CLASS DESCRIPTION

In this class, students will explore web page development using the basic HTML tools such as attributes, links, images, colors and so on.

TOTAL CLASS TIME: 150 minutes

CLASS OUTCOME
By the end of this class, students will learn how to add additional functions into their HTML document and create more functional web pages.

Note: Please ensure you have taken the Basic HTML part 1, Session 1 lesson.

HTML ATTRIBUTES

- Attributes provide additional information about an element
- Attributes are always specified in the start tag
- Attributes usually come in name/value pairs like:
  name="value" <tagname name="value"> Content </tagname>

Below is an alphabetical list of some attributes often used in HTML:
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt</td>
<td>Specifies an alternative text for an image, when the image cannot be displayed</td>
</tr>
<tr>
<td>Disabled</td>
<td>Specifies that an input element should be disabled</td>
</tr>
<tr>
<td>Href</td>
<td>Specifies the URL (web address) for a link</td>
</tr>
<tr>
<td>Id</td>
<td>Specifies a unique id for an element</td>
</tr>
<tr>
<td>Src</td>
<td>Specifies the URL (web address) for an image</td>
</tr>
<tr>
<td>Style</td>
<td>Specifies an inline CSS style for an element</td>
</tr>
<tr>
<td>Title</td>
<td>Specifies extra information about an element (displayed as a tool tip)</td>
</tr>
</tbody>
</table>
The Href Attribute

HTML links are defined with the `<a>` tag. The link address is specified in the `href` attribute:

Example

```
<a href="https://www.waawfoundation.org">This is a link</a> You
```

will learn more about links and the `<a>` tag later in this tutorial.

Size Attributes

HTML images are defined with the `<img>` tag.

The filename of the source (`src`), and the size of the image (`width` and `height`) are all provided as attributes:

Example

```
<img src="dogs.jpg" width="104" height="142">
```

The image size is specified in pixels: width="104" means 104 screen pixels wide.

You will learn more about images and the `<img>` tag later in this tutorial.

The Alt Attribute

The `alt` attribute specifies an alternative text to be used, when an image cannot be displayed.

Example

```
<img src="dogs.jpg" alt="view later.com" width="104" height="142">
```
HTML LINKS

HTML links are hyperlinks. You can click on a link and jump to another document.

When you move the mouse over a link, the mouse arrow will turn into a little hand.

**Note:** A link does not have to be text. It can be an image or any other HTML element.

- **HTML Links – Syntax**

In HTML, links are defined with the `<a>` tag:

```html
<a href="url">link text</a>
```

**Example**

```html
<a href="https://www.waawfoundation.org/html/">Visit our HTML tutorial</a>
```

The **href** attribute specifies the destination address (https://www.waawfoundation.org/html/) of the link.

- **Local Links**

The example above used an absolute URL (A full web address).

A local link (link to the same web site) is specified with a relative URL (without http://www....).

**Example**

```html
<a href="html_images.asp">HTML Images</a>
```
### THE HTML STYLE ATTRIBUTE

Setting the style of an HTML element can be done with the style attribute. The HTML style attribute has the following syntax:

```html
<tagname style="property:value;">
</tagname>
```

**Note:** The property is a CSS property. The value is a CSS value.

### Examples of HTML Styles

#### Html Background Color

The `background-color` property defines the background color for an HTML element.

This example sets the background color for a page to powderblue:

```html
<body style="background-color:powderblue;">  
<h1>This is a heading</h1>  
<p>This is a paragraph.</p>  
</body>
```

#### Html Text Color

The `color` property defines the text color for an HTML element:

```html
<h1 style="color:blue;">This is a heading</h1>  
<p style="color:red;">This is a paragraph.</p>
```

#### Html Fonts

The `font-family` property defines the font to be used for an HTML element:
Example

```html
<p style="font-family:verdana;">This is a paragraph.</p>

<h1 style="font-family:verdana;">This is a heading</h1>
```

### Html Text Size

The **font-size** property defines the text size for an HTML element:

Example

```html
<p style="font-size:160%;">This is a paragraph.</p>
<h1 style="font-size:300%;">This is a heading</h1>
```

### Html Text Alignment

The **text-align** property defines the horizontal text alignment for an HTML element:

Example

```html
<p style="text-align:center;">Centered paragraph.</p>
<h1 style="text-align:center;">Centered Heading</h1>
```

### HTML COMMENTS

#### Html Comment Tags

You can add comments to your HTML source by using the following syntax:

```
<!-- Write your comments here -->
```

Notice that there is an exclamation point (!) in the opening tag, but not in the closing tag.

