

1.

What is HTML?

HTML stands for Hyper Text Markup Language. It is the standard language used to create and design webpages. HTML is the backbone of every website, providing the structure and content that browsers render to display a webpage.

2.

Used of HTML

- Structuring the content on webpages.
- Embedding multimedia (images, videos, audio).
- Creating hyperlinks for navigation.
- Adding forms for user input.
- Building the foundation for CSS (styling) and JavaScript (interactivity)

3.

Key Features of HTML

- HTML uses "tags" to mark up content.
- HTML is used to create static content like text, images, videos, and tables.
- HTML works across all devices and operating systems, as long as there's a browser.

1. Basic Structure of an HTML Document

```
<!DOCTYPE html>
<html>
<head>
  <title>My First HTML Page</title>
</head>
<body>
  <h1>Welcome to HTML</h1>
  <p>This is a basic webpage created with HTML.</p>
  <a href="https://example.com">Click here</a> to learn more.
</body>
</html>
```

2. Explanation of the Code

- **<!DOCTYPE html>**: Declares the document type as HTML5.
- **<html>**: The root element of the HTML document.
- **<head>**: Contains metadata about the page (e.g., title, charset).
- **<title>**: Specifies the title displayed in the browser tab.
- **<body>**: Contains the content visible on the webpage (e.g., text, links).

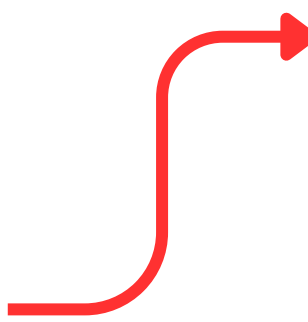

1.

Types of Tags in HTML

- **Structural Tags:** <html>, <head>, <body>, <header>, <footer>
- **Formatting Tags:** , <i>, <u>, , <mark>
- **Media Tags:** , <audio>, <video>, <canvas>
- **Linking Tags:** <a>, <link>
- **List Tags:** , , , <dl>, <dt>, <dd>
- **Table Tags:** <table>, <tr>, <td>, <th>, <caption>
- **Form Tags:** <form>, <input>, <textarea>, <button>, <select>, <label>
- **Semantic Tags:** <article>, <section>, <nav>, <main>, <aside>
- **Metadata Tags:** <meta>, <title>, <style>, <script>
- **Self-Closing Tags:**
, <hr>, <input>

2.

Example

Opening Tag  **<p>**This is a paragraph.**</p>**  Closing Tag

Types of Headings in HTML

In HTML, there are six levels of headings that are used to structure and organize the content of a webpage. These headings are represented by the tags **<h1>** to **<h6>**, with each level having a specific purpose and importance.

<h1> - Main Heading

<h2> - Subheading

<h3> - Sub-subheading

<h4> - Sub-sub-subheading

<h5> - Sub-sub-sub-subheading

<h6> - Smallest Heading

Example

Input

```
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
```

Output

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

Notes: Heading tags are **block-level elements**, which means they always start on **a new line and take up the full width of their container by default**, pushing other content to the next line.

<p> tag in HTML

The **<p>** tag in HTML is used to define paragraphs. It is one of the most commonly used tags in HTML for organizing text content on a webpage.

Notes: **<p>** tag is also a ***block-level element***, which means they always start on **a new line and take up the full width of their container by default**, pushing other content to the next line.

Example

Input

```
<p>Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quod facere eaque illo ducimus accusantium, reprehenderit sint vel ipsa alias praesentium dolorum provident architecto possimus quo voluptatem vero earum.</p>
```

Output

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Quod facere eaque illo ducimus accusantium, reprehenderit sint vel ipsa alias praesentium dolorum provident architecto possimus quo voluptatem vero earum.

Text Formatting Tags in HTML

These tags are used to enhance the visual and semantic structure of web content.

- ****: Makes text bold (does not imply importance).
- ****: Makes text bold and indicates importance.
- **<i>**: Makes text italicized (used for styling).
- ****: Makes text italicized and emphasizes it.
- **<u>**: Underlines text.
- **<s>**: Shows text as strikethrough (no longer accurate or relevant).
- **<mark>**: Highlights text.
- **<small>**: Displays text in a smaller font size.

Notes: All of these tags are *inline elements*, meaning they do not break the flow of text and can appear within a block of text, like a `<p>` tag. They only apply styling or semantics to the text they wrap.

Example

Input

```
<p>Loremipsum dolor</b>, sit amet consectetur adipisicing elit. Quod facere eaque illo ducimus accusantium, reprehenderit sint vel ipsa alias praesentium dolorum provident architecto possimus quo voluptatem vero earum.</p>
```

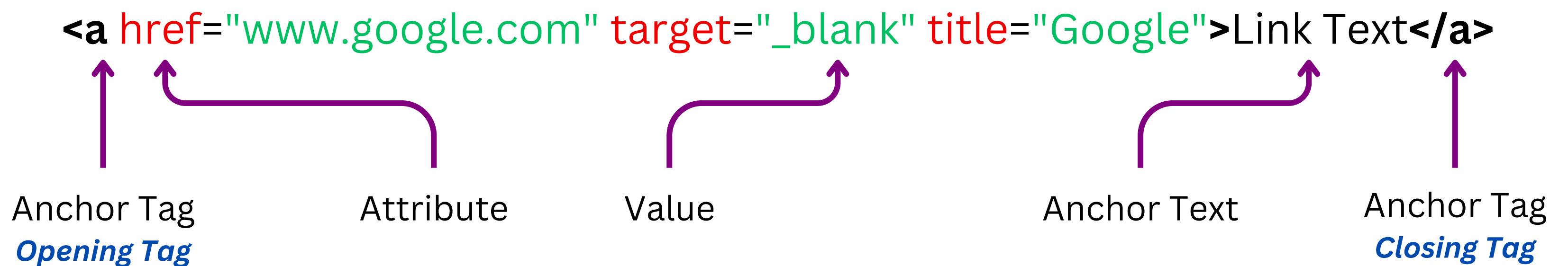
Output

Lorem**ipsum dolor**, sit amet *consectetur adipisicing* elit. Quod facere eaque illo ducimus accusantium, reprehenderit sint *vel ipsa alias* praesentium ~~dolorum~~ provident architecto possimus quo **voluptatem vero** earum.

