**Software Lesson 1.2: HTML Elements**

**Brief**

**Lesson Overview**

The learners will be learning how to create simple webpages using HTML. This lesson will explore the different HTML tags as well as attributes.

**Part 1 - Introduction**

All HTML documents must start with a document type declaration: <!DOCTYPE html>.

The HTML document itself begins with <html> and ends with </html>.

The visible part of the HTML document is between <body> and </body>.

<!-- index.html -->

<!DOCTYPE html>

<html>

<head>

<title>My first webpage</title>

</head>

<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>

</html>

Save the file as index.html.

**Viewing HTML code in web browsers**

The Chrome developer's tool can be accessed by doing either of the following:

1. Right-click on the screen and choose "Inspect"
2. Pressing F12 or Ctrl+Shift+I in the keyboard

**HTML tags**

Demonstration to the learners the following HTML elements:

<h1>...<h6>

<p>

<img>

<ul><li>

<a>

Code:

<!-- index.html -->

<h3>John Doe</h3>

<img class="avatar" src="https://m.media-amazon.com/images/I/71qokUI2ypL.\_AC\_SX679\_.jpg" height="200px" width="200px"/>

<p>My name is John. I am a software developer. I am proficient in:</p>

<ul>

<li>HTML</li>

<li>CSS</li>

<li>JavaScript</li>

<li>React</li>

</ul>

<p>Check out my full profile at <a href="https://w3schools.com">W3Schools!</a></p>

**HTML Attributes**

All HTML elements can have attributes. They provide additional information about elements.

Attributes are always specified in the start tag and usually come in name/value pairs like: name="value".

Here are some of the commonly used attributes:

1. href - used in anchor tags (<a>), specifies the URL of the page the link goes to.
2. src - when used in image tags, it specifies the path to the image to be displayed.
3. alt - when used in image tags, it specifies an alternate text for an image, if the image for some reason cannot be displayed.
4. style - used to add inline style to an element, such as color, font, size, and more.
5. id - denotes the id of the element
6. class - denotes a class for a group of elements

**Part 2 - HTML Tables**

HTML tables allow web developers to arrange data into rows and columns.

<!-- index.html -->

<table>

<tr>

<th>Company</th>

<th>Contact</th>

<th>Country</th>

</tr>

<tr>

<td>Alfreds Futterkiste</td>

<td>Maria Anders</td>

<td>Germany</td>

</tr>

<tr>

<td>Centro comercial Moctezuma</td>

<td>Francisco Chang</td>

<td>Mexico</td>

</tr>

</table>

The <table> tag denotes that there is a table The <tr> tag denotes a table row The <th> tag denotes that it is a header for a column The <td> tag denotes a single cell in the table

HTML tables can have cells that span over multiple rows and/or columns by using the rowspan and colspan attributes. The values of the attributes represent the number of rows/columns to span.

**Part 3 - HTML Forms**

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

<!-- index.html -->

<h3>Sample Form</h3>

<form>

<label for="fname">First Name:</label>

<input type="text" name="fname" placeholder="Enter Name"/>

<br/>

<label for="age">Age:</label>

<input type="number" name="age" placeholder="Enter Age"/>

<br/>

<textarea>Enter Comment</textarea>

<br/>

<input type="submit">

</form>

The HTML <form> element is used to create an HTML form for user input:` The HTML <input> element is the most used form element.

An <input> element can be displayed in many ways, depending on the type attribute.

Here are some examples:

<input type="text"> - Displays a single-line text input field <input type="number"> - Displays a single-line number input field <input type="radio"> - Displays a radio button (for selecting one of many choices) <input type="checkbox"> - Displays a checkbox (for selecting zero or more of many choices) <input type="submit"> - Displays a submit button (for submitting the form) <input type="button"> - Displays a clickable button

The <label> tag defines a label for many form elements.