



Web Technologies

ICT1153

Buddhika Gayashani Jayaneththi
Dept. Of ICT
Faculty of Technology
University of Ruhuna



Cascading Style Sheets

Objectives

- After successfully completing this lecture, students should be able to,
 - Use CSS in Web Pages





CSS Introduction

- Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation features (the look and formatting) of a document written in a markup language.
- CSS can be combined with the markup language HTML.
- It is a simple mechanism for controlling the *style* of a Web document separately from the document *structure* and the *content*.
- Separation of structure from presentation, simplifies maintaining and modifying web pages, especially on large-scale websites.



What You Can Do Using CSS

You can control,

- The color of the text
- The style of fonts
- The spacing between paragraphs
- How columns are sized and laid out
- What background images or colors are used
- Layout designs
- Variations in display for different devices
- Screen sizes
- Etc....



CSS Advantages

- Saves time.
- Easy to change.
- Keep consistency.
- Give you more control over layout.
- Make it easy to create a common format for all the Web pages.



CSS Syntax

- A CSS rule-set consists of a selector and a declaration block.

Selector	Declaration		Declaration	
h1	{	color:blue;	font-size:12px;	}
		↑	↑	
		Property	Value	
			↑	
			Property	Value



CSS Selectors

- CSS selectors are to "find" (or select) HTML elements, based on their element name, id, etc...

Types of CSS selectors

1. Element selector
2. Id selector
3. Class selector
4. Group selector



Element Selector

- Selects elements based on the element name

Ex:

```
<html>
<head>
<style>
body {background-color: powderblue;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```



Id Selector

- Uses the id attribute of an HTML element to select a specific element.
- The **id of an element should be unique** within a page, so the id selector is used to select one unique element.
- Id selector is represented with #

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

`<p id="para1">Hello World!</p>`



Class Selector

- The class selector selects elements with a specific class attribute
- To select elements with a specific class, write a period (.) character, followed by the name of the class.

Ex: .center {
 text-align: center;
 color: red;
 }

<p class="center">Hello World!</p>

Class Selector Example



```
<html>
<head>
<style>
p.hometown {
  background: yellow;
}
</style>
</head>
<body>
<h1>Demo of the .class selector</h1>

<p>My name is Donald.</p>
<p class="hometown">I live in England.</p>
<p>My name is Dolly.</p>
<p class="hometown">I also live in England.</p>

</body>
</html>
```



Class Selector

- Can specify only the specified html elements which are required to be affected by a class

Ex: `p.center { color:red;}`

the `<p>` elements with `class="center"` will be colored red

Class Selector



```
<html>
<head>
<style>
p.center {
  text-align: center;
  color: red;
}
p.large {
  font-size: 24px;
}
</style>
</head>
<body>
<h1>Demo of the .class selector</h1>
<h1 class="center">This heading will not be affected</h1>
<p class="center">This paragraph will be red and center-aligned.</p>
<p class="center large">This paragraph will be red, center-aligned, and in a 24px font
size.</p>
</body>
</html>
```

Group Selector



- If we have elements with same styles then it is better to group the selectors to minimize the code.
- To group selectors, separate each selector with a comma.

Ex:

```
h1 {  
    text-align: center;  
    color: red;  
}  
h2 {  
    text-align: center;  
    color: red;  
}
```

After grouping selectors,

```
h1, h2 {  
    text-align: center;  
    color: red;  
}
```



Using CSS in Web Developing

Three ways to apply CSS

- Inline style sheets
- Internal style sheets (Embedded)
- External style sheets



Inline Styles

- Individual element's style defined using **STYLE** attribute.
- Each CSS property followed by a colon and the value of that attribute.
- Inline styles override any other styles.
- Used to apply a unique style for a single element.
- To use inline styles, add the style attribute to the relevant element.
- The style attribute can contain any CSS property.

Syntax :

```
<h1 style="color:blue;margin-left:30px;">Inline style</h1>
```

Inline Styles Example



```
<html>
▼ <head>
  <title>Inline CSS </title>
</head>
▼ <body>
  <h1 style="color:green;margin-left:30px;"> HTML </h1>
  <h2 style="color:blue;margin-left:30px;">Welcome to Cascading Style Sheets</h2>
</body>
• </html> == $0
```

Internal Styles



- An internal style sheet may be used if one single page has a unique style.
- Internal styles are defined within the `<style>` element, inside the `<head>` section of an HTML page.
- These style sheets are called **embedded** style sheets or document level style sheet.

