

CSS

OBJECTIVES

By the end of the session, students should be able to

- ☐ Define CSS
- ☐ Define selector and its type
- ☐ Define declaration
- ☐ Write CSS comment
- ☐ Differentiate types of style sheet
- ☐ Implement external style sheet
- ☐ Implement text pseudo-classes
- ☐ Implement various CSS properties

CSS

- ❑ CSS stands for **C**ascading **S**tyle **S**heets
- ❑ It is a simple mechanism for adding styles to a web document
- ❑ CSS defines **how HTML elements are to be displayed**
- ❑ It was introduced in order to separate presentation from content.
- ❑ CSS saves a lot of work
- ❑ External Style Sheets are stored in **CSS files**
- ❑ The powerful feature of CSS is **inheritance**

CSS

□ three ways to insert CSS

1. Inline style
2. Internal or embedded style sheet
3. External style sheet

Inline Style

- ❑ Used to change the default style of the HTML element
- ❑ Inserted at the opening tag of the element
- ❑ **Style** attribute is used
- ❑ Style attribute **syntax**
style="property:value"
- ❑ For example
<p style="color:red;">

HTML Style

Property	Description
font-family	Defines the font to be used within the HTML element
font-size	Defines the text size of the HTML element
text-align	For text alignment
background-color	For background color
color	For text color
List-style-type	For specifying the bullet type in Unordered list
font-weight	To display text as bold
font-style	To display text as italic
Visit the URL to learn more	http://www.w3schools.com/cssref/#multicol

Inline Style

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>HTML Unordered List</title>
```

```
</head>
```

```
  <body>
```

```
    <p style="background-color:yellow; font-style:italic; color:red;">
```

```
      Dorji is coming to college </p>
```

```
    </body>
```

```
</html>
```

Grouping text

- ❑ we can group text as
 - ❑ Block
 - ❑ Inline text
- ❑ Grouping Text as block
 - ❑ `<div>` tag used to refer to block of text
 - ❑ Defines logical section or division in a web page
 - ❑ You can define a section and apply different style to a section using this tag

Grouping Text as block

```
<!DOCTYPE html>
```

```
<html>
```

```
<head><title>Grouping in Block</title></head>
```

```
<body>
```

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

```
    <p>My trying to group Text as block.</p>
```

```
    <h1>i have applied style in a block.</h1>
```

```
  </div>
```

```
  <p>I haven't group this text</p>
```

```
</body>
```

```
</html>
```

Grouping inline Text

❑ Used to apply styles to the text which is written in the middle of other text

❑ Use `` tag

```
<!DOCTYPE html>
```

```
<html>
```

```
<head><title>Grouping Inline Text</title></head>
```

```
<body>
```

```
  <p>My trying to group inline Text.
```

```
  <span style="color:red;">I have applied inline text  
  grouping</span>
```

```
  This is a text withing paragraph tag.</p>
```

```
</body>
```

```
</html>
```

Embedded Style sheets

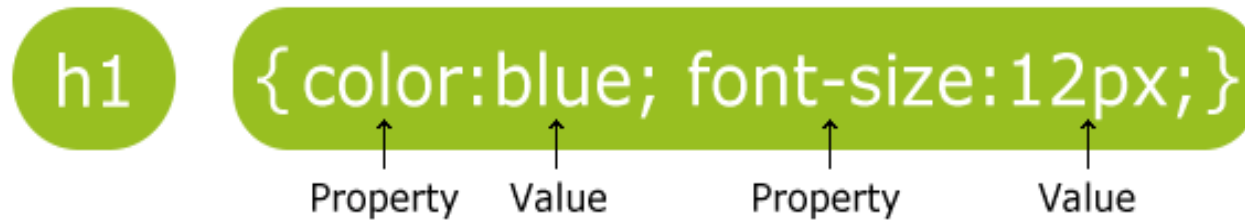
- ❑ inline style apply to individual elements in the page
 - ❑ can lead to inconsistencies as similar elements are formatted differently
 - e.g., might like for all H1 elements to be centered
 - ❑ inline definitions mix content & presentation
- ❑ alternatively, embedded style sheets allow for a clean separation of content and presentation
 - ❑ style definitions are placed in the HEAD of the page (within STYLE tags)
 - ❑ can apply to all elements, or a subclass of elements, throughout the page

Embedded Style sheets

