**Unit One – HTML and CSS**

**HTML** (HyperText Markup Language) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages like JavaScript.

* Stands for Hypertext Markup Language
* It is a tag-based language used to create web pages
* Created by Berners – Lee in the late 1993
* Current version is HTML 5.3
* Developed with an intent of defining the structure of documents like headings, paragraphs, lists etc.
* HTML is sent from server to client’s browser whenever HTTP request is sent to server

**Basic Syntax/Skeleton:**

<html>

<head>

<title> This is my first document </title>

</head>

<body>

<h1> This is a heading </h1>

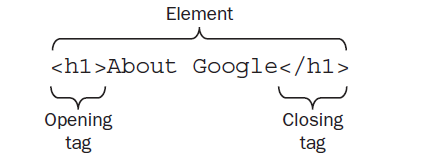
<p> This is paragraph </p>

</body>

</html>

**Tags and Elements:**

|  |  |
| --- | --- |
| Tags | Elements |
| A tag is made up of left & right-angle bracket and letters & numbers between those brackets. | Whereas elements are the opening and closing tags plus anything between the two tags. |



**Q. Why HTML is called markup language?**

Hypertext means machine readable text and Markup means to structure it in a specific format. So, HTML is called Hypertext Markup Language because it is a language that allows users to organize, improve the appearance and link text with data on the internet.

HTML defines the structure and layout of a web document by using a variety of tags and attributes. The HTML syntax is based on a list of tags that describe the page format and what is displayed on the web page.

Further, it is called markup language because it marks the information by tagging them.

Example:

<p> Hello </p>

Here, it is marking the word “hello” by <p> paragraph tag. So, that browser will know how to display it.

**DOCTYPE:**

In HTML, the DOCTYPE declaration (short for "Document Type Declaration") is an instruction to the web browser about which version of HTML the document is written in.

The DOCTYPE declaration is placed at the beginning of an HTML document, before the <html> tag. Its purpose is to tell the browser how to interpret the document, as different versions of HTML may have different rules for syntax and features.

***For example, the DOCTYPE declaration for HTML5 is:***

<!DOCTYPE html>

This tells the browser that the document is written in HTML5 and should be rendered accordingly.

**Prior to HTML5,** the DOCTYPE declaration was more complex and included information about the document type, version, and DTD (Document Type Definition).

***For example, the DOCTYPE declaration for HTML 4.01 Transitional was:***

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

This DOCTYPE declaration specifies the DTD (loose.dtd) and the version of HTML (HTML 4.01 Transitional). The DTD defines the rules for the syntax and structure of the document, and tells the browser how to interpret it.

**In HTML5,** the DOCTYPE declaration is simplified to just <!DOCTYPE html>, as the HTML5 specification includes a built-in default DTD and does not require a separate reference to an external DTD.

**Note:** DTD (Document Type Definition) specifies the valid structure and elements of an XML or HTML document, ensuring the document adheres to a defined format or schema.

**Separating Heads from Bodies: (HTML Tag Reference)**

Whenever you write a web page in HTML, the whole of the page is contained between the opening <html> and closing </html> tags, just as it was in the last example. Inside the html document, there are three main parts to the page:

* **The <html> element:** Defines the root of an HTML document.
* **The <head> element:** Often referred to as the head of the page, this contains information about the page (this is not the main content of the page). For example, it might contain a title and a description of the page, or instructions on where a browser can find CSS rules that explain how the document should look. It consists of the opening <head> tag, the closing </head> tag, and everything in between.
* **The <body> element:** Often referred to as the body of the page, this contains the information you actually see in the main browser window. It consists of the opening <body> tag, closing </body> tag, and everything in between.

**Note:** The <head> element contains information about the document, which is not displayed within the main page itself. The < body > element holds the actual content of the page that is viewed in your browser.

**Empty HTML Elements:**

HTML elements with no content are called empty elements. <br> is an empty element without a closing tag (the <br> tag defines a line break)

Example:

<p> This is a <br> paragraph with a line break </p>

HTML is not case sensitive:

HTML tags are not case sensitive. <P> means same as <p>.