CSS Introduction

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Objective

- introduction
- How to insert CSS
- Background

Prerequisites

- You should be familiar with:
  - Basic word processing using any text editor.
  - How to create directories and files.
  - How to navigate through different directories.
  - Internet browsing using popular browsers like Internet Explorer or Firefox.
  - Developing simple Web Pages using HTML or XHTML.

What is CSS?

- you should have a basic understanding of the following: HTML / XHTML
- **CSS** stands for **C**ascading **S**tyle **S**heets
- Styles define **how to display** HTML elements
- Styles were added to HTML **to solve a problem**
- **External Style Sheets** can save a lot of work
- External Style Sheets are stored in **CSS files**

What is CSS?

- HTML was never intended to contain tags for formatting a document.
- HTML was intended to define the content of a document, like:
  - <h1>This is a heading</h1>
  - This is a paragraph.
- When tags like <font>, and color attributes were added to the HTML 3.2 specification, it started a nightmare for web developers. Development of large web sites, where fonts and color information were added to every single page, became a long and expensive process.
- To solve this problem, the World Wide Web Consortium (W3C) created CSS.
- In HTML 4.0, all formatting could be removed from the HTML document, and stored in a separate CSS file.
- All browsers support CSS today.
- CSS Saves a Lot of Work!

CSS3 Modules

- CSS3 is split up into "modules". The old specification has been split into smaller pieces, and new ones are also added.
- CSS is used to control the style and layout of Web pages.
- CSS3 is the latest standard for CSS.
- Some of the most important CSS3 modules are:
  - Selectors
  - Box Model
  - Backgrounds and Borders
  - Text Effects
  - 2D/3D Transformations
  - Animations
  - Multiple Column Layout
  - User Interface

CSS3 Recommendation

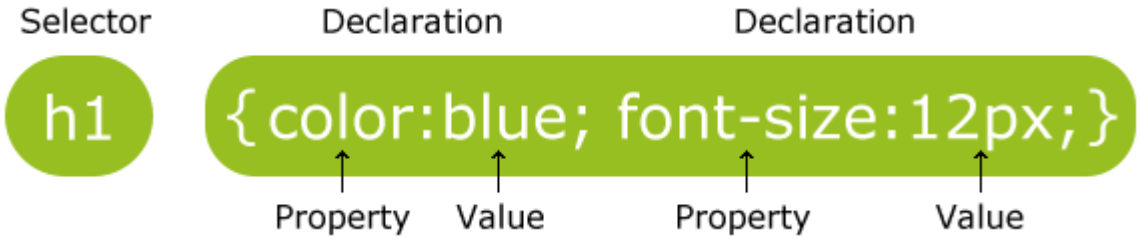
- The CSS3 specification is still under development by W3C.
- However, many of the new CSS3 properties have been implemented in modern browsers.

CSS Styling

- Some of the most important CSS3 modules are:
  - Selectors
  - Box Model
  - Backgrounds and Borders
  - Text Effects
  - 2D/3D Transformations
  - Animations
  - Multiple Column Layout
  - User Interface

