Gampaha Wickramarachchi University of Indigenous Medicine
Faculty of Indigenous Health Sciences and Technology
Department of Technology
BHSc Hons (HICT)
Year 2 - Semester II
Handout
HICT 22013- Web Design and Development

CSS

Cascading Style Sheet

CSS Beginner's Guide

What is CSS?

CSS (Cascading Style Sheets) is used to style HTML elements on a web page. CSS allows you to change colors, layout, fonts, and other visual aspects of a website.

Ways to Add CSS to HTML Documents

Inline CSS

- CSS is applied directly to an HTML element using the `style` attribute.
- Used for quick styling of individual elements.

```html
<p style="color: red; font-size: 16px;">This is an inline styled paragraph.</p>
```

Internal CSS

- CSS rules are defined within a `<style>` block inside the `<head>` section of the HTML document.
- Useful for styling a single HTML page.

```html
<html>
<head>
    <style>
        p {
            color: blue;
            font-size: 18px;
        }
    </style>
</head>
<body>
    <p>This paragraph is styled using internal CSS.</p>
</body>
</html>
```

External CSS

- A separate CSS file is linked to the HTML document using the `<link>` tag.
- Allows for the reuse of styles across multiple pages.

```
<html>
<head>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <p>This paragraph is styled using external CSS.</p>
</body>
</html>
```

styles.css

```
p {
    color: green;
    font-size: 20px;
}
```

CSS Syntax

CSS is made up of selectors and declarations. A declaration is made up of a property and a value.

```
selector {
 property: value;
}
```

Example:

```
h1 {
 color: blue;
 font-size: 24px;
}
```

This example selects all `<h1>` elements and makes the text blue with a font size of 24px.

CSS Selectors

Selectors are used to target HTML elements that you want to style.

- **Element Selector**: Targets elements by their HTML tags (e.g., **h1, p, div**).

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

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Paragraph Styling Example</title>
  <style>
    h1 {
      color: blue;
      font-size: 24px;
    }
    p {
      color: red;
    }
  </style>
</head>
<body>
  <h1>Welcome to My Website</h1>
  <p>This is a sample paragraph with red text.</p>
  <p>Here's another paragraph demonstrating the same style.</p>
</body>
</html>
```

- **Class Selector:** Targets elements by class attribute (use **.** before class name).

```
.container {
 width: 100%;
 padding: 20px;
}
```

What is a Class in CSS?

- A class is an attribute you assign to an HTML element, including <div>, for styling or behavior.
- A class in CSS is a reusable styling definition applied to one or multiple HTML elements.

class01.html

```
<style>
  .container {
    width: 100%;
    padding: 20px;
    background-color: #f0f0f0;
  }
  p {
    color: red;
  }
</style>
</head>
<body>
  <div class="container">
    <p>This is a paragraph inside a container with padding and full width.</p>
  </div>
  <p>This paragraph is outside the container and will not have the same styling.</p>
</body>
```

class02.html

```html
<style>
  .container {
    width: 80%;
    margin: auto;
    padding: 20px;
    background-color: #e0e0e0;
  }
  .highlight {
    color: white;
    background-color: blue;
    padding: 10px;
    border-radius: 5px;
  }
</style>
</head>
<body>
  <div class="container">
    <h1 class="highlight">Welcome to My Website</h1>
    <p>This is a sample paragraph inside the container.</p>
    <p class="highlight">This paragraph has a highlight style applied to it.</p>
  </div>
  <p>This paragraph is outside the container and does not have any special styling.</p>
</body>
```

- ID Selector: Targets elements by ID attribute (use # before ID name).

```css
#header {
 background-color: lightgray;
}
```

Use ID When: You need to style or target one unique element.

Use Class When: You need to apply the same style to multiple elements.

IDselector.html

```
<style>
  #header {
    background-color: lightgray;
    padding: 20px;
    text-align: center;
  }
  p {
    color: black;
  }
</style>
</head>
<body>
  <div id="header">
    <h1>Welcome to My Website</h1>
    <p>This is the header section styled with the ID selector.</p>
  </div>
  <p>This paragraph is outside the header and does not have the same styling.</p>
</body>
```

- **Universal Selector**: Targets all elements.

```
* {
  margin: 0;
  padding: 0;
}
```

- **Attribute Selector**: Targets elements with a specific attribute.

```
input[type="text"] {
  border: 1px solid #ccc;
}
```

universal.html

```html
<style>
  * {
    margin: 0;
    padding: 0;
  }
  input[type="text"] {
    border: 1px solid #ccc;
    padding: 8px;
    border-radius: 4px;
    width: 100%;
  }
  .container {
    margin: 20px;
    padding: 20px;
    background-color: #f0f0f0;
  }
  label {
    margin-bottom: 10px;
    display: block;
    font-weight: bold;
  }
</style>
</head>
<body>
  <div class="container">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" placeholder="Enter your name">
  </div>
</body>
```

Common CSS Properties

CSS properties define what styles you want to apply. Here are some commonly used ones:

Sets the text color : color: blue;

Sets the background color of an element.; background-color: yellow;

Controls the size of the font.: font-size: 16px;

Sets the font type : font-family: Arial, sans-serif;

Aligns text within an element: text-align: center;

Sets the width and height of an element:

width: 100px;
height: 50px;

Adds space inside an element's border: padding: 10px;

Adds space outside an element's border: margin: 10px;

Adds a border around an element: border: 1px solid black;

Combining Selectors

You can combine multiple selectors for more specific styling.

Grouping Selectors: Use commas to apply styles to multiple elements.

```
h1, h2, p {
  color: blue;
}
```

Descendant Selector: Targets elements within a parent.

```
.container p {
  font-size: 14px;
}
```

Child Selector: Targets direct children of a parent.

```
.container > p {
  color: green;
}
```

CSS Box Model

The CSS box model defines the space around elements.

- Content: The actual content inside the box.
- Padding: Space between the content and the border.
- Border: The border around the padding and content.
- Margin: Space outside the border.

Example:

```css
.box {
  width: 200px;
  padding: 10px;
  border: 2px solid black;
  margin: 20px;
}
```

boxModel.html

```html
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>CSS Box Model Example</title>
  <style>
    .box {
      width: 200px;
      padding: 10px;
      border: 2px solid black;
      margin: 20px;
      background-color: #f9f9f9;
    }
    p {
      margin: 0;
    }
  </style>
</head>
<body>
  <div class="box">
    <p>This is a box with content, padding, border, and margin.</p>
  </div>
</body>
```