

CHAPTER-2

HTML: HTML (HyperText Markup Language) is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation (CSS) or functionality/behavior (JavaScript).

"Hypertext" refers to links that connect web pages to one another, either within a single website or between websites.

HTML uses "markup" to explain text, images, and other content for display in a Web browser. HTML markup includes special "elements" such as <head>, <title>, <body>.

Coding conventions in HTML:

- Declaration of document type in HTML.
- Use of lowercase element names in HTML.
- Close all elements in HTML.
- Use Lowercase Attribute Names in HTML.
- Quote Attribute Values in HTML.
- Specification of alt, width and height attributes of the image in HTML.
- HTML Indentation and Blank lines.
- Don't Omit <html> and <body> tags.
- Don't Omit <head> tag
- HTML Close empty tags.
- Use HTML Comments.
- Use HTML Style Sheets.

HTML Tags:

HTML tags are like keywords which defines that how web browser will format and display the content. With the help of tags, a web browser can distinguish between an HTML content and a simple content. HTML tags contain three main parts: opening tag, content and closing tag. But some HTML tags are unclosed tags.

- All HTML tags must enclosed within < > these brackets.
- Every tag in HTML perform different tasks.
- If you have used an open tag <tag>, then you must use a close tag </tag> (except some tags)

Structure of HTML Element:

<tag> content </tag>

Examples:

<p> Paragraph Tag </p>

<h2> Heading Tag </h2>

 Bold Tag

<i> Italic Tag </i>

<u> Underline Tag</u>

HTML Global Attributes:

The global attributes are attributes/properties that can be used with all HTML elements.

- **Hidden:** Specifies that an element is not yet, or is no longer, relevant
`<p hidden>This paragraph should be hidden.</p>`
- **Dir:** Specifies the text direction for the content in an element
`<input type="text" dir="rtl">Write this text right-to-left!`
- **Title:** Provides additional information for the element which is displayed on focus element.
`<h1 title="welcome to the class">This is Computer Engg.</h1>`
- **Style:** Applies inline CSS style sheet to any element
`<p style='color: red'>This is a paragraph</p>`
- **Tabindex:** specifies the tab order index for the element. This allows the developers to customize a tab order that make sense for the page.
`<h1 tabindex=1>Welcome to web technologies class</h1>`
`<p tabindex=3>This is a paragraph</p>`
`<input type="text" tabindex=2>`
- **Id:** this gives an element a unique id that can be used for different purposes like styling an html element.
`<h1 id='heading1'>`
`<style>`
`#heading1{`
`Color:red;`
`}`
- **Class:** Specifies one or more class names for an element (refers to a class in a style sheet).
`<h1 class='heading1'>`
`<style>`
`h1.heading1{`
`color:red;`
`}`

Structure of a Web Page:

An HTML Document is mainly divided into two parts:

HEAD: This contains the information about the HTML document. For Example, the Title of the page, version of HTML, Meta Data, etc.

BODY: This contains everything you want to display on the Web Page.

```

<!DOCTYPE html>
<html>

<head>
  <title>Page Title</title>
</head>

<body>
  <h2>Heading Content</h2>
  <p>Paragraph Content</p>
</body>

</html>

```

Every Webpage must contain this code.

<!DOCTYPE html>: This tag is used to tell the HTML version. This currently tells that the version is HTML 5.0

<html> </html> : <html> is a root element of html. It's a biggest and main element in complete html language, all the tags, elements and attributes enclosed in it or we can say wrap in it, which is used to structure a web page.

<html> tag is parent tag of <head> and <body> tag, other tags enclosed within <head> and <body>. In <html> tag we use "lang" attributes to define languages of html page such as <html lang="en"> here en represents English language. some of them are : es = Spanish, zh-Hans = Chinese, fr= french and el= Greek etc.

<head>: Head tag contains metadata, title, page CSS etc. Data stored in the <head> tag is not displayed to the user, it is just written for reference purposes and as a watermark of the owner.

<meta>: The <meta> tag defines metadata about an HTML document. Metadata is data (information) about data. <meta> tags always go inside the <head> element, and are typically used to specify character set, page description, keywords, author of the document, and viewport settings.

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta name="description" content="Free Web tutorials">
```

```
<meta name="keywords" content="HTML, CSS, JavaScript">
```

```
<meta name="author" content="John Doe">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
</head>
```

<title>: The <title> tag defines the title of the document. The title must be text-only, and it is shown in the browser's title bar or in the page's tab.

```
<head>
```

```
<title>HTML Elements Reference</title>
```

```
</head>
```

<body>: A body tag is used to enclose all the data which a web page has from texts to links. All the content that you see rendered in the browser is contained within this element. Following tags and elements used in the body.

1. <h1> ,<h2> ,<h3> to <h6>
2. <p>
3. <div> and
4. , <i> and<u>
5. ,and.
6. , <audio> , <video> and<iframe>
7. <table> <th> , <thead>and<tr>.
8. <form>
9. <label> and <input> others.....

HTML Comments: The comment tag is used to insert comments in the source code. Comments are not displayed in the browsers. You can use comments to explain your code, which can help you when you edit the source code at a later date. This is especially useful if you have a lot of code.

<!--This is a comment. Comments are not displayed in the browser-->

DOM (Document Object Model): The HTML DOM is an Object Model for HTML. It defines:

- HTML elements as objects
- Properties for all HTML elements
- Methods for all HTML elements
- Events for all HTML elements

When a browser is loaded the browser creates a DOM (tree like structure) of the page.