Anchor Tag in HTML

The `<a>` tag in HTML is used to create hyperlinks, which allow users to navigate to other pages, websites, or sections within the same page. It is one of the most commonly used tags in web development.

● Tag ● Attribute ● Value



Example

Input

```
<a href="www.google.com" target="_blank" title="Google">Link Text</a>
```

Output

Link Text 

Notes: `<a>` tag or Anchor Tag is an **Inline-element** meaning they do not break the flow of text and can appear within a block of text

Values of Target Attribute in HTML

The **Target Attribute** in HTML specifies where to display the linked document when a hyperlink (<a> tag) is clicked. Below are the commonly used values for the target attribute:

- **_self** (Default): Opens the link in the same tab or window.
- **_blank**: Opens the link in a new tab or window.
- **_parent**: Opens the link in the parent frame (useful in iframes).
- **_top**: Opens the link in the full window, removing frames.
- **framename**: Opens the link in a named iframe.

Example

Input

```
<a href="page.html" target="_self">Same Tab</a>  
<a href="https://example.com" target="_blank">New Tab</a>  
<a href="parent.html" target="_parent">Parent Frame</a>  
<a href="top.html" target="_top">Full Window</a>  
<a href="page.html" target="myFrame">Specific Frame</a>
```

Output

[Same Tab](#) [New Tab](#) [Parent Frame](#) [Full Window](#) [Specific Frame](#)

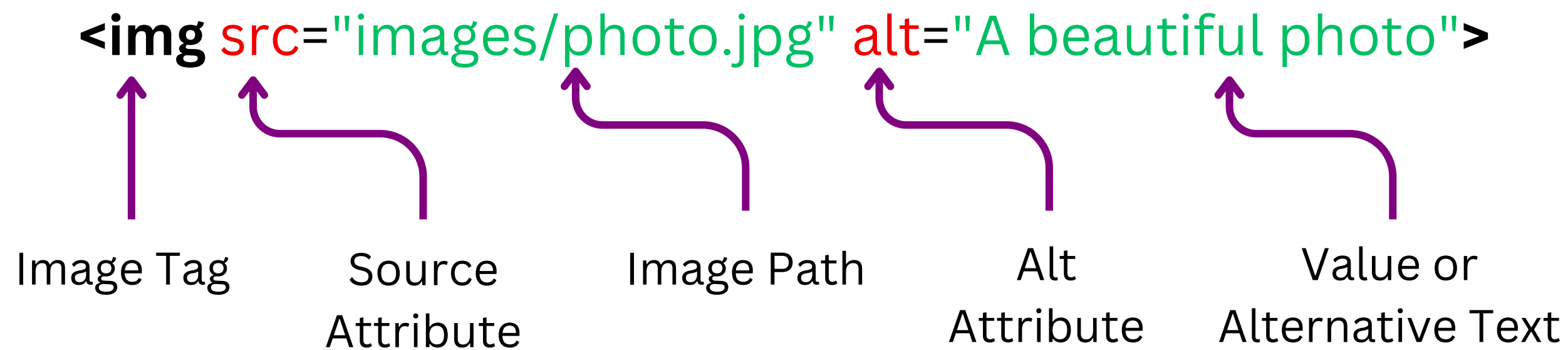
Best Practices:

- **Use** target="_blank" cautiously to avoid interrupting the user's workflow unless necessary.
- Provide meaningful navigation cues (like tooltips) with the title attribute.
- Always test how the target behavior works in different browsers, especially when using iframe or older HTML techniques.

Image Tag in HTML

The `` tag in HTML is used to embed images in a web page. It is a self-closing tag that does not require an end tag.

● Tag ● Attribute ● Value



Example

Input

```

```

Output

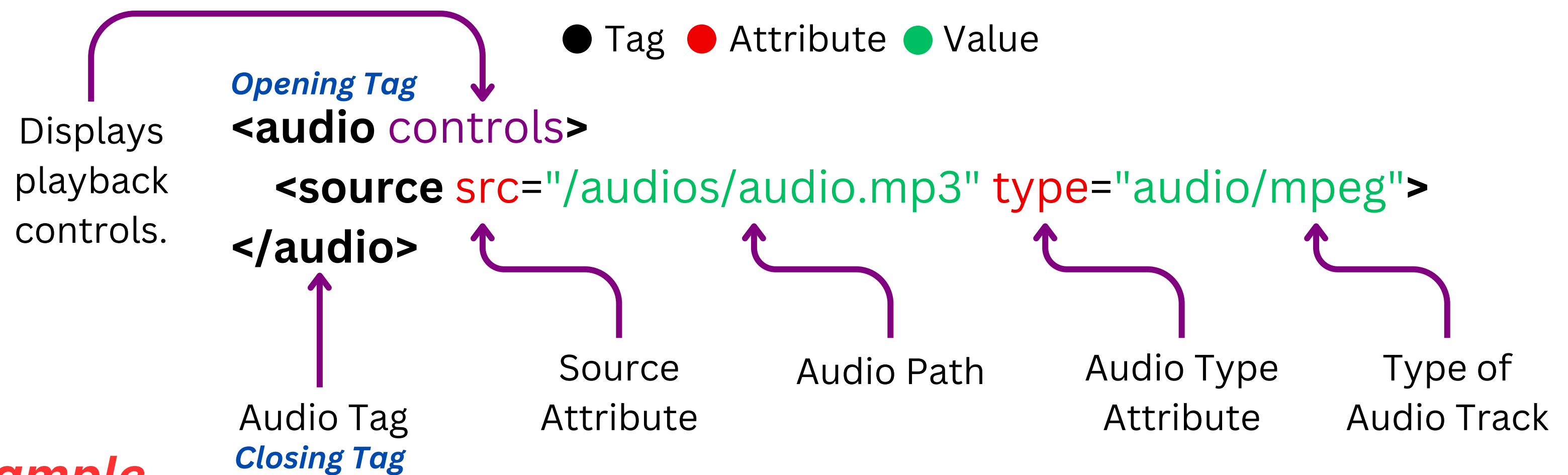


Noted:

- `` tag **does not have a closing tag** like `<h1>`, `<p>` etc
- Always **include the alt attribute** for accessibility and better user experience.
- **Compress images** to reduce page load time.