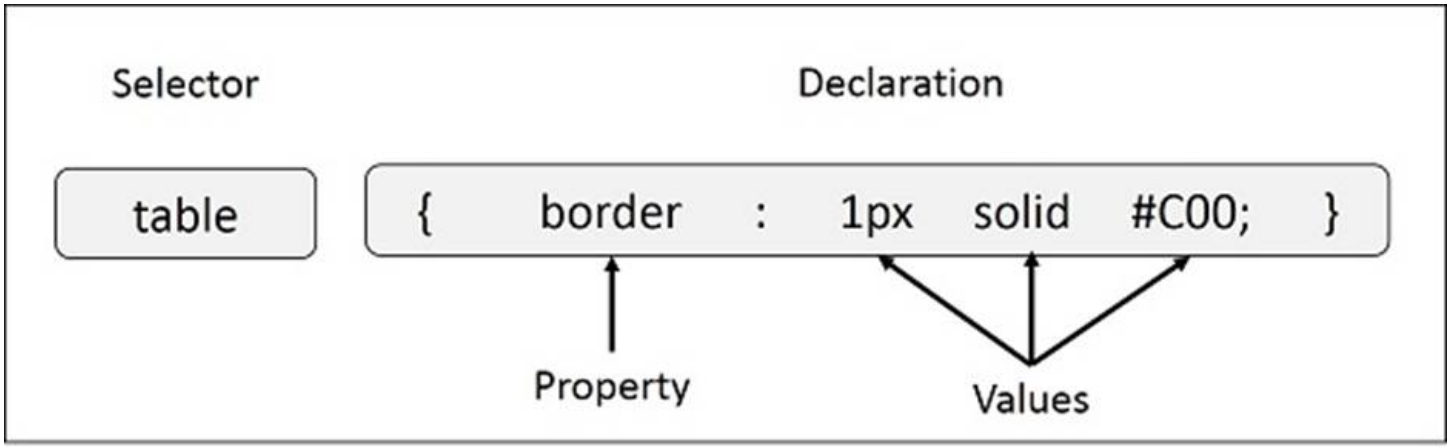
CSS Syntax

A CSS rule has two main parts: a selector, and one or more declarations:



The selector is normally the HTML element you want to style.
Each declaration consists of a property and a value.
The property is the style attribute you want to change. Each property has a value.

```
p
{
color:red;
text-align:center;
}
```



The Type Selectors

```
h1 {
   color: #36CFFF;
}
```

The Universal Selectors

```
* {
   color: #000000;
}
```

The Descendant Selectors

```
ul em {
   color: #000000;
}
```

The id and class Selectors

- The id selector is used to specify a style for a single, unique element.
- The id selector uses the id attribute of the HTML element, and is defined with a "#".
- The style rule below will be applied to the element with id="para1":

```
#para1
{
text-align:center;
color:red;
}
```

Do **NOT** start an ID name with a number! It will not work in Mozilla/Firefox.

Sample id

```
<!DOCTYPE html><html>
<head>
<style type="text/css">
#para1
{
text-align:center;
color:red;
}
</style>
</head>

<body>
<p id="para1">Hello World!</p>
<p>This paragraph is not affected by the style.</p>
</body>
</html>
```

Class

- The class selector is used to specify a style for a group of elements. Unlike the id selector, the class selector is most often used on several elements.
- This allows you to set a particular style for many HTML elements with the same class.
- The class selector uses the HTML class attribute, and is defined with a "."
- In the example below, all HTML elements with class="center" will be center-aligned:

```
.center {text-align:center;}
```

Class

- You can also specify that only specific HTML elements should be affected by a class.
- In the example below, all p elements with class="center" will be center-aligned:
- **Example**

```
p.center {text-align:center;}
```

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
.center
{
text-align:center;
}
</style>
</head>

<body>
<h1 class="center">Center-aligned heading</h1>
<p class="center">Center-aligned paragraph.</p>
</body>
</html>
```

Insert CSS

- **Three Ways to Insert CSS**
  - External style sheet
  - Internal style sheet
  - Inline style

External style sheet

An external style sheet is ideal when the style is applied to many pages. With an external style sheet, you can change the look of an entire Web site by changing one file. Each page must link to the style sheet using the <link> tag. The <link> tag goes inside the head section:

Eksternal :

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

An external style sheet can be written in any text editor. The file should not contain any html tags. Your style sheet should be saved with a .css extension.

```
hr {color:sienna;}
p {margin-left:20px;}
body {background-
image:url("images/back40.gif");}
```

Ex.

```
<!DOCTYPE html><html>
<head>
 <link rel="stylesheet"
type="text/css" href="ex1.css" />
</head>
 <body>
 <h1>This header is 36 pt</h1>
<h2>This header is blue</h2>
 <p>This paragraph has a left margin
of 50 pixels</p>
</body>
 </html>
```

```
body
{
 background-color:yellow;
}
h1
{
font-size:36pt;
}
h2
{
color:blue;
}
p
{
 margin-left:50px;
}
```

Internal style sheet

An internal style sheet should be used when a single document has a unique style. You define internal styles in the head section of an HTML page, by using the <style> tag, like this:

Internal :

```
<head>
<style type="text/css">
body {background-color: red}
p {margin-left: 20px}
</style>
</head>
```

Internal :

```
<head>
<style type="text/css">
p {margin-left:20px;}
body {background-
image:url("images/back40.gif");}
</style>
</head>
```

Inline style

An inline style loses many of the advantages of style sheets by mixing content with presentation. Use this method sparingly!
To use inline styles you use the style attribute in the relevant tag.The style attribute can contain any CSS property.The example shows how to change the color and the left margin of a paragraph:

Inline :

```
<p style="color: red; margin-left: 20px">
This is a paragraph
</p>
```

Inline :