```
<head>
<style type="text/css">
p { font-family: sans-serif; color: red; }
h2 { background-color: yellow; }
</style>
</head>
```

Internal Styles Example



```
<html>
<head>
<style>
body {background-color:green;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>

</html>
```



<style> Tag

- The **type** attribute within the style tag defines the page as the one that uses embedded styles.
- The type attribute identifies the content between the <style> and </style> tags.
- The value "text/css" indicates that the content is CSS.

Ex:

```
<style type="text/css">  
    Selector {  
        |    property1:value1;  
        |    property2:value2  
    }  
</style>
```

Exercise



Write down two separate html codes to include the following styles using inline style and embedded style

H1:

Text: Hello world

color: blue

font-family: Arial

Background-color: yellow

Hello World



External Style Sheets

- Keep the style rules in a **separate file**, apart from the HTML documents.
- An external style sheet can be written in any text editor.
- The file should not contain any html tags.
- The style sheet file must be saved with a **.css** extension.

Advantages

- Can use the same style sheet to link to multiple pages.
- By defining your styles in a single document and linking them to multiple pages, you only need to edit the style sheet to change the presentation style of all the pages linked to it.

External Style Sheets Example



```
body {  
    background-color:lightblue;  
}  
  
h1 {  
    color: navy;  
    margin-left: 20px;  
}  
  
p {  
    text-align : center;  
}
```

style1.css

```
<html>  
  <head>  
    <link ...../>  
  </head>  
  <body>  
    <h1> Hello </h1>  
    <p> This is first paragraph  
  </p>  
  <body>  
</html>
```

web.html



How to Link External CSS Files

- Create <link> tag element inside the html page to include a reference to external style sheet file.
- The <link> element goes inside the <head> section.

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

- A page can have multiple style sheet files

```
<link href="style.css" type="text/css" rel="stylesheet" />
<link href="http://www.google.com/css/gsearch.css"
rel="stylesheet" type="text/css" />
```



CSS Properties for Fonts

property	description
font-family	which font will be used
font-size	how large the letters will be drawn
font-style	used to enable/disable italic style
font-weight	used to enable/disable bold style



CSS Properties for Fonts

property	description
text-align	alignment of text within its element
text-decoration	decorations such as underlining
line-height, word-spacing, letter-spacing	gaps between the various portions of the text
text-indent	indents the first letter of each paragraph



CSS Properties for Backgrounds

property	description
background-color	color to fill background
background-image	image to place in background
background-position	placement of bg image within element
background-repeat	whether/how bg image should be repeated
background-attachment	whether bg image scrolls with page
background	shorthand to set all background properties



CSS Background Properties

- The CSS background properties are used to define the background effects for elements

background-color

- The background-color property specifies the background color of an element

Ex:–

```
body {  
    background-color: lightblue;  
}
```



background-image

- Background-image property specifies an image to use as the background of an element.
- By default, the image is repeated so it covers the entire element.

Ex:

```
body {  
    background-image: url("image.gif");  
}
```



background-repeat

- Background-image property repeats an image both horizontally and vertically.
- But **background-repeat** property repeats an image either horizontally or vertically.

Ex:

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



background-position

- Change the position of the background image.

Ex:

```
body {  
    background-image: url("img_tree.png");  
    background-repeat: no-repeat;  
    background-position: right top;  
    background-attachment: fixed;  
}
```




background-attachment

- To specify that the background image should be fixed (will not scroll with the rest of the page), **background-attachment** property is used.

```
Ex: body {  
    background-image: url("img_tree.png");  
    background-repeat: no-repeat;  
    background-attachment: fixed;  
}
```

Questions ???





Thank You.