Audio Tag in HTML

The `<audio>` element is used to embed audio content.

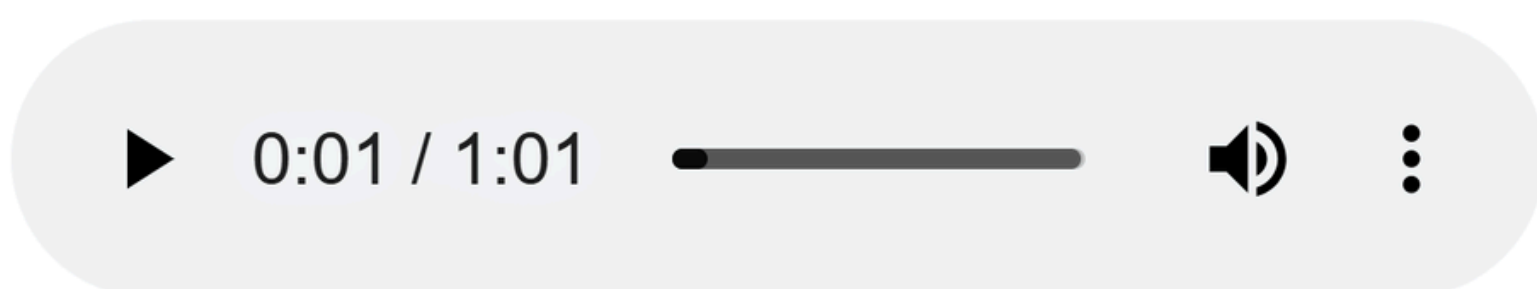


Example

Input

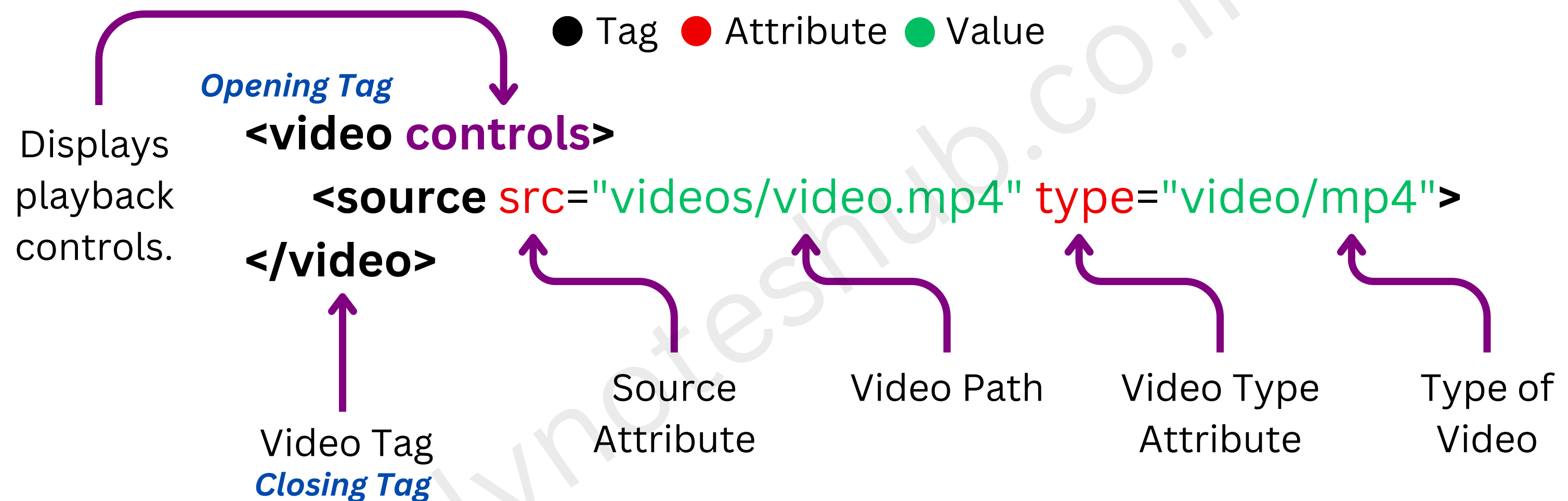
```
<audio controls>  
  <source src="/audios/audio.mp3" type="audio/mpeg">  
</audio>
```

Output



Video Tag in HTML

The **<video>** element supports video playback. You can include multiple source formats to ensure compatibility with various browsers.