```
<p style="color:sienna;margin-left:20px">This is a paragraph.</p>
```

Multiple style sheets

- If some properties have been set for the same selector in different style sheets, the values will be inherited from the more specific style sheet.
- For example, an external style sheet has these properties for the h3 selector: *And an internal style sheet has these properties for the h3 selector:*

```
h3
{
color:red;
text-align:left;
font-size:8pt;
}
```

```
h3
{
text-align:right;
font-size:20pt;
}
```

If the page with the internal style sheet also links to the external style sheet the properties for h3 will be:

```
color:red;
text-align:right;
font-size:20pt;
```

The color is inherited from the external style sheet and the text-alignment and the font-size is replaced by the internal style sheet.

Multiple Styles Will Cascade into One

- Styles can be specified:
  - inside an HTML element
  - inside the head section of an HTML page
  - in an external CSS file
- **Tip:** Even multiple external style sheets can be referenced inside a single HTML document.

Cascading order

- What style will be used when there is more than one style specified for an HTML element?
- 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)
- So, an inline style (inside an HTML element) has the highest priority, which means that it will override a style defined inside the <head> tag, or in an external style sheet, or in a browser (a default value).

Color

- You can specify your color values in various formats. Following table lists all the possible formats −

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;}

CSS3 Backgrounds

- In this chapter you will learn about the following background properties:
  - background-size
  - background-origin
- You will also learn how to use multiple background images.
- **Browser Support :** Internet Explorer 9+, Firefox, Chrome, Safari, and Opera support the new background properties

CSS background Property

- Set all the background properties in one declaration:

- background-color
  background-image
  background-repeat
  background-attachment
  background-position
  background-clip
  background-origin
  background-size

Syntax

background: *color position size repeat origin clip attachment image*;

The background-size Property

- The background-size property specifies the size of the background image.

```
<!DOCTYPE html>
<html>
<head>
<style>
body
{
background:url(img_flwr.gif);
background-size:80px 60px; // or percent
background-repeat:no-repeat;
padding-top:40px;
}
</style>
</head>
……
```

Background-**Color**

- The background-color property sets the background color of an element.
- The background of an element is the total size of the element, including padding and border (but not the margin).

```
body
{
background-color:yellow;
}
h1
{
background-color:#00ff00;
}
p
{
background-color:rgb(255,0,255);
}
```

```
body
{
background-color:yellow;
background-color:transparent;
}
```

background-image Property

- Set a background-image for the body element
- The background-image property sets one or more background images for an element.
- The background of an element is the total size of the element, including padding and border (but not the margin).
- By default, a background-image is placed at the top-left corner of an element, and repeated both vertically and horizontally.

```
body
{
background-image:url('paper.gif');
background-color:#cccccc;
}
```

background-position Property

- The background-position property sets the starting position of a background image.
- The background-position property is supported in all major browsers.
- **Note:** For this to work in Firefox and Opera, the background-attachment property must be set to "fixed".

```
body
{
background-image:url('smiley.gif');
background-repeat:no-repeat;
background-attachment:fixed;
background-position:center;
}
```

Value	Description
left top left center left bottom right top right center right bottom center top center center center bottom	If you only specify one keyword, the other value will be "center"
x% y%	The first value is the horizontal position and the second value is the vertical. The top left corner is 0% 0%. The right bottom corner is 100% 100%. If you only specify one value, the other value will be 50%. . Default value is: 0% 0%
xpos ypos	The first value is the horizontal position and the second value is the vertical. The top left corner is 0 0. Units can be pixels (0px 0px) or any other CSS units. If you only specify one value, the other value will be 50%. You can mix % and positions

background-repeat Property

- The background-repeat property sets if/how a background image will be repeated.
- By default, a background-image is repeated both vertically and horizontally.
- background-repeat

```
body
{
background-image:url('gradient2.png');
background-repeat:repeat-x;
}
```

- backgroundno-repeat

```
body
{
background-image:url('img_tree.png');
background-repeat:no-repeat;
}
```

Value	Description
repeat	The background image will be repeated both vertically and horizontally.This is default
repeat-x	The background image will be repeated only horizontally
repeat-y	The background image will be repeated only vertically
no-repeat	The background-image will not be repeated
inherit	Specifies that the setting of the background-repeat property should be inherited from the parent element

Comments

Comments are used to explain your code, and may help you when you edit the source code at a later date. Comments are ignored by browsers.

```
/*This is a comment*/
p
{
text-align:center;
/*This is another comment*/
color:black;
font-family:arial;
}
```