Introduction to HTML

HTML – stands for "HyperText Markup Language". It is defined as Markup Language and the standard markup language for creating web pages. HTML is consists of textual content, HTML element and attribute.

- The extension file of an HTML is .html

- **Element**
  - o An element is composed of an open tag and a closing tag. The name of the elements is in between of those two angle brackets <html>. The elements can be modified by attributes.
  - o An element may also contain another element

  ```
  <p>
      Hello
      <strong>
              World!
      </strong>
  </p>
  ```

- **Attribute**

  - o An attribute is placed within the opening tag in an element. Attribute is also known as name=value pair.

Tag – A tag has two angle brackets <u><html>.</u> A tag normally comes in two pairs <html> and </html>. Opening tag <html> is composed of two angle brackets and the name of the element. The closing tag is the same with the opening tag, but the difference is the closing tag has a forward slash.

HTML Basics

HTML has the basic elements that are commonly used in developing a web page or website and the structure of the syntax inside the HTML file.

HTML Basic Examples:

- **HTML Document**
  - o An HTML document is composed of textual content, HTML elements, and attributes.
  - o The common tags in an HTML Document are `<!DOCTYPE>, <html>, <head>, <title>` and the `<body>`.

- **Paragraph**
  - o A paragraph is the basic unit of text in HTML.
  - o Paragraphs may also contain another element to highlight the specific text.

  ```
  <p>
      An example of
      <strong>
              element structure
      </strong>
      in HTML5 document
  </p>
  ```

- **Heading**
  - o Heading has six (6) levels, with the higher heading number indicating a heading of less importance.
  - o In a browser, the heading is used to create a document outline

  ```
  <h1 class="heading1">Heading 1</h1>
  <h2 class="heading2">Heading 2</h2>
  <h3 class="heading3">Heading 3</h3>
  <h4 class="heading4">Heading 4</h4>
  <h5 class="heading5">Heading 5</h5>
  <h6 class="heading6">Heading 6</h6>
  ```

- **Links**
  - A link is an essential feature of all web pages.
  - This element uses a **href** attribute to determine the destination
  - A link has two (2) parts the destination and the label.

```
<a href="https://www.google.com.ph">Google</a>
<br>
<br>
<a href="image.html">
    <img src="img.jpg" width="280px" height="140px"/>
</a>
```

- **Form**
  - A form is an alternative way to interact with the server and collect the user inputs.
  - Form is constructed in HTML in the same manner as table <table> or list<li>.
  - A container for an element that represents the various input elements within the form.

```
<form action="#">
    <input type="text" placeholder="First name"/>
    <br>
    <input type="text" placeholder="Last name"/>
    <br>
    <input type="submit" value="submit"/>
</form>
```

- **Table**
  - A table in HTML is created using <table> element.
  - There are three (3)elements that can be used inside the table:
    - **Table header <th>**
      - The header of the table
    - **Table row <tr>**
      - This element indicates how many rows should be displayed in a table.
    - **Table data <td>**
      - It holds the data or information that will be displayed in a table.

```
<table>
    <tr>
        <th>Student no.</th>
        <th>Name</th>
        <th>Section</th>
    </tr>
    <tr>
        <td>01</td>
        <td>Mark</td>
        <td> BSIT501</td>
    </tr>
    <tr>
        <td>02</td>
        <td>Christian</td>
        <td>BSIT601</td>
    </tr>
    <tr>
        <td>03</td>
        <td>Mae</td>
        <td>BSIT502</td>
    </tr>
</table>
```

  - A table element has two attributes to create one or two rows and columns.
    - **Colspan**
      - This attribute is used to create two or more columns in a table.

- **Rowspan**
  - This attribute is used to create two or more rows in a table.

```
<table>
    <tr>
        <th>Food</th>
        <th colspan="2">Category</th>
    </tr>
    <tr>
        <td>Orange</td>
        <td>0</td>
        <td>1</td>
    </tr>
    <tr>
        <td>Apple</td>
        <td>0</td>
        <td>1</td>
    </tr>
    <tr>
        <td>Carrot</td>
        <td>1</td>
        <td>0</td>
    </tr>
    <tr>
        <td>Grapes</td>
        <td>0</td>
        <td>1</td>
    </tr>
    <tr>
        <td>Broccoli</td>
        <td>1</td>
        <td>0</td>
    </tr>
</table>
```

```
<table>
    <tr>
        <th>Category</th>
        <th>Food</th>
    </tr>
    <tr>
        <td rowspan="3">Fruit</td>
        <td>Orange</td>
    </tr>
    <tr>
        <td>Grapes</td>
    </tr>
    <tr>
        <td>Apple</td>
    </tr>
    <tr>
        <td rowspan="2">Vegetable</td>
        <td>Carrot</td>
    </tr>
    <tr>
        <td>Broccoli</td>
    </tr>
</table>
```

HTML Structure

HTML follows a proper structure to have an organize syntax in an HTML Document. In a structured HTML <!DOCTYPE> is always in the first line of an HTML Document. Next is the <html> element, it contains the <head> and <body> element. Inside in the <head> element it contains the <title>, <meta>, <link> and the <script> element. In the <body> element will be the content of a web page.

```
<!DOCTYPE html>
<html>
    <head lang="en">
        <title>My first Web Page </title>
        <meta charset="utf-8"/>
        <link rel="stylesheet" href="../css/hw.css" />
        <script src="helloworldjs.js"></script>
    </head>
    <body>
        <h1 class="sample">Hello World!</h1>
    </body>
</html>
```

<!DOCTYPE>
- Short for Document Type Definition is a type of element.
- It tells the browser or any software that is reading an HTML Document, what type of document is about to process.

<html>
- This element is sometimes called the root element. This element contains other HTML elements in the

document.
- Inside this element has two sections, the <head> and <body> element.

<head>
- Head element contains information about the document.

<body>
- This element contains the content that will be displayed in the browser.

<meta>
- <meta> element is also known as metadata contains data about data.
- It is used to specify the page description, author of the document, character coding, and other metadata.

<link>
- Link specifies an external CSS style sheet file.
- HTML can use the **<style>** element to make it consistent. Most websites use external style sheets.

<script>
- This element refers to a connection from an external Javascript file.
- Javascript is used to program the behavior of a web page.

REFERENCES:
Connolly, R. & Hoar, R. (2015). *Fundamentals of web development*. New Jersey: Pearson Education, Inc.
Lemay, L., Colburn, R., & Kyrnin, J. (2016). *Sams teach yourself HTML, CSS, and JavaScript web publishing in one hour a day* (7th Ed.). New Jersey: Pearson Education, Inc.
Krause, J. (2016). *Introducing web development*. California: Apress Media, LLC.