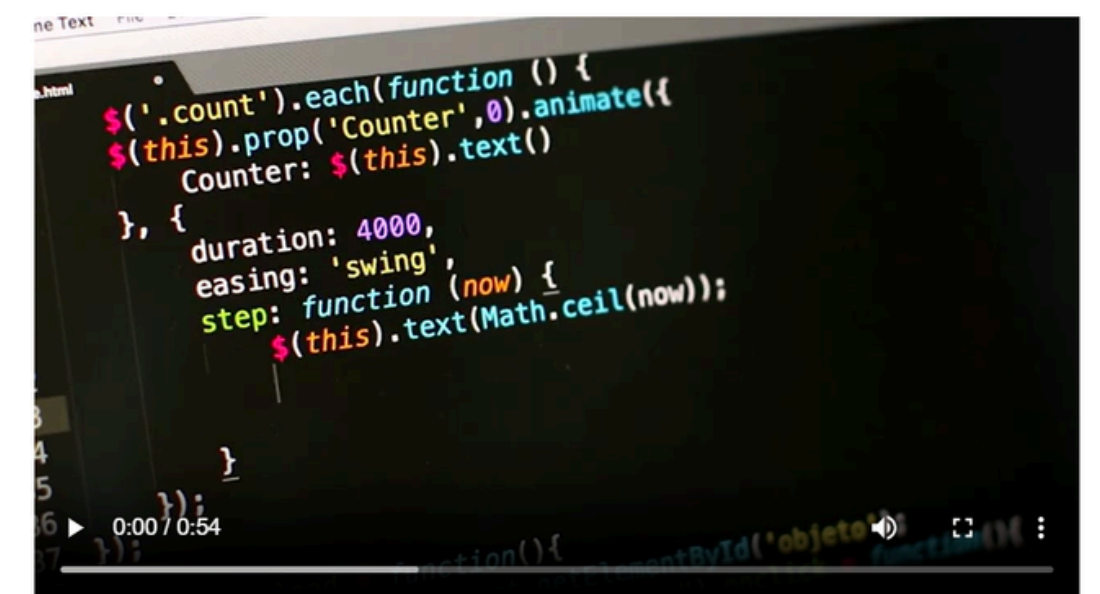


Example

Input

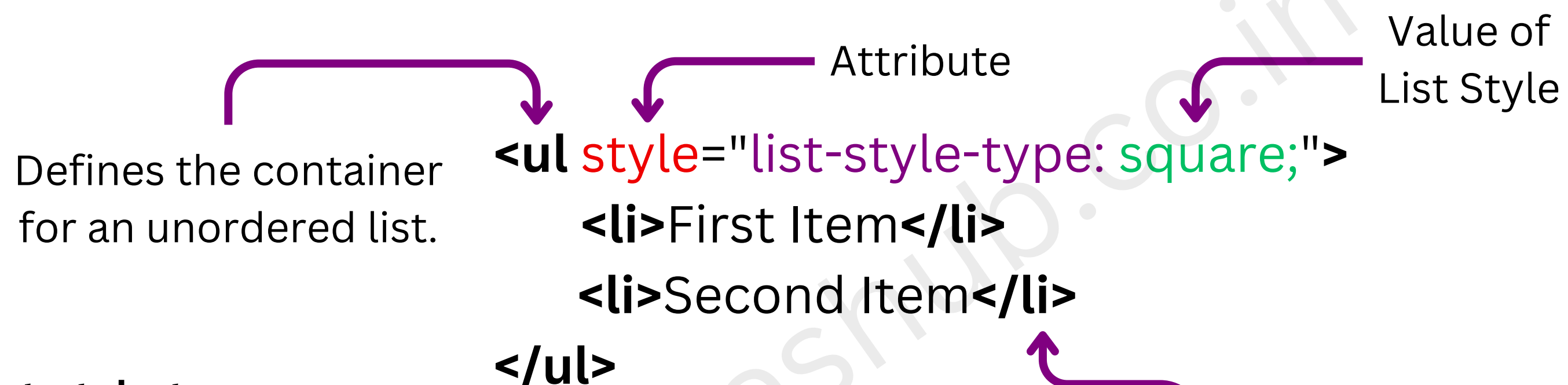
```
<video controls>
  <source src="/videos/video.mp4" type="video/mp4">
</video>
```

Output



Unorder Lists in HTML

Used to create a list where the order of items does not matter. List items are typically marked with bullet points.



Value of **list-style-type**

- *disc (default)*: Filled circle (•).
- *circle*: Hollow circle (○).
- *square*: Square (◻).
- *none*: No bullets.

Example

Input

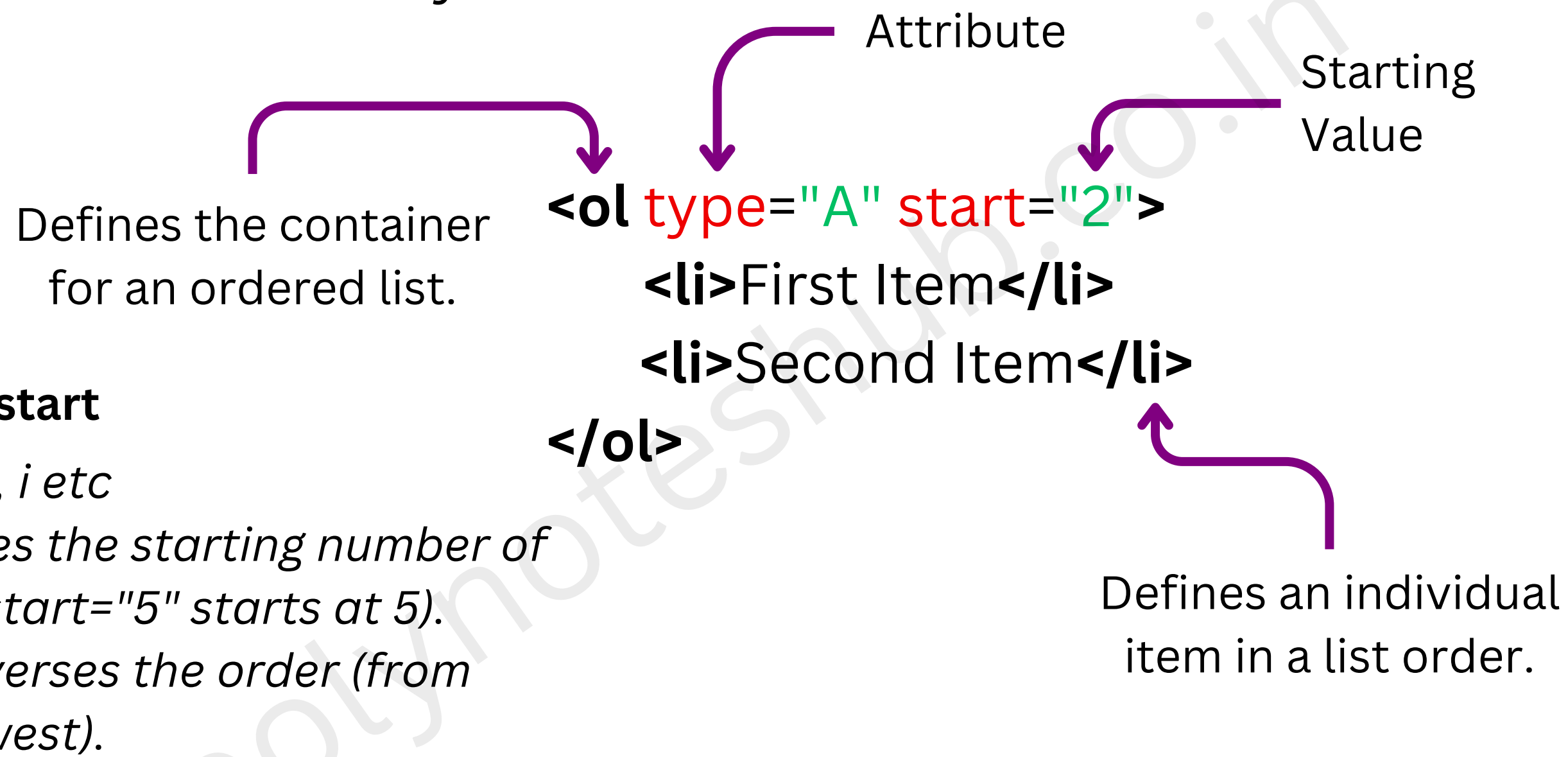
```
<ul style="list-style-type: square;">
  <li>First Item</li>
  <li>Second Item</li>
</ul>
```