**Note:** Comments are not displayed by the browser, but they can help document your HTML source code.
With comments you can place notifications and reminders in your HTML:

Example

<!-- This is a comment -->

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

<!-- Remember to add more information here -->

**HTML COLORS**

- In HTML, a color can be specified by using a color name, an RGB value, or a HEX value.

**Color Names**

<table>
<thead>
<tr>
<th>Color</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="red.png" alt="Red" /></td>
<td>Red</td>
</tr>
<tr>
<td><img src="orange.png" alt="Orange" /></td>
<td>Orange</td>
</tr>
<tr>
<td><img src="yellow.png" alt="Yellow" /></td>
<td>Yellow</td>
</tr>
</tbody>
</table>
Note: HTML supports 140 standard color names.

**RGB VALUE**

- In HTML, a color can also be specified as an RGB value, using this formula: rgb(red, green, blue)
- Each parameter (red, green, and blue) defines the intensity of the color between 0 and 255.
- For example, rgb(255,0,0) is displayed as red, because red is set to its highest value (255) and the others are set to 0.
- To display the color black, all color parameters must be set to 0, like this: rgb(0,0,0).
- To display the color white, all color parameters must be set to 255, like this: rgb(255,255,255).

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Color</th>
<th>RGB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyan</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td></td>
</tr>
</tbody>
</table>

| rgb(255,0,0) | rgb(255,255,255) |
Shades of gray are often defined using equal values for all the 3 light sources:

<table>
<thead>
<tr>
<th>Color</th>
<th>RGB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rgb(255,255,0)</td>
</tr>
<tr>
<td></td>
<td>rgb(0,255,0)</td>
</tr>
<tr>
<td>rgb(0,255,255)</td>
<td></td>
</tr>
<tr>
<td>rgb(0,0,255)</td>
<td></td>
</tr>
<tr>
<td>rgb(90,90,90)</td>
<td></td>
</tr>
</tbody>
</table>

Example
In HTML, a color can also be specified using a hexadecimal value in the form: #RRGGBB, where RR (red), GG (green) and BB (blue) are hexadecimal values between 00 and FF (same as decimal 0-255).

For example, #FF0000 is displayed as red, because red is set to its highest value (FF) and the others are set to the lowest value (00).

**Example**

<table>
<thead>
<tr>
<th>Color</th>
<th>HEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>#FF0000</td>
<td></td>
</tr>
<tr>
<td>#FFFF00</td>
<td></td>
</tr>
</tbody>
</table>
Shades of gray are often defined using equal values for all the 3 light sources:

Example

<table>
<thead>
<tr>
<th>Color</th>
<th>HEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>#000000</td>
<td></td>
</tr>
<tr>
<td>#404040</td>
<td></td>
</tr>
<tr>
<td>#808080</td>
<td></td>
</tr>
</tbody>
</table>
**HTML IMAGES**

- **HTML Images Syntax**

  - In HTML, images are defined with the `<img>` tag.
  - The `<img>` tag is empty, it contains attributes only, and does not have a closing tag.
  - The `src` attribute specifies the URL (web address) of the image.

  ```html
  <img src="url" alt="some_text" style="width:WIDTH;height:HEIGHT;"> 
  ```

  The image tag `<img>` has several attributes:

  - `src` = identifies the image and tells the browser where to get the image.
  - `Height` & `width` = tell the browser the size of the graphic.
  - `alt` = gives alternative text for those who are not viewing their pages with images.

- **Image Size - Width and Height**

  You can use the `style` attribute to specify the width and height of an image.

  The values are specified in pixels (use `px` after the value):
Example

```
<img src="html5.gif" alt="HTML5 Icon" style="width:128px;height:128px;">
```

Alternatively, you can use the width and height attributes. Here, the values are specified in pixels by default.

- Note: image format may be in JPG, GIF or PNG files formats.

Adding image to your document:

- Select image to be added and save as .jpg in your html file document
- Write some html on your notepad as shown and attached image name to src
- Save and upload to your browser.

