**W01 Learning Activity: An Introduction to HTML**

**Overview**

HTML stands for **HyperText Markup Language** and is one of the three core technologies of the web, HTML, CSS, and JavaScript. HTML defines the **structure** and **meaning** of a web document. Hypertext refers to the way hypertext links are placed in the document that allows users to move from one page to another. Markup is a set of symbols or codes for displaying content on the Internet. Web browsers, like Google Chrome, use HTML markup and content to render pages.

Notes:

* The structure of the page helps us to understand the message. The headings and subheading give some structure to this page.
* It’s HTML’s job to give structure like this to a web page
* HTML elements are shown in red with angle brackets. They usually have an opening and closing tag. The closing tags have a slash after the first angle bracket.
* Some tags contain other tags. The HTML tag has all the other tags between it’s opening and closing tag. The body tag contains all the tags that will display in the page of the browser. This is called nesting. You can have tags inside other tags or parent and child tags.
* The text between the h1 tags, or heading level 1 tags, is the main heading. H2 tags are one level down from the main heading, in this case they are used as subheadings and the text between the p tags is the paragraph text.
* HTML stands from hypertext markup language. Hypertext refers to the way we can place hypertext links in our document that allows our users to move from one page to another. Markup is a set of symbols or codes for displaying content on the internet.

**HTML Elements and attributes notes:**

**Common Structural Elements**

* Three primary child elements of <body>: <header>, <main>, and <footer>
* Use indentation to nest child elements for clarity

**Role of Structural Tags**

* <header>: Contains reusable page-top elements like logos or menus (not to be confused with <head>)
* <main>: Holds **unique content** specific to that page
* <footer>: Holds consistent bottom-of-page content (e.g., contact info or copyright)

**Navigation & Links**

* <nav>: A child of <header> that holds navigational content
* <a>: Defines a hyperlink; uses the href attribute to specify destination
* **Attributes**: Name/value pairs inside tags (e.g., href="url"), typically in lowercase

**Image Elements**

* <img>: Self-contained (no closing tag)
* Uses src (image file path) and alt (accessible description) attributes

**HTML Code Behavior**

* Some editors (e.g., Visual Studio Code) color-code HTML for clarity
* <html> often uses a lang attribute (e.g., lang="en" for English content)

**Semantics & Style**

* Semantic tags describe **meaning**: <h1> = main heading, <a> = link, <img> = image
* HTML handles structure; **CSS handles appearance**
* Browsers apply default styles (e.g., <h1> bold, <a> underlined)

HTML Activity: Key Questions & Answers

* What is the purpose of <!DOCTYPE html> ?

It’s a required preamble that ensures the HTML document behaves correctly. Originally linked to rule sets for HTML validation, but now mostly used to trigger proper rendering in browsers.

* What does <html lang="en-US"> ... </html> do ?

It wraps all content on the page as the \*\*root element\*\* and includes the `lang` attribute to specify the document’s primary language (e.g., English - US).

* What’s inside the <head> ... </head> element?

It holds machine-readable metadata like character encoding, title, linked stylesheets, and viewport settings.

* What does `<meta charset="utf-8">` do?

Declares character encoding as UTF-8, which supports all characters and is required for HTML5. Must be in the first 1024 bytes.

* What is the function of `<meta name="viewport" content="width=device-width, initial-scale=1.0">`?

Ensures the webpage displays correctly across different screen sizes, especially on mobile, by controlling the viewport scaling.

* What does `<title> ... </title>` define?

Sets the \*\*browser tab title\*\* and helps users identify or bookmark the page. Should match the content of the `<h1>` in the body.

* What does the `<body> ... </body>` element do?

It holds all the visible content users see—text, images, audio, games, etc. There can only be one `<body>` tag per page.

* What is the basic anatomy of an HTML document?

html

<!DOCTYPE html>

<html lang="en-US">

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width">

<title>Relevant Document Title</title>

</head>

<body>

<!-- Visible content goes here -->

</body>

</html>

* Using an HTML snippet, how do you identify its components?

Example:

html

<p>A paragraph with a link to <a href="https://byupathway.edu">BYU Pathway</a>.</p>

- `<p>` = opening (start) tag

- `</p>` = closing (end) tag

- `href` = attribute (with value as destination URL)

- Text content = "A paragraph with a link..."

- `<a>` = anchor tag for hyperlink

* What are elements with no content and no closing tag called?

Void elements. Example:

html

<img src="images/sample.png" alt="A sample image">

- In modern HTML, omit the trailing slash (`/`) in void elements.