MODULE-4

CSS Introduction

**What is meant by CSS?**

* CSS stands for Cascading Style Sheets
* CSS describes how HTML elements are to be displayed on screen, paper, or in other media
* CSS saves a lot of work. It can control the layout of multiple web pages all at once.
* External Stylesheets are stored in CSS files.

**Use of 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.

**What is the syntax of CSS?**

A **CSS Syntax** rule consists of a selector, property, and its value. The selector points to the HTML element where CSS style is to be applied. The CSS property is separated by semicolons. It is a combination of selector name followed by the property: value pair that is defined for the specific selector.

**Syntax:**

Selector {Property:value;}

**CSS properties:**

\* Font-size

\* Padding

\* Margin

\* Text-align

\* Height

\* Width

\* Font-family

\* Color

**Advantage Of CSS:**

• CSS saves time - You can write CSS once and then reuse the same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many web pages as you want.

• Pages load faster - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So, less code means faster download times.

• Easy maintenance - To make a global change, simply change the style, and all the elements in all the web pages will be updated automatically.

• Superior styles to HTML - CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

• Multiple Device Compatibility - Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of website can be presented for handheld devices such as PDAs and cell phones or for printing.

**CSS -The <Style>Element**

You can put your CSS rules into an HTML document using the <style> element. This tag is placed inside the <head>……..</head> tags. Rules defined using this syntax will be applied to all the elements available in the document. Here is the generic syntax:

<head>

<link rel=”stylesheet” type=”text”/css href=”style.css”>

Style rules

…………

</style>

</head>

**CSS Colors**

CSS uses color values to specify a color. Typically, these are used to set a color either for the foreground of an element (i.e., its text) or else for the background of the element. They can also be used to affect the color of borders and other decorative effects.

|  |  |  |
| --- | --- | --- |
| **Format** | **Syntax** | **Example** |
| Hex Code | #RRGGBB | p{color:#FF0000;} |
| Short Hex Code | #RGB | p{color:#6A7;} |
| RGB % | rgb(rrr%,ggg%,bbb%) | p{color:rgb(50%,50%,50%);} |
| RGB Absolute | rgb(rrr,ggg,bbb) | p{ color:rgb (0,0,255);} |
| keyword | aqua, black, etc. | p{color:teal;} |

**CSS backgrounds**

* 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.
* The **background** property is used as a short hand to specify a number of other background properties.

Example:

<html>

<head>

</head>

<body>

<p style=”background-color:yellow;”>

This text has a yellow background.

</p>

</body>

</html>

**Set the Background Image Position:**

<table style="background-image:url(/images/pattern1.gif);

background-position:100px;">

<tr><td>

Background image positioned 100 pixels away from the left.

</tr></td>

</table>

**External style sheet**

The external style sheet is generally used when you want to make changes on multiple pages. It is ideal for this condition because it facilitates you to change the look of the entire web site by changing just one file.

It uses the <link> tag on every pages and the <link> tag should be put inside the head section.

Example:

<head>

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

</head>

The external style sheet may be written in any text editor but must be saved with a .css extension. This file should not contain HTML elements.

**Insert CSS into webpages**

1. With an external file that you link to in your web page:

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

2. By creating a CSS block in the web page itself; typically inserted at the

top of the web page in between the <head> and </head> tags:

<head>

<style type="text/css">

p { padding-bottom: 12px; }

</style>

</head>

3. By inserting the CSS code right on the tag itself:

<p style="padding-bottom:12px;">Your Text</p>

Generally speaking we can say that all the styles will "cascade" into a

new "virtual" style sheet by the following rules, where number four has

the highest priority:

1. Browser default

2. External style sheet

3. Internal style sheet (in the head section)

4. Inline style (inside an HTML element)

**Inline CSS -The style Attribute:**

You can use style attribute of any HTML element to define style rules. These rules will be applied to that element only. Here is the generic syntax:

<element style="...style rules....">AttributesAttribute Value Description

style style

rules

The value of style attribute is a combination of style

declarations separated by semicolon (;).

Example

Following is the example of inline CSS based on the above syntax:

<h1 style ="color:#36C;"> This is inline CSS </h1>

It will produce the following result:

This is inline CSS.