```
<!DOCTYPE html>
<html>
<head><title>Document style sheets</title>
<style type="text/css">
p {background-color:yellow;
Font-style:italic;
Color:red;}
</style>
</head>
  <body>
    <p >Dorji is coming to college </p>
  </body>
</html>
```

External CSS

- ❑ Rule consist of
 - ❑ **Selector**: indicates which element or elements the declaration applies to
 - ❑ **Declaration**: sets out how the elements referred to in the selector should be styled
- ❑ **Selector**: HTML element to which rule is to be applied
- ❑ Declaration block consist one or more declaration
- ❑ **Declaration** is splitted into two parts separated by colon (:)
 - ❑ **Property**: property of the selected element
 - ❑ **Value**:



External CSS

- ❑ An external style sheet is declared in an external file with a **.css** extension.
- ❑ It is called by many HTML pages to change the look.
- ❑ The **<style>** tag is NOT used in an external stylesheet.
- ❑ External stylesheets are called using the **<link>** tag which should be placed in the head section of an HTML document. This tag takes three attributes.
 - ❑ **rel** - When using an external stylesheet on a webpage, this attribute takes the value **"stylesheet"**
 - ❑ **type** - When using an external stylesheet on a webpage, this attribute takes the value **"text/css"**
 - ❑ **href** - This attribute denotes the location and name of the external stylesheet to be used.

CSS comment

- ❑ 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.
- ❑ A CSS comment starts with `/*` and ends with `*/`.
- ❑ Comments can also span multiple lines

```
p {  
    color: red;  
    /* This is a single-line comment */  
    text-align: center;  
}
```

```
/* This is  
a multi-line  
comment */
```

External CSS

- With an external style sheet, you can change the look of an entire website by changing just one file!
- Each page must include a reference to the external style sheet file inside the <link> element. The <link> element goes inside the head section:

```
<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.
- The style sheet file must be saved with a .css extension.
- Don't add space between property and value

External CSS example

```
<html>
```

```
<head>
```

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

```
</head>
```

```
<body>
```

```
<p>Dorji is going <br /> lama la kheno</p>
```

```
</body>
```

```
</html>
```

External CSS example

❑ Open a new text file and copy the following rule

```
p{color:red;}
```

❑ Save the css file as 1.css

❑ Run the HTML code and see the effect

Advantages of External CSS

- ❑ It saves you repeating the same style rules in each page.
- ❑ You can change the appearance of several pages by altering just the style sheet rather than each individual page. This means it is easier to update your site if you want to, for example, change the style of font used in all headings or alter the color of all links.
- ❑ Once a visitor to your site has downloaded the CSS style with the first page of your site that uses it, subsequent pages will be quicker to load (because the browser retains a copy of the CSS style sheet and the rules do not have to be downloaded for every page). This also puts less strain on the server (the computer that sends the web pages to the people viewing the site) because the pages it sends out are smaller.
- ❑ Reusability capability of the html code for different user devices

CSS for controlling text

Property	Purpose
font	Allows you to combine several of the following properties into one
font-family	Specifies the typeface or family of font that should be used
font-size	Specifies the size of a font
font-weight	Specifies whether the font should be normal or bold
font-style	Specifies whether the font should be normal, italic, or oblique
font-stretch	Allows you to control the width of the actual characters in a font
font-variant	Specifies whether the font should be normal or small caps
font-size-adjust	Allows you to alter the aspect ratio of the size of the font's characters

CSS property for formatting text

Property	Purpose
<code>color</code>	Specifies the color of the text
<code>text-align</code>	Specifies the horizontal alignment of the text within its containing element
<code>vertical-align</code>	Specifies the vertical alignment of text within containing element
<code>text-decoration</code>	Specifies whether the text should be underlined, overlined, strikethrough, or blinking text
<code>text-indent</code>	Specifies an indent from the left border for the text

