**HTML (Hyper Text Markup language) Basics**

**HTML Elements**

HTML elements consist of an **opening tag**, **content**, and a **closing tag**:

<h1> This is heading </h1>

**HTML Attributes**

Attributes are enclosed inside the opening tag:

<a href="https://www.google.com"> Click here to open Google browser </a>

**HTML Headings**

HTML tags are the building blocks of HTML:

<h1>This is a heading</h1>

<p>This is a paragraph</p>

**HTML Void Elements**

Void elements do not have closing tags:

* **Horizontal Rule Element**: <hr/>
* **Break the Line**: <br/>

**List Elements**

**1. Ordered Lists**

An ordered list uses the <ol> tag:

<ol>

<li>First item</li>

<li>Second item</li>

</ol>

* **Start Attribute**: Specifies the starting number:

<ol start="5">

<li>Item 1</li>

<li>Item 2</li>

</ol>

**2. Unordered Lists**

An unordered list uses the <ul> tag:

<ul>

<li>Item A</li>

<li>Item B</li>

</ul>

**Nested Lists**

To create a nested list, define a list inside a list item:

<ul>

<li>A

<ol>

<li>A1</li>

<li>A2</li>

</ol>

</li>

<li>B</li>

<li>C</li>

</ul>

**Output**:

* A
  + 1. A1
    2. A2
* B
* C

**Comments**

Use comments to include notes or annotations in your HTML:

<!-- Content Here -->

**Anchor Elements**

To create hyperlinks, use the <a> tag:

<a href="https://www.google.com"> Click here to browse on Google </a>

**Output**: Click here to browse on Google

**Image Element**

The <img> tag is a void element and does not have a closing tag:

<img src="image\_url.jpg" alt="Alternative text description">

* **Alt Attribute**: Provides a description when the image fails to load.

**File Paths**

**1. Relative File Paths**

Used for files within the same directory or parent directories:

* **Same Directory**:

<img src="./rabbit.png">

* **Parent Directory**:

<img src="../Folder1/cat.png">

**2. Absolute File Paths**

Complete path including the root directory:

<img src="/path/to/file.jpg">

**HTML Boilerplate**

An HTML boilerplate is a standardized template used as a starting point for creating web pages.

**1. Document Structure**

* **<!DOCTYPE html>**: Declaration defining the document type.
* **<html>**: Root element of the HTML document.
* **<head>**: Contains meta-information about the document.
* **<title>**: Sets the title of the document.
* **<meta>**: Provides metadata about the HTML document.
* **<link>**: Links to external resources like stylesheets.
* **<style>**: Contains internal CSS styles.
* **<script>**: Includes or links to JavaScript code.
* **<body>**: Contains the visible content of the document.

**2. Text Formatting**

* **<h1> to <h6>**: Headings of various levels.
* **<p>**: Paragraphs.
* **<br>**: Line break.
* **<hr>**: Horizontal rule.
* **<strong>**: Important text (bold by default).
* **<em>**: Emphasized text (italic by default).
* **<b>**: Bold text.
* **<i>**: Italic text.
* **<u>**: Underlined text.
* **<mark>**: Highlighted text.
* **<small>**: Smaller text.
* **<del>**: Deleted text.
* **<ins>**: Inserted text.
* **<sub>**: Subscript text.
* **<sup>**: Superscript text.

**3. Lists**

* **<ul>**: Unordered list.
* **<ol>**: Ordered list.
* **<li>**: List item.
* **<dl>**: Definition list.
* **<dt>**: Definition term.
* **<dd>**: Definition description.

**4. Links and Anchors**

* **<a>**: Anchor/link.
* **<area>**: Defines a clickable area in an image map.
* **<link>**: Defines the relationship between a document and an external resource (e.g., stylesheet).

**5. Images and Media**

* **<img>**: Embeds an image.
* **<map>**: Defines an image map.
* **<video>**: Embeds a video.
* **<audio>**: Embeds audio.
* **<source>**: Specifies multiple media resources for elements like <video> and <audio>.
* **<track>**: Specifies text tracks for <video> and <audio>.

**6. Forms**

* **<form>**: Defines an HTML form.
* **<input>**: Defines an input control.
* **<textarea>**: Defines a multi-line text input control.
* **<button>**: Defines a clickable button.
* **<select>**: Defines a drop-down list.
* **<option>**: Defines options in a drop-down list.
* **<label>**: Defines a label for an <input> element.
* **<fieldset>**: Groups related elements in a form.
* **<legend>**: Defines a caption for a <fieldset> element.

**7. Tables**

* **<table>**: Defines a table.
* **<tr>**: Defines a row in a table.
* **<td>**: Defines a cell in a table.
* **<th>**: Defines a header cell in a table.
* **<thead>**: Groups header content in a table.
* **<tbody>**: Groups body content in a table.
* **<tfoot>**: Groups footer content in a table.

**8. Semantics**

* **<header>**: Defines a header for a document or section.
* **<nav>**: Defines navigation links.
* **<main>**: Specifies the main content of a document.
* **<section>**: Defines a section in a document.
* **<article>**: Defines an independent piece of content.
* **<aside>**: Defines content aside from the main content.
* **<footer>**: Defines a footer for a document or section.

**9. Embedded Content**

* **<iframe>**: Defines an inline frame.
* **<embed>**: Embeds external content.
* **<object>**: Defines an embedded object.
* **<param>**: Defines parameters for an <object> element.

**10. Scripting**

* **<script>**: Defines client-side JavaScript.
* **<noscript>**: Defines alternative content for users with scripts disabled.

**11. Miscellaneous**

* **<div>**: Defines a division or section.
* **<span>**: Defines a span of inline text.
* **<details>**: Defines additional details that the user can view or hide.
* **<summary>**: Defines a visible heading for a <details> element.
* In terms of **visual appearance**, the <thead>, <tbody>, and <tfoot> elements **do not change how the table looks by default**. They are primarily used for **semantic meaning**