**Creating internal style sheet**

Enter the following bolded text between the </title> tag and the </head> tag (you can add it **after** this line of code: <link rel="Stylesheet" media="screen" type="text/css" href="eportfolio.css" />).  Follow the indenting conventions.  By organizing the indenting and punctuation this way, it really helps you to layout your ideas and allows you to easily find mistakes in your coding when things don’t work:

</title>

<link rel="Stylesheet" media="screen" type="text/css" href="eportfolio.css"/>

**<style type="text/css">**

**body {**

**text-align: left;**

**font-size: 1em;**

**}**

**a {**

**color: maroon;**

**font-size: 1.2em;**

**}**

**p {**

**background-color: lime;**

**}**

**img {**

**border: 5px solid #000000;**

**}**

**</style>**

</head>

**DHTML | Introduction**

DHTML stands for Dynamic HTML, it is totally different from HTML. The browsers which support the dynamic HTML are some of the versions of Netscape Navigator and Internet Explorer of version higher than 4.0. The DHTML is based on the properties of the HTML, javascript, CSS, and DOM (Document Object Model which is used to access individual elements of a document) which helps in making dynamic content. It is the combination of HTML, CSS, JS, and DOM. The DHTML make use of Dynamic object model to make changes in settings and also in properties and methods. It also makes uses of Scripting and it is also part of earlier computing trends.

DHTML allows different scripting languages in a web page to change their variables, which enhance the effects, looks and many others functions after the whole page have been fully loaded or under a view process, or otherwise static HTML pages on the same. But in true ways, there is noting that as dynamic in DHTML, there is only the enclosing of different technologies like CSS, HTML, JS, DOM, and different sets of static languages which make it as dynamic.

**HTML**: HTML stands for Hypertext Markup Language and it is a client-side markup language. It is used to build the block of web pages.

**Javascript**: It is a Client-side Scripting language. Javascript is supported by most of the browser, also have cookies collection to determine the user needs.

**CSS**: The abbreviation of CSS is Cascading Style Sheet. It helps in the styling of the web pages and helps in designing of the pages. The CSS rules for DHTML will be modified at different levels using JS with event handlers which adds a significant amount of dynamism with very little code.

**DOM**: It is known as a Document Object Model which act as the weakest links in it. The only defect in it is that most of the browser does not support DOM. It is a way to manipulate the static contents.

**Key Features**: Following are the some major key features of DHTML:

 Tags and their properties can be changed using DHTML.

\*It is used for real-time positioning.

\*Dynamic fonts can be generated using DHTML.

\*It is also used for data binding.

\*It makes a webpage dynamic and be used to create animations, games, applications along with providing new ways of navigating through websites.

\*The functionality of a webpage is enhanced due to the usage of low-bandwidth effect by DHTML.

\*DHTML also facilitates the use of methods, events, properties, and codes.

**Advantages:**

\*Size of the files are compact in compared to other interactional media like Flash or Shockwave, and it downloads faster.

\*It is supported by big browser manufacturers like Microsoft and Netscape.

\*Highly flexible and easy to make changes.

\*Viewer requires no extra plug-ins for browsing through the webpage that uses DHTML, they do not need any extra requirements or special software to view it.

\*User time is saved by sending less number of requests to the server. As it is possible to modify and replace elements even after a page is loaded, it is not required to create separate pages for changing styles which in turn saves time in building pages and also reduces the number of requests that are sent to the server.

\*It has more advanced functionality than a static HTML. it is capable of holding more content on the web page at the same time.

**Disadvantages:**

\*It is not supported by all the browsers. It is supported only by recent browsers such as Netscape 6, IE 5.5, and Opera 5 like browsers.

\*Learning of DHTML requires a lot of pre-requisites languages such as HTML, CSS, JS, etc should be known to the designer before starting with DHTML which is a long and time-consuming in itself.

\*Implementation of different browsers are different. So if it worked in one browser, it might not necessarily work the same way in another browser.

\*Even after being great with functionality, DHTML requires a few tools and utilities that are some expensive. For example, the DHTML text editor, Dreamweaver. Along with it the improvement cost of transferring from HTML to DHTML makes cost rise much higher.

**DHTML has many Term:**

In this tutorial you have learned that DHTML is only a term used to describe the different combinations of HTML, JavaScript, DOM, and CSS that can be used to create more dynamic web pages.

