DHTML

It is the combination of several built in browser features in fourth generation browsers that enable a web page to be more dynamic. It makes the Web experience faster and more interactive for end users

Components of DHMTL :

1.HTML

2. CSS

3. Scripting

4. DOM (Document Object Model)

Style Sheets

One of the most important aspects of HTML is the capability to separate presentation and content. A style is simply a set of formatting instructions that can be applied to a piece of text.

CSS

CSS is a style language that defines layout of HTML documents. For example, CSS covers fonts, colours, margins, lines, height, width, background images, advanced positions and many other things. HTML can be (mis-)used to add layout to websites. But CSS offers more options and is more accurate and sophisticated. CSS is supported by all browsers today.

What is the difference between CSS and HTML?

HTML is used to structure content. CSS is used for formatting structured content.

CSS was invented to provide sophisticated layout opportunities supported by all browsers. At the same time, separation of the presentation style of documents from the content of documents, makes site maintenance a lot easier.

Benefits of CSS

CSS was a revolution in the world of web design. The concrete benefits of CSS include:

- control layout of many documents from one single style sheet;
- more precise control of layout;
- apply different layout to different media-types (screen, print, etc.);
- numerous advanced and sophisticated techniques

Advantages of CSS:

CSS saves time – CSS can be writtenonce and same sheet can be reuserd in multiple HTML pages. We can define a style for each HTML element and apply it to as many Web pages as we 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 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 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 far better look to your HTML page in comparison of 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 a website can be presented for handheld devices such as PDAs and cell phones or for printing.
- **Global web standards** - Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.
- **Improved search engine result**
- **Less code**

The basic CSS Syntax

CSS are a set of rules that governs the display of the document through web browser.

What is a CSS rule?

A CSS rule is simply a statement that consists of a selector and a declaration.

• **Selector:** is the hook used to choose what part(s) of your HTML to apply the CSS to. It indicates the element to which the rule is applied.

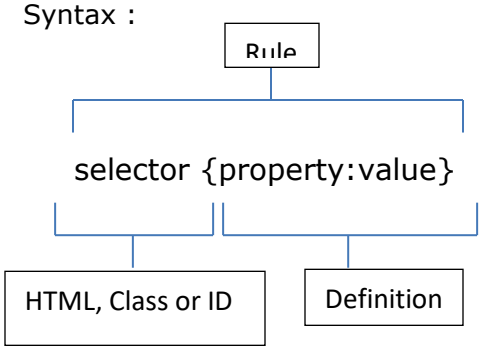
• **Declaration Block:** Everything within the curly brackets, "{" and "}", is called the declaration block

• **Declaration:** Inside a declaration block you can have as many declarations as you want and each declaration is a combination of a CSS Property and a value.

• **Property:** is one of the CSS Properties used to tell what part of the selector will be changed (or styled). It specifies a characteristic, such as color, font-family, position, and is followed by a colon (:)

• **Value:** assigns a value to the property.

Syntax :



For e.g

```
H1 {
        Color:blue;
        Font-family:Arial, sans-serif;
    }
```

CSS Selectors

In CSS, selectors are patterns used to select the element(s) you want to style.

The "CSS" column indicates in which CSS version the property is defined (CSS1, CSS2, or CSS3).

Selector	Example	Example description	CSS
.class	.intro	Selects all elements with class="intro"	1
#id	#firstname	Selects the element with id="firstname"	1
*	*	Selects all elements	2
element	p	Selects all <p> elements	1
element,element	div,p	Selects all elements and all <p> elements	1
element element	div p	Selects all <p> elements inside elements	1
element>element	div>p	Selects all <p> elements where the parent is a element	2
element+element	div+p	Selects all <p> elements that are placed immediately after elements	2
[*attribute*]	[target]	Selects all elements with a target attribute	2
[*attribute=value*]	[target=_blank]	Selects all elements with target="_blank"	2
[*attribute~=value*]	[title~=flower]	Selects all elements with a title attribute containing the word "flower"	2
[*attribute|=value*]	[lang|=en]	Selects all elements with a lang attribute value starting with "en"	2
:link	a:link	Selects all unvisited links	1
:visited	a:visited	Selects all visited links	1
:active	a:active	Selects the active link	1
:hover	a:hover	Selects links on mouse over	1
:focus	input:focus	Selects the input element which has focus	2
:first-letter	p:first-letter	Selects the first letter of every <p> element	1
:first-line	p:first-line	Selects the first line of every <p> element	1
:first-child	p:first-child	Selects every <p> element that is the first child of its parent	2
:before	p:before	Insert content before the content of every <p> element	2
:after	p:after	Insert content after every <p> element	2
:lang(*language*)	p:lang(it)	Selects every <p> element with a lang attribute equal to "it" (Italian)	2

element1~element2	p~ul	Selects every element that are preceded by a <p> element	3
[*attribute*^=*value*]	a[src^="https"]	Selects every <a> element whose src attribute value begins with "https"	3
[*attribute*$=*value*]	a[src$=".pdf"]	Selects every <a> element whose src attribute value ends with ".pdf"	3
[*attribute**=*value*]	a[src*="w3schools"]	Selects every <a> element whose src attribute value contains the substring "w3schools"	3
:first-of-type	p:first-of-type	Selects every <p> element that is the first <p> element of its parent	3
:last-of-type	p:last-of-type	Selects every <p> element that is the last <p> element of its parent	3
:only-of-type	p:only-of-type	Selects every <p> element that is the only <p> element of its parent	3
:only-child	p:only-child	Selects every <p> element that is the only child of its parent	3
:nth-child(*n*)	p:nth-child(2)	Selects every <p> element that is the second child of its parent	3
:nth-last-child(*n*)	p:nth-last-child(2)	Selects every <p> element that is the second child of its parent, counting from the last child	3
:nth-of-type(*n*)	p:nth-of-type(2)	Selects every <p> element that is the second <p> element of its parent	3
:nth-last-of-type(*n*)	p:nth-last-of-type(2)	Selects every <p> element that is the second <p> element of its parent, counting from the last child	3
:last-child	p:last-child	Selects every <p> element that is the last child of its parent	3
:root	:root	Selects the document’s root element	3
:empty	p:empty	Selects every <p> element that has no children (including text nodes)	3
:target	#news:target	Selects the current active #news element (clicked on a URL containing that anchor name)	3
:enabled	input:enabled	Selects every enabled <input> element	3
:disabled	input:disabled	Selects every disabled <input> element	3
:checked	input:checked	Selects every checked <input> element	3
:not(*selector*)	:not(p)	Selects every element that is not a <p> element	3
::selection	::selection	Selects the portion of an element that is selected by a user	3

Three ways to insert CSS in an HTML document

1. Inline styles
2. Internal/Embedded style sheet
3. External style sheet

1.Inline Styles

The first way is called Inline Cascading Style Sheets. We can add CSS directly into the elements in your markup with the "style" attribute.

```
<div style="color:red;">

<p style="font-size:12px;">
```

2.Internal/Embedded Styles

Including CSS using HTML tag <style> in head section

```
<style type="text/css">
body {background-color : #FF0000;"}
</style>
```

3.External Styles

Create two files .html and .css file and put them in the same folders.

```
<head>
<title>CSS external

styles</title>

<link rel="stylesheet" type="text/css" href="style.css" media="screen"/>
</head>
```

style.css

```
h1, h2, h3 { color: #36C; font-weight: normal; letter-spacing: .4em; margin-bottom: 1em;
    text-transform: uppercase; }
```

@import Rule:

```
<head>
@import "mystyle.css";
</head>
```