CSS property for formatting text

<code>text-transform</code>	Specifies that the content of the element should all be uppercase, lowercase, or capitalized
<code>text-shadow</code>	Specifies that the text should have a drop shadow
<code>letter-spacing</code>	Controls the width between letters (known to print designers as <i>tracking</i>)
<code>word-spacing</code>	Controls the amount of space between each word
<code>white-space</code>	Specifies whether the white space should be collapsed, preserved, or prevented from wrapping
<code>direction</code>	Specifies the direction of text (similar to the <code>dir</code> attribute)

CSS Selector

- ❑ Selects the HTML element to be manipulated
- ❑ Selects elements based on their id, class, type, attribute and more
- ❑ CSS selector can be of following type
 - ❑ Universal Selector
 - ❑ Type selector
 - ❑ Element selector
 - ❑ id selector
 - ❑ class selector

Universal selector Selector

- ❑ The *universal selector* is an asterisk;
- ❑ matches all element types in the document.
- ❑ Syntax:
 * {color:red;}
- ❑ It is slightly different from applying default styles to the <body> element

Element Selector

❑ selects elements based on the element name.

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

❑ Can be applicable to only one element

❑ applies uniform rules to all same element in the HTML document

Type Selector

- The *type selector* matches all of the elements specified in the comma - delimited list.
- It allows you to apply the same rules to several elements.
- For eg. **h1,h2,h3 {}**

Class selector

- ❑ The *class selector* allows you to match a rule with an element (or elements) carrying a class attribute whose value matches the one you specify in the class selector.

- ❑ Class selector can be used in two ways

- ❑ Consider

`< p class="BackgroundNote" > This paragraph contains an aside. < /p >`

- ❑ preceding the value of the class attribute with a period or full stop:

`.BackgroundNote {}`

- ❑ you can create a selector that selects only the `< p >` elements that carry a class attribute with a value of BackgroundNote (not other elements) like so: `p.BackgroundNote {}`

- ❑ Class attribute can have several values separated by space

Eg. `< p class="important code" >`

id selector

- The *id selector* works just like a class selector, but works on the value of id attributes.
- Rather than using a period or full stop before the value of the id attribute, you use a hash or pound sign (#).

Eg. #abstract{ }

- this selector should apply to the content of one element

Text-Pseudo classes

❑ there are two text pseudo classes that help you the work with text

- **First-letter pseudo-classes:** allows you to render first word of a element
- **First-line pseudo-classes:** allows you to render first line of the element different from rest of the line

❑ **First-letter pseudo-classes:**

- The first - letter pseudo - class allows you to specify a rule just for the first letter of an element.
- This is most commonly used on the first character of a new page, either in some magazine articles or in books.

Text-Pseudo classes

❑ First-letter pseudo-classes:

<html>

<head>

<style type="text/css">

p:first-letter{text-transform:uppercase;

font-size:88px;

color:red;

font-weight:bold;}</style>

</head>

<body>

**<p>Dorji is going
</p>**

</body>

</html>



❑ First-line pseudo-classes:

- The first - line pseudo - class should allow you to render the first line of any paragraph differently from the rest of the paragraph.
- Commonly this might be in a bold font so that the reader can clearly see an introduction (for articles) or the first line (for poems).

```
<html>
```

```
<head>
```

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

```
p:first-line{
```

```
font-size:30px; color:red;
```

```
font-weight:bold;
```

```
text-decoration:underline;}
```

```
</style>
```