Output

- First Item
- Second Item

Order Lists in HTML

Used to create a list where the order of items matters. List items are numbered automatically.



Value of **types & start**

- *type*: 1, A, a, I, i etc
- *start*: Specifies the starting number of the list (e.g., `start="5"` starts at 5).
- *reversed*: Reverses the order (from highest to lowest).

Example

Input

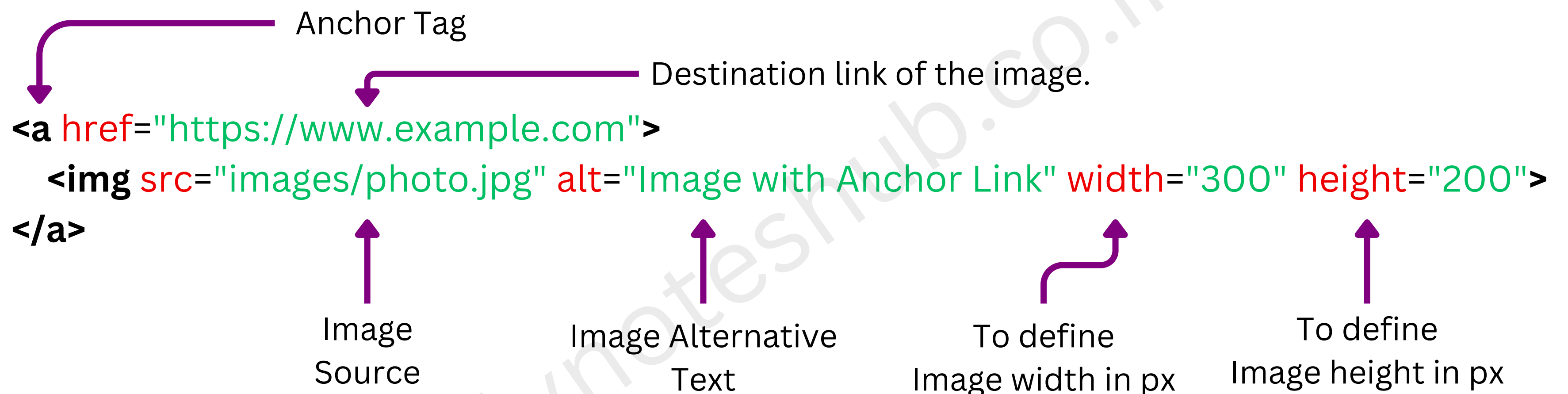
```
<ol type="A" start="2">  
  <li>First Item</li>  
  <li>Second Item</li>  
</ol>
```

Output

B. First Item
C. Second Item

Add Link on Image in HTML

In HTML, you can create an image that is also a link using the `<a>` (anchor) tag wrapped around an `` (image) tag. Here's a basic example:



To Open Link in New Tab

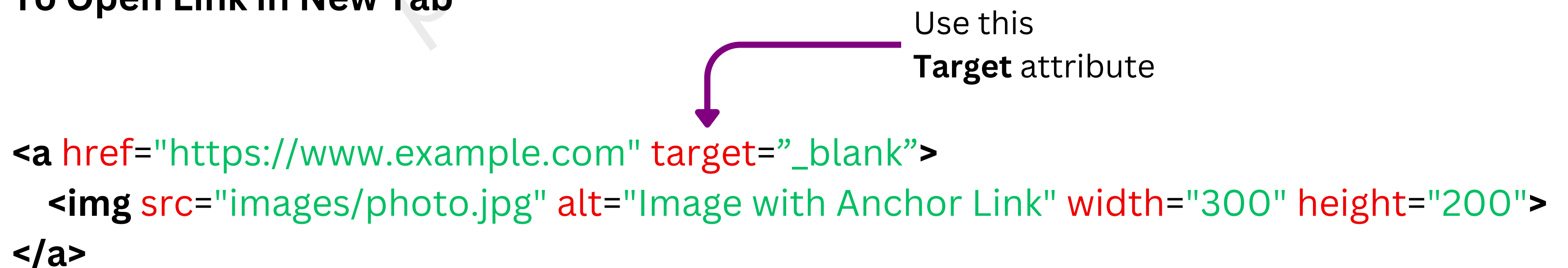


Table in HTML

In HTML, tables are created using the **<table>** element, with rows (**<tr>**) and columns (cells) using **<td>** (**data cell**) and **<th>** (**header cell**). Below is a complete guide with examples.

Example

Input

```
<table border="1">
  <tr>
    <th>Name</th>
    <th>Age</th>
    <th>City</th>
  </tr>
  <tr>
    <td>Arun</td>
    <td>25</td>
    <td>Siliguri</td>
  </tr>
</table>
```

Output

Name	Age	City
Arun	25	Siliguri

Explanation





- **<table>** → Defines the table.
- **<tr>** → Defines a table row.
- **<th>** → Defines a table header (bold and centered by default).
- **<td>** → Defines a table cell (data).