More DHTML examples

**JavaScript:**

JavaScript is the standard scripting language for the Internet.

Everyone serious about web development should have a full understanding of JavaScript.

**The HTML DOM:**

TML 4 supports the HTML Document Object Model (DOM).

\*The HTML DOM is the official (standard and browser independent) way to access HTML elements. It works in all browsers.

\*Only by using the HTML DOM you can make interactive web pages that will work in all modern browsers.

\*If you are serious about web development, study our HTML DOM tutorial, and our complete HTML DOM reference.

**Dynamic CSS:**

\*There is no such thing as dynamic CSS.

\*However, with JavaScript and the HTML DOM you can dynamically change the CSS style of any HTML element.

**Server Side Scripting**:

\*Web pages can also be made more dynamic by using scripts on the server.

\*server scripting you can edit, add, or change any web page content. You can respond to data submitted from HTML forms, access data or databases and return the results to a browser, and customize pages for individual users.

**Practicing inline commands:**

<p **style="color: red; background-color: yellow;">** This is my brief description for my webpage. Welcome to my site...</p>

<img src="example.jpg" **style="border: solid; border-color: green;"** alt= "example" />

There should now be a solid green border around your image. Also, notice how only that one paragraph area has a yellow background color and the font color is red?  **In both cases the inline style overrode the internal style sheet’s rules,** because it is closer to the actual content.  This is an effect of the “cascading” part of CSS.

**Css Properties and values:**

|  |  |
| --- | --- |
| background-color | for changing the background color of elements  e.g.  background-color: blue;  e.g. background-color: #FFFFFF;  (white) |
| background-image | for changing the background image of elements  e.g. background-image: url(bluehill.jpg); |
| border | for setting the style of a border (syntax: width type color)  e.g. border: 5px solid green; |
| color | for setting the foreground color of an element – basically, the text  e.g. color: blue; |
| font-family | for choosing the font family for text  e.g. font-family: Helvetica; |
| font-size | for setting the size of text  e.g. font-size: 1em; |
| font-weight | for applying, removing, and adjusting bold formatting  e.g. font-weight: bold;  e.g. font-weight: light; |
| text-decoration | for decorating text  e.g. text-decoration: underline;  e.g. text-decoration: overline;  e.g. text-decoration: line-through; |
| text-align | for aligning text  e.g. text-align: right;  e.g. text-align: left;  e.g. text-align: center; |
|  | |
| height | for setting the height of an element – applies only to content height (does not include margin and padding)  e.g. height: 100px; |
| width | for setting the width of an element – applies only to content width (does not include margin and padding)  e.g. width: 1024px; |
| padding | for setting the amount of space between the border of the element and the content (measured same as margin: TRBL)  e.g. padding: 5px 10px 5px 10px; |
| margin | for setting the amount of space outside the border of the element  set “top right bottom left” (it spells TRBL like trouble)  e.g. margin: 10px 20px 10px 20px; |

**Measurements in CSS**

|  |  |  |
| --- | --- | --- |
| Unit | Description | Example |
| % | Defines a measurement as a percentage relative to another value, typically an enclosing element. | p {font-size: 16pt; line-height: 125%;} |
| cm | Defines a measurement in centimeters. | div {margin-bottom: 2cm;} |
| em | A relative measurement for the height of a font in em spaces. Because an em unit is equivalent to the size of a given font, if you assign a font to 12pt, each "em" unit would be 12pt; thus, 2em would be 24pt. | p {letter-spacing: 7em;} |
| ex | This value defines a measurement relative to a font's x-height. The xheight is determined by the height of the font's lowercase letter x. | p {font-size: 24pt; line-height: 3ex;} |
| in | Defines a measurement in inches. | p {word-spacing: .15in;} |
| mm | Defines a measurement in millimeters. | p {word-spacing: 15mm;} |
| pc | Defines a measurement in picas. A pica is equivalent to 12 points; thus, there are 6 picas per inch. | p {font-size: 20pc;} |
| pt | Defines a measurement in points. A point is defined as 1/72nd of an inch | body {font-size: 18pt;} |
| px | Defines a measurement in screen pixels. | p {padding: 25px;} |