Example

```
<!DOCTYPE html>
<html>
<body>
<h2>Spectacular Mountain</h2>
<img src="pic_mountain.jpg" alt="Mountain View" style="width:304px;height:228px;">
</body>
</html>
```

MORE FORMATTING ON HTML

So far we’ve learned how to put text and images on our webpage, but let’s say we want to change the look of the text. Easy, we’ll just use some more formatting tags, such as bold, strong, italic, emphasized, small and delete.
**HTML Formatting Elements**

HTML also defines special **elements** for defining text with a special **meaning**.

HTML uses elements like `<b>` and `<i>` for formatting output, like **bold** or **italic** text.

Formatting elements were designed to display special types of text:

- `<b>` - Bold text
- `<strong>` - Important text
- `<i>` - Italic text
- `<em>` - Emphasized text
- `<mark>` - Marked text
- `<small>` - Small text
- `<del>` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
- `<sup>` - Superscript text

**HTML <B> AND <STRONG> ELEMENTS**

The HTML `<b>` element defines **bold** text, without any extra importance.

**Example**

```html
<b>This text is bold</b>
```

The HTML `<strong>` element defines **strong** text, with added semantic "strong" importance.

**Example**

```html
<strong>This text is strong</strong>
```
HTML `<i>` AND `<em>` ELEMENTS

The HTML `<i>` element defines ITALIC text, without any extra importance.

Example

```html
<i>This text is italic</i>
```

The HTML `<em>` element defines EMPHASIZED text, with added semantic importance.

Example

```html
<em>This text is emphasized</em>
```

**Note:** Browsers display `<strong>` as `<b>`, and `<em>` as `<i>`. However, there is a difference in the meaning of these tags: `<b>` and `<i>` defines bold and italic text, but `<strong>` and `<em>` means that the text is "important".

---

HTML `<small>` ELEMENT

The HTML `<small>` element defines smaller text:

Example

```html
<h2>HTML <small>Small</small> Formatting</h2>
```

---

HTML `<mark>` ELEMENT

The HTML `<mark>` element defines marked or highlighted text:

Example

```html
<h2>HTML <mark>Marked</mark> Formatting</h2>
```
**HTML <DEL> ELEMENT**

The HTML `<del>` element defines deleted (removed) text.

Example

```html
<p>My favorite color is <del>blue</del> red.</p>
```

**HTML <INS> ELEMENT**

The HTML `<ins>` element defines inserted (added) text.

Example

```html
<p>My favorite <ins>color</ins> is red.</p>
```

**HTML <SUB> ELEMENT**

The HTML `<sub>` element defines subscripted text.

Example

```html
<p>This is <sub>subscripted</sub> text.</p>
```

**HTML <SUP> ELEMENT**

The HTML `<sup>` element defines superscripted text.

Example

```html
<p>This is <sup>superscripted</sup> text.</p>
```

**Try this on your own.**

- Enter the following code in your text editor
Here is bold text. 

Here is strong text. 

Here is italic text. 

Here is text emphasized 

Here is small text. 

Here is text with strikeout. 

---

- Save the file as `formatting.html` in HTML folder.

- Open to view in the browser

---

**BLOCKQUOTE**

Sometimes, you may want to indent a block of text and or maybe even a sentence. That is done with the simple `<blockquote>` tag.

**Add a blockquote to the text above.**

- Make the changes shown in yellow.
<title>Formatting Text</title>

<body>

<p><b>Here is bold text.</b></p>

<p><strong>Here is strong text.</strong></p>

<p><blockquote><i>Here is italic text.</i></blockquote></p>

<p><blockquote><em>Here is text emphasized</em></blockquote></p>

<p><small>Here is small text.</small></p>

<p><del>Here is text with strikeout.</del></p>

</body>

</html>

- Save the file as <code>blockquote.html</code> in HTML folder.

- Open file to see how it looks in your browser.

---

**REVIEW/DISCUSSION**

Review what students learnt and how well you can apply their knowledge to designing their web page.

**REFERENCES:**

- [www.w3schools.com](http://www.w3schools.com)
- [www.goodellgroup.com](http://www.goodellgroup.com)
- [www.codecademy.com](http://www.codecademy.com)