HTML Background Color

In HTML, the *bgcolor* attribute is used to set the background color of an element, but it is deprecated in modern HTML. Instead, it's recommended to use CSS for better styling and flexibility.

Example

Input

```
<h1 style="background-color:  red;">HTML Background Color 1</h1>  
<h2 style="background-color:  blue;">HTML Background Color 2</h2>  
<h3 style="background-color:  green;">HTML Background Color 3</h3>  
<h4 style="background-color:  yellow;">HTML Background Color 4</h4>
```

Output

HTML Background Color 1

HTML Background Color 2

HTML Background Color 3

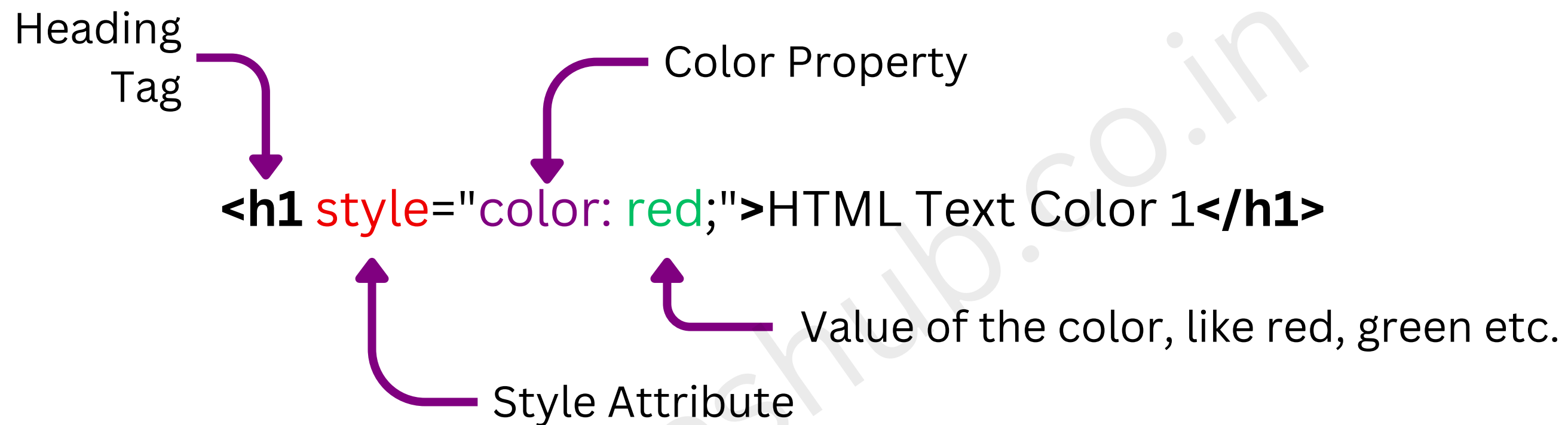
HTML Background Color 4

Noted

We are using here, **Inline CSS** with *style* attribute *background-color* property & different color *values*

HTML Text Color

You can use the **color** property inside the **style** attribute to change text color.



Example

Input

```
<h1 style="color: ■ red;">HTML Text Color 1</h1>  
<h2 style="color: ■ blue;">HTML Text Color 2</h2>  
<h3 style="color: ■ green;">HTML Text Color 3</h3>  
<h4 style="color: ■ brown">HTML Text Color 4</h4>
```

Output

HTML Text Color 1

HTML Text Color 2

HTML Text Color 3

HTML Text Color 4

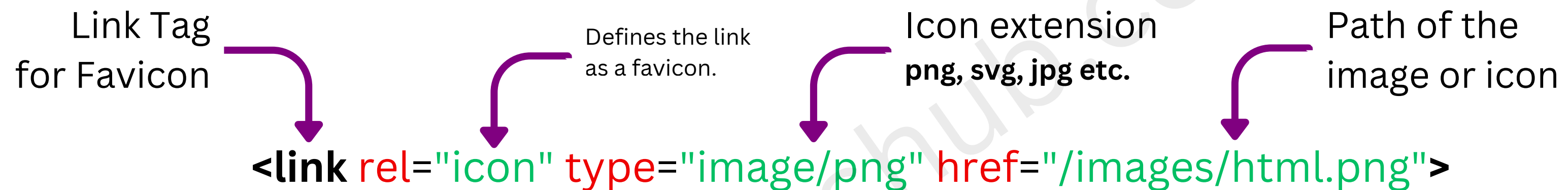
Noted

We are using here, **Inline CSS** with **style** attribute **color** property & different color **values**

HTML Favicon

A favicon (short for "**favorite icon**") is the small icon displayed in the browser tab next to the webpage title.

Noted Place this inside the **<head>** section of your HTML file.



