

What is DHTML?

- DHTML is the combination of several built-in browser features in fourth generation browsers that enable a web page to be more dynamic.
- DHTML is NOT a scripting language (like JavaScript), but a browser feature- or enhancement- that makes the browser dynamic
- It uses a host of different technologies - JavaScript, VBScript, the Document Object Model (DOM), layers, cascading stylesheets - to create HTML that can change even after a page has been loaded into a browser

What is DHTML? ...

- It is considered to be made up of
 - HTML
 - Cascading Style Sheets (CSS)
 - Scripting language
- All three of these components are linked via Document Object Model (DOM)
- DOM is the interface that allows scripting languages to access the content, style, and structure of the web documents and change them dynamically

Tools of DHTML

- HTML and XML
 - Partitions and Organizes the content
- CSS
 - Defines the Presentation of the content
- Scripting - JavaScript, JScript, VBScript
 - Adds interactivity to the page
- DOM- Document Object Model
 - Defines what and how elements are exposed for script access

CSS – Cascading Style Sheets

- CSS is Cascading Style Sheets
- CSS is a language, or a micro-language that's integrated into HTML, principally from the v4 browsers (which means IE4 and NS4).
- It is a specification controlled by the World Wide Web Consortium (W3C).
- HTML controls the organization of a Web page document
- CSS controls the presentation and layout of the Web page document elements

What is CSS? ...

- **Styles** define *how to display* HTML elements; styles are normally stored in **Style Sheets**
- “**Cascading**” refers to the fact that each different style declaration can be “cascaded” under the one above it,

Some Advantages of CSS

- Excellent addition to plain HTML
- The design of Web pages is separated from the content!
- Easily change the look; shorter development time
- One CSS – multiple Web pages
- Offers much more detailed attributes
- Faster download time

CSS Syntax

General syntax:

selector { property: value }

- Three parts:
- selector - the basic HTML tag to be defined
- *property* - the attribute of the selector to be changed
- *value* - the particular markup value for the given attribute
- Example:

body {color: black}

CSS Syntax ...

- If the value has multiple words, put the value in quotes,
e.g. p {font-family: “sans serif” }
- Multiple properties can be specified to a single selector; properties must be separated by a semicolon,

e.g. p {text-align: left; color: red }

- To make properties more readable, use separate lines, e.g.

```
p { text-align: center;  
    color: navy;  
    font-family: arial  
}
```


CSS Syntax ... Grouping

- Selectors can be grouped so that a common property can be specified,

e.g.

```
h1,h2,h3,h4,h5,h6 { color: red }
```

```
<h1> This is a level 1 heading </h1>
```

```
<h2> This is a level 2 heading </h2>
```

Selectors

Basic selector components include

- all tags
- IDs (i.e., values of **ID** attributes)
- Classes (i.e., values of **CLASS** attributes)
- "Pseudo-classes" and "pseudo-elements"

CSS-Adding styles to web pages

- Four ways
 - Embed a style sheet within HTML document
 - Link to an external stylesheet from the HTML document
 - Add styles inline in the HTML document
 - Importing style sheets

CSS-Embed a style sheet

- All stylesheet information lies at the top of the HTML code (in the head portion)

Eg:

```
<HTML>
```

```
<HEAD>
```

```
<STYLE TYPE= "text/css" >
```

```
    H1 {color: green; font-family: impact}
```

```
</STYLE>
```

```
</HEAD>
```

```
<BODY> . . .
```

- Style applies to the whole document

CSS-Link to an external stylesheet

- An externally defined stylesheet is used as a style template that can be applied to a number of pages
- A text file (with ext .css) contains the stylesheet rules to be applied to a page (or set of pages)

Eg. A file named '**mystyles.css**'

H1 {color: green; font-family: impact}

B {color: red; font-family: courier}

- This file is linked to the HTML document (<LINK>)

In the web Page:

<HTML>

<LINK REL=stylesheet HREF="mystyles.css" TYPE="text/css">

<HEAD>

<BODY> ...

CSS-Add styles inline

- Applying stylesheets rules to particular HTML tags

Eg:

```
<B STYLE="color: purple; background: yellow">Adding Inline styles</B>
```

- The style applies to only that particular `<B>` tag

CSS – Importing Stylesheets

- Style Sheets which are external to the HTML document are imported (included) into the <style> element within the <head> element of the current document.
- Similar to linking, but useful when you want to override some style rules when you include it in your own stylesheet.

```
<style type="text/css">  
@import url(http://www.cen.com//houseBasic.css)  
</style>
```

- The imported sheets must appear before any document-specific styles

CSS- Classes

- Selectively apply a style to HTML elements
- you can define different classes of style to the same element, and apply the appropriate class of style when required
- HTML

```
<P CLASS="first">The first paragraph</P>
<P CLASS="second">The second paragraph</P>
<P CLASS="third">The third paragraph</P>
```
- Stylesheet

```
P.first { color: green }
P.second { color: purple }
P.third { color: gray }
```