**HTML5 Tags and their Types**

HTML5 introduced a wide range of semantic and non-semantic tags. These tags can be grouped into several types based on their functionality. Here’s a breakdown:

**1. Structural/Sectioning Tags**

These tags define the layout or sections of a webpage:

<header>: Represents introductory content or a set of navigational links.

<footer>: Defines the footer of a document or a section.

<article>: Specifies independent, self-contained content.

<section>: Groups related content or thematic sections.

<nav>: Defines navigation links.

<aside>: Represents a sidebar or content tangentially related to the main content.

<main>: Represents the main content of the document.

<h1> to <h6>: Headings, <h1> being the top-level heading.

**2. Content Tags**

These tags help in defining and organizing different types of content:

<p>: Paragraph.

<blockquote>: A section that is a quote from another source.

<pre>: Preformatted text.

<code>: Represents a fragment of computer code.

<figure>: Groups media content like images or diagrams with optional captions.

<figcaption>: Defines a caption for a <figure>.

<div>: Defines a division or a container (non-semantic).

**3. Inline Text Tags**

These tags are used for specific text formatting:

<span>: An inline container for text (non-semantic).

<strong>: Indicates important or bold text.

<em>: Emphasizes text, typically rendered as italic.

<mark>: Highlights or marks text.

<abbr>: Defines an abbreviation or acronym.

<time>: Defines a date or time.

<small>: Smaller text, often for side notes.

<b>: Bold text without added importance.

<i>: Italic text without added emphasis.

**4. Media Tags**

These tags are for embedding and displaying multimedia content:

<img>: Embeds an image.

<audio>: Embeds sound content.

<video>: Embeds a video.

<source>: Specifies multiple media resources (used with <audio> and <video>).

<track>: Defines text tracks for <video> or <audio> (subtitles, captions).

**5. Form-Related Tags**

These tags are used to create forms and handle user input:

<form>: Defines an HTML form for user input.

<input>: Accepts various types of user input (text, number, password, checkbox, radio, etc.).

<textarea>: Multi-line text input.

<button>: Represents a clickable button.

<select>: A drop-down list of options.

<option>: Defines an option in a <select> list.

<label>: Represents a label for an input element.

<fieldset>: Groups form elements.

<legend>: Defines a title for the <fieldset>.

**6. Interactive and Script Tags**

These tags add dynamic and interactive features:

<details>: Creates a disclosure widget that users can open or close.

<summary>: Defines a visible heading for the <details> element.

<dialog>: Defines a dialog box or window.

<script>: Embeds or refers to client-side scripts.

<noscript>: Content for browsers that don’t support scripting.

**7. Table Tags**

These tags are used for creating tables:

<table>: Defines a table.

<thead>: Groups the header content in a table.

<tbody>: Groups the body content in a table.

<tr>: Defines a row in a table.

<td>: Represents a data cell in a table.

<th>: Defines a header cell in a table.

<caption>: Provides a caption for a table.

**8. Metadata and Document Tags**

These tags provide metadata and manage the document structure:

<meta>: Defines metadata about an HTML document (charset, viewport, etc.).

<title>: Specifies the title of the document.

<link>: Defines the relationship between the current document and an external resource (stylesheets, icons).

<style>: Embeds CSS styles.

<base>: Specifies the base URL for all relative URLs in a document.

**9. Scripting Tags**

These handle interactions with external scripts and dynamic content:

<canvas>: A container for graphics, often rendered via JavaScript.

<script>: Defines a client-side script.

<noscript>: Fallback content for users with disabled JavaScript.

**10. Miscellaneous Tags**

Some tags that don’t fall into specific categories:

<br>: Line break.

<hr>: Horizontal rule or thematic break.

<wbr>: Optional line break.

These tags help structure and organize content effectively while enhancing accessibility and SEO optimization.