Supported Favicon Formats are:
.ico, .png, .jpg, and .svg

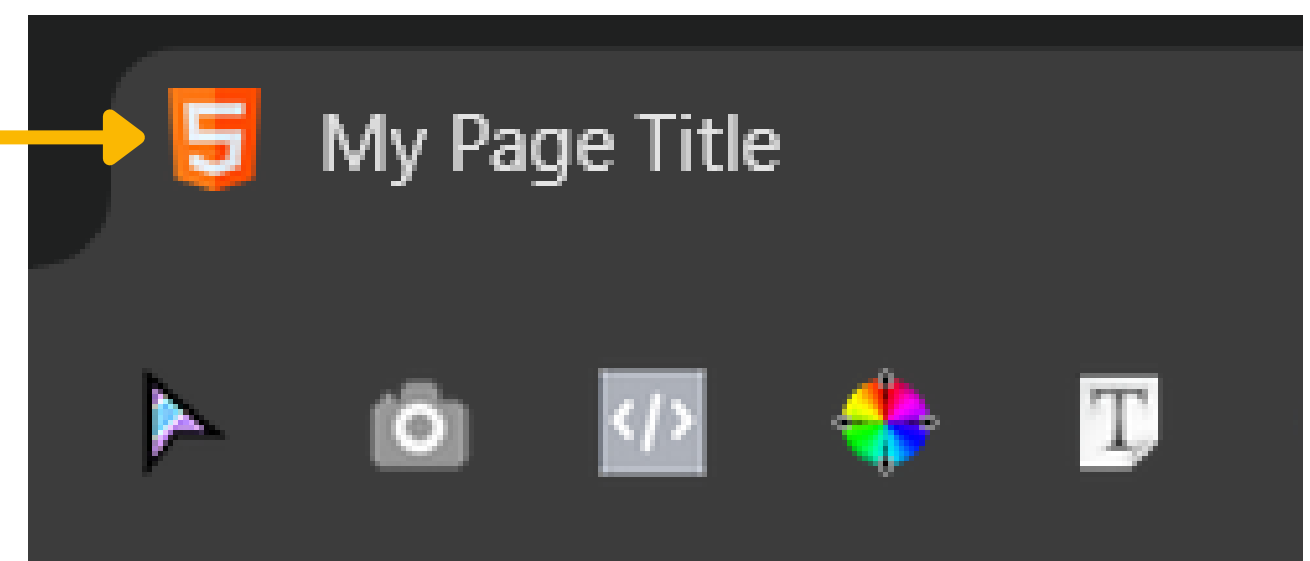
Example

Input

```
<head>  
  <meta charset="UTF-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1.0">  
  <title>My Page Title</title>  
  <link rel="icon" type="image/png" href="/images/html.png">  
</head>
```

Output

This is the Favicon Icon



HTML iframe Syntex

The **<iframe>** (inline frame) tag is used to embed another webpage, video, map, or document inside a web page.

`<iframe src="https://polynoteshub.co.in" width="400" height="600"></iframe>`

↑
iframe Tag

↑
Specify the URL

↑
The URL

↑
Width of the Frame in px

↑
Height of the Frame in px

Example

```
<iframe src="https://www.polynoteshub.co.in" width="400" height="600"></iframe>
```

Important Notes

- Some websites block iframe embedding for security reasons.
- Use ***allowfullscreen*** for embedding videos.
- Always check **permissions** before embedding external content.

HTML Layout Elements

HTML provides several semantic elements that define the structure of a webpage.

Element	Description
<code><header></code>	Defines the page's header (often contains logos, navigation, etc.).
<code><nav></code>	Represents navigation links (menus, sidebars, etc.).
<code><section></code>	Groups related content together.
<code><article></code>	Represents independent content (blog posts, news articles, etc.).
<code><aside></code>	Sidebar content (ads, related links, etc.).
<code><footer></code>	Defines the page's footer (copyright, contact info, etc.).
<code><main></code>	Represents the main content of a page.
<code><div></code>	A generic container for styling and layout.

HTML Block Elements

Here we have listed some block elements in HTML start on a new line and take up the full width available. They help structure a webpage's layout.

Element	Description
<code><div></code>	Generic container for layout and styling.
<code><p></code>	Defines a paragraph.
<code><h1></code> - <code><h6></code>	Headings from largest (<code><h1></code>) to smallest (<code><h6></code>).
<code><section></code>	Defines a section in a document.
<code><article></code>	Represents self-contained content (like a blog post).
<code><header></code>	Represents introductory content or a header.
<code><footer></code>	Defines a footer for a document or section.
<code><nav></code>	Defines navigation links.
<code><aside></code>	Represents content indirectly related to the main content.
<code><main></code>	Specifies the main content of a webpage.
<code><form></code>	Defines a form for user input.
<code><table></code>	Creates a table structure.
<code></code> / <code></code>	Defines an unordered or ordered list.
<code></code>	Represents a list item inside <code></code> or <code></code> .
<code><blockquote></code>	Represents a block of quoted text.
<code><pre></code>	Displays preformatted text (preserves spaces and line breaks).