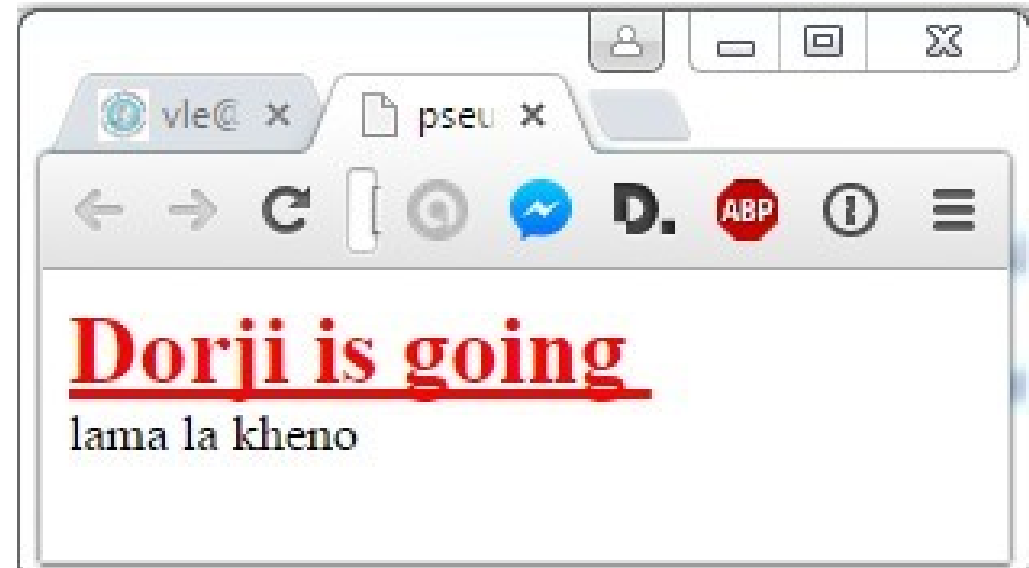
```
</head>
```

```
<body>
```

```
<p>Dorji is going <br /> lama la kheno</p>
```

```
</body>
```

```
</html>
```



Working with link

❑ The following properties are used with links

Property	Description
color	Changes the color of the link
text-decoration	Commonly used to control whether the link is underlined or not, although it can also specify that text should have a strikethrough, blink, or be overlined
background-color	Highlights the link, as if it had been highlighted with a highlighter pen

Working with link

❑ The link has four pseudo class

Pseudo-class	Purpose
<code>link</code>	Styles for links in general
<code>visited</code>	Styles for links that have already been visited
<code>hover</code>	Styles for when someone is hovering over a link
<code>active</code>	Styles for links that are currently active (being clicked)

Link Example

```
<!DOCTYPE html>
```

```
<head>
```

```
<title>Understanding the Box Model</title>
```

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

```
</head>
```

```
<body>
```

```
<a href="table.html">visit to our college website</a>
```

```
</body>
```

```
</html>
```

Link CSS example

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

```
a {
```

```
font-family: courier; font-size:45px; font-weight:bold;}
```

```
a:link {
```

```
color:red;text-decoration:none;}
```

```
a:visited {
```

```
color:black;text-decoration:none;}
```

```
a:hover {
```

```
background-color:white; text-decoration:underline;}
```

```
a:active {
```

```
color:#0033ff;text-decoration:underline;}
```

Background

❑ The following are the background properties

Property	Purpose
<code>background-color</code>	Specifies a background color
<code>background-image</code>	Specifies an image to use as the background
<code>background-repeat</code>	Indicates whether the background image should be repeated
<code>background-attachment</code>	Indicates a background image should be fixed in one position on the page, and whether it should stay in that position when the user scrolls down the page
<code>background-position</code>	Indicates where an image should be positioned
<code>background</code>	A shorthand form that allows you to specify all of these properties

Background

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p><br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br>
```

```
<p>The background-image is fixed. Try to scroll down the page.</p> <br><br><br> <br><br><br>
```

```
<p>If you do not see any scrollbars, try to resize the browser window.</p>
```

```
</body>
```

```
</html>
```

Background

Add the following CSS rule:

```
body {  
    background-image: url('dog.jpg');  
    background-repeat: no-repeat;  
    background-attachment: fixed;  
}
```

Background

□ There are a few points to note about how background images work:

1. There is no way to express the intended width and height of a background image, so you need to save it at the size you want it to appear.
2. There is no equivalent to the alt attribute (alternate text for those not able to see the image for any reason); therefore, a background image should not be used to convey any important information that is not described on the page in text as well.
3. Background images are often shown on the page after other items have been rendered, so it can look as if they take a long time to load.
4. The background - image property works well with most block - level elements, although some older browsers can have problems showing background images in tables

List

❑ The following are the CSS properties to control the list

Property	Purpose
<code>list-style-type</code>	Allows you to control the shape or appearance of the marker (the marker is another name for the bullet point or number).
<code>list-style-position</code>	When a list item takes up more than one line, this property specifies where the marker should appear in relation to the text.
<code>list-style-image</code>	Specifies an image for the marker rather than a bullet point or number.
<code>list-style</code>	Serves as shorthand for the preceding properties.
<code>marker-offset</code>	Specifies the distance between a marker and the text in the list.

Table

❑ The following are the commonly properties with <table>,<th>,<td>

property	description
border	Set the properties of the border of the table
padding	Set the amount of space between the border of a table cell and its content-this property is very important inorder to make tables easier to read
text-align	To align writing to the left , right and center of a cell
vertical-align	To align the writing to the top,middle or bottom of a cell

Table

❑ The following are the commonly properties with `<table>`, `<th>`, `<td>`

property	description
Width	Set the width of the table
height	Set the height of the table
Background-color	Changes the background color of a table or cell
Background-image	Add an image to the background of a table or cell

❑ Never use these properties in `<tr>` apart from ***background-color*** and ***height***

Table specific properties

Property	Purpose
<code>border-collapse</code>	Where the borders of two table cells touch, this property indicates whether <i>both</i> borders should be visible, or whether the browser should pick just one of the borders to show.
<code>border-spacing</code>	Specifies the width of the space that should appear between table cells.
<code>caption-side</code>	Specifies which side of a table the caption should appear on.
<code>empty-cells</code>	Specifies whether the border should be shown if a cell is empty.
<code>table-layout</code>	If the space you have allocated for a table is not enough to fit the contents, browsers will often increase the size of the table to fit the content in — this property can force a table to use the dimensions you specify.

Generated Content

- ❑ CSS introduced a powerful way to add content before and after a specific element
- ❑ Pseudo elements such as **:before** and **:after** are added to the selector
- ❑ **content** property is used to specify what should be inserted into the document
 - ❑ Example
 - ❑ `p:before{content:"hello";}`
 - ❑ `p:after{content:"bye "}`
- ❑ Some of the content property value can be string, url, counter, open-code, close-quote, no-open-quote, no-close-quote.

Generated Content

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <style>
```

```
    p:after{content:"please read it all";color:red;}
```

```
  </style>
```

```
</head>
```

```
<body>
```

```
  <p>a quick brown fox jumps over the lazy dog</p>
```

```
</body>
```

```
</html>
```

Counter

- ❑ Idea is particularly helpful in numbering the section of document without them being the list
- ❑ Automatic renumbering if extra element is added or removed
- ❑ Demo:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
</head>
```

```
<body>
```

```
  <p>a quick brown fox jumps over the lazy dog</p>
```

```
  <p>a quick brown fox jumps over the lazy frog</p>
```

```
  <p>a quick brown fox jumps over the lazy cow</p>
```

```
</body>
```

```
</html>
```

Counter

❑ Add the following CSS rule either as external or internal CSS

p:before{content:counter(para)". "; }

p{counter-increment:para;}

Web thumb rule

Web rules of thumb HTML provides for lots of neat features, but just because you can add a feature doesn't mean you should!

- ❑ don't add features that distract from the content of the page

- ❑ use color & fonts sparingly and be careful how elements fit together

 - e.g, no purple text on a pink background, no weird fonts

- ❑ use images only where appropriate

 - e.g., bright background images can make text hard to read

 - e.g., the use of clickable images instead of buttons or links can slow access

- ❑ don't rely on window or font size for layout

 - e.g., font size may be adjusted by viewer, window constrained

Web thumb rule

- ❑ don't be annoying

 - e.g., no pop-up windows, excessive advertising, silly music

- ❑ break large document into smaller or provide a menu (either internal or frame)

- ❑ stick to standard features and test using both IE and Netscape

- ❑ utilize style sheets to make changes easy & ensure consistency

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