;

            border-radius: 8px;

            padding: 5px;

            width: 900px;

            height: 500px;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <img src = "Sample.jpg">

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Use ‘auto’ to automatically adjust to fit the screen

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        img {

            max-width: auto;

            height: auto;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <img src = "Sample.jpg">

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + To set the maximum width to 100%, so it doesn’t scale up more than the original size

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        img {

            max-width: 100%;

            height: auto;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <img src = "Sample.jpg">

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + To center the image and make it a block element

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        img {

            display: block;

            margin-left: auto;

            margin-right: auto;

            width: 50%;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <img src = "Sample.jpg">

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + To make image transparent, use ‘opacity’ property (has a range of 0.0 - 1.0)
  + Lower the value, higher the transparency

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        img {

            opacity: 0.5;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <img src = "Sample.jpg">

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* Styling videos
  + Use ‘width’, ‘max-width’, ‘height’, etc

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        video {

            max-width: 100%;

            height: auto;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <video width = "400" controls>

        <source src="Sample.mp4" type="video/mp4">

    </video>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* Basic animations
  + We can transform dimensions, rescaling objects, move objects from point A to B
  + You can create object as shown below

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        .transform\_animation {

            width: 200px;

            height: 100px;

            margin-top: 200px;

            background-color: crimson;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <h2> CSS - Multimedia </h2>

    <centre>

        <div class = "transform\_animation"></div>

    </centre>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Use ‘transform scale property’ to change the size of object when hovering

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        .transform\_animation {

            width: 200px;

            height: 100px;

            margin-top: 200px;

            background-color: crimson;

        }

        .transform\_animation:hover {

            transform: scale(2,2);

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <h2> CSS - Multimedia </h2>

    <centre>

        <div class = "transform\_animation"></div>

    </centre>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + To change the angle of the object when hovering, use ‘transform rotate’ property

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        .transform\_animation {

            width: 200px;

            height: 100px;

            margin-top: 200px;

            background-color: crimson;

        }

        .transform\_animation:hover {

            transform: rotate(75deg);

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <h2> CSS - Multimedia </h2>

    <centre>

        <div class = "transform\_animation"></div>

    </centre>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Use ‘transform translate’ property to move object from point A to point B

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        .transform\_animation {

            width: 200px;

            height: 100px;

            margin-top: 200px;

            background-color: crimson;

        }

        .transform\_animation:hover {

            transform: translate(100px, 100px)

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <h2> CSS - Multimedia </h2>

    <centre>

        <div class="transform\_animation"></div>

    </centre>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

* + Use ‘translateX’ to move along X axis and use ‘translate’ with only one value to move along y axis

Pseudo elements

* Keyword added to CSS selector
* Common pseudo elements: ::first-letter, ::before, ::after, ::first-line

<!DOCTYPE html>

<html>

<head>

    <title> Best Website in the West </title>

    <style>

        p::first-letter {

            font-size: 40px;

            font-weight: 900;

            padding: 10px 5px 5px 0px;

            float: left;

            line-height: 15px;

        }

        h2::before {

            content: '';

            background-image: url(Sample.jpg);

            background-size: cover;

            background-repeat: no-repeat;

            display: inline-block;

            height: 15px;

            width: 30px;

        }

        h2::after {

            content: '';

            background-image: url(Sample.jpg);

            background-size: cover;

            background-repeat: no-repeat;

            display: inline-block;

            height: 15px;

            width: 30px;

        }

        p::first-line {

            text-decoration: underline;

            color: darkorchid;

        }

    </style>

</head>

<header>

    <h1> Welcome to the Website </h1>

</header>

<body>

    <h2>This is the body </h2>

</body>

<footer>

    <p> Copyrights: Dilshan Perera </p>

</footer>

</html>

CSS box model

* Every HTML element can be considered as a box shaped object
* Margins always get overlapped (only the high margin will be visible)
* HTML file is as follows:

<!DOCTYPE html>

<html>

<head>

    <title> CSS box model </title>

    <link rel="stylesheet" href="Mystyle.css">

</head>

<body>

    <p class="box1">This is the first box</p>

    <p class="box2">This is the second box</p>

</body>

</html>

* Linked CSS file is as follows:

\* {

    padding: 0;

    margin: 0;

    font-size: 35px;

}

.box1 {

    background-color: rgb(202,211,142);

    padding: 5px 10px 15px 50px;

    border: 20px solid blue;

    margin: 10px;

}

.box2 {

    background-color: rgb(255,22,142);

    margin: 20px;

    border: 0;

}

Industry related frameworks in CSS - Bootstrap

* Framework - Platform that provides foundation for developing software applications
* It’s a template of a working program that can be modified according to our requirements
* Bootstrap - Most popular frontend (HTML, CSS, JavaScript) framework for faster and responsive web development