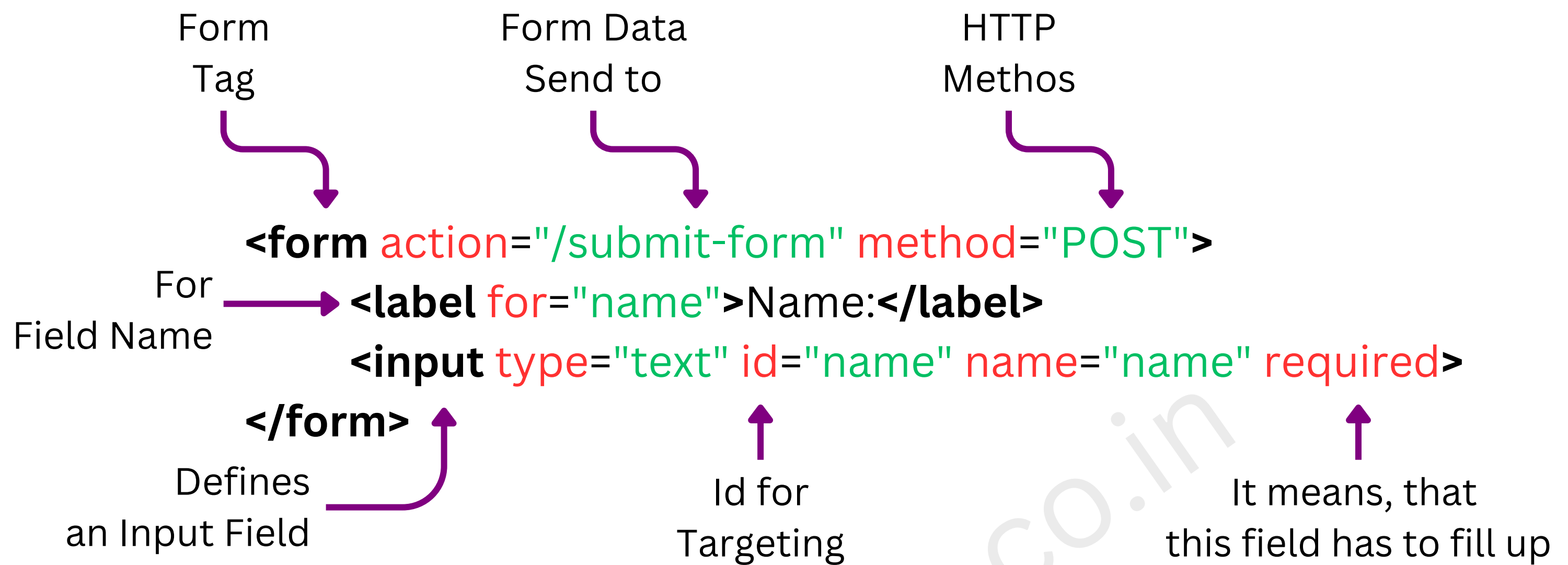
HTML Inline Elements

Inline elements do not start on a new line and only take up as much width as necessary.

Element	Description
	A generic inline container for styling or scripting.
<a>	Defines a hyperlink.
	Makes text bold (semantic).
	Makes text bold (non-semantic).
	Emphasizes text (italic, semantic).
<i>	Italicizes text (non-semantic).
<u>	Underlines text.
<small>	Displays smaller text.
<mark>	Highlights text.
<sub>	Displays subscript text.
<sup>	Displays superscript text.
<code>	Represents inline code.
<kbd>	Represents keyboard input.
<samp>	Represents sample output.
<time>	Represents a time or date.
	Embeds an image.
 	Inserts a line break.
<button>	Creates an interactive button.

HTML Form

HTML forms allow users to input data and submit it to a server. They consist of various form elements, like text fields, checkboxes, and buttons.



Example

Input

```

<h2>Contact Us</h2>
<form action="">

  <!-- Text input -->
  <label for="name">Name:</label>
  <input type="text" id="name" name="name" required>
  <br><br>

  <!-- Email input -->
  <label for="email">Email:</label>
  <input type="email" id="email" name="email" required>
  <br><br>

  <!-- Submit button -->
  <button type="submit">Submit</button>

</form>

```

Output

Contact Us

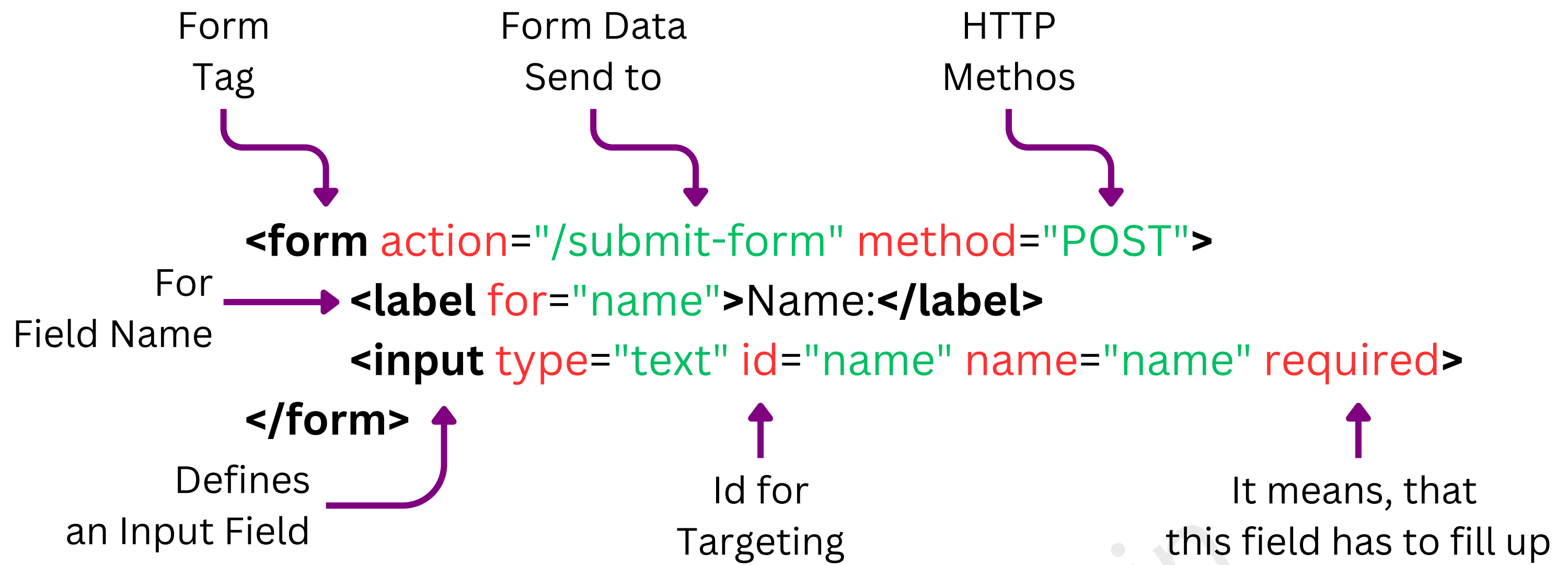
Name:

Email:

Important Notes

- **action:** Specifies where the form data will be sent.
- **method:** Specifies the HTTP method (usually **POST** or **GET**).
- **enctype:** Specifies the encoding type for file uploads (used with **POST**).

Common HTML Form Elements



Element	Description	Example
<form>	Defines the form.	<form action="/submit-form" method="POST">
<input>	Defines an input field.	<input type="text" id="name" name="name">
<label>	Defines a label for an input element.	<label for="name">Name:</label>
<textarea>	Defines a multi-line text input.	<textarea id="message" name="message"> </textarea>
<button>	Defines a clickable button.	<button type="submit">Submit</button>
<select>	Creates a drop-down list.	<select name="country"><option value="us">USA</option></select>
<option>	Defines an option in a drop-down list.	<option value="us">USA</option>
<fieldset>	Groups related form elements.	<fieldset><legend>Contact Info</legend> </fieldset>
<legend>	Defines a caption for a <fieldset>.	<legend>Personal Info</legend>