# Lecture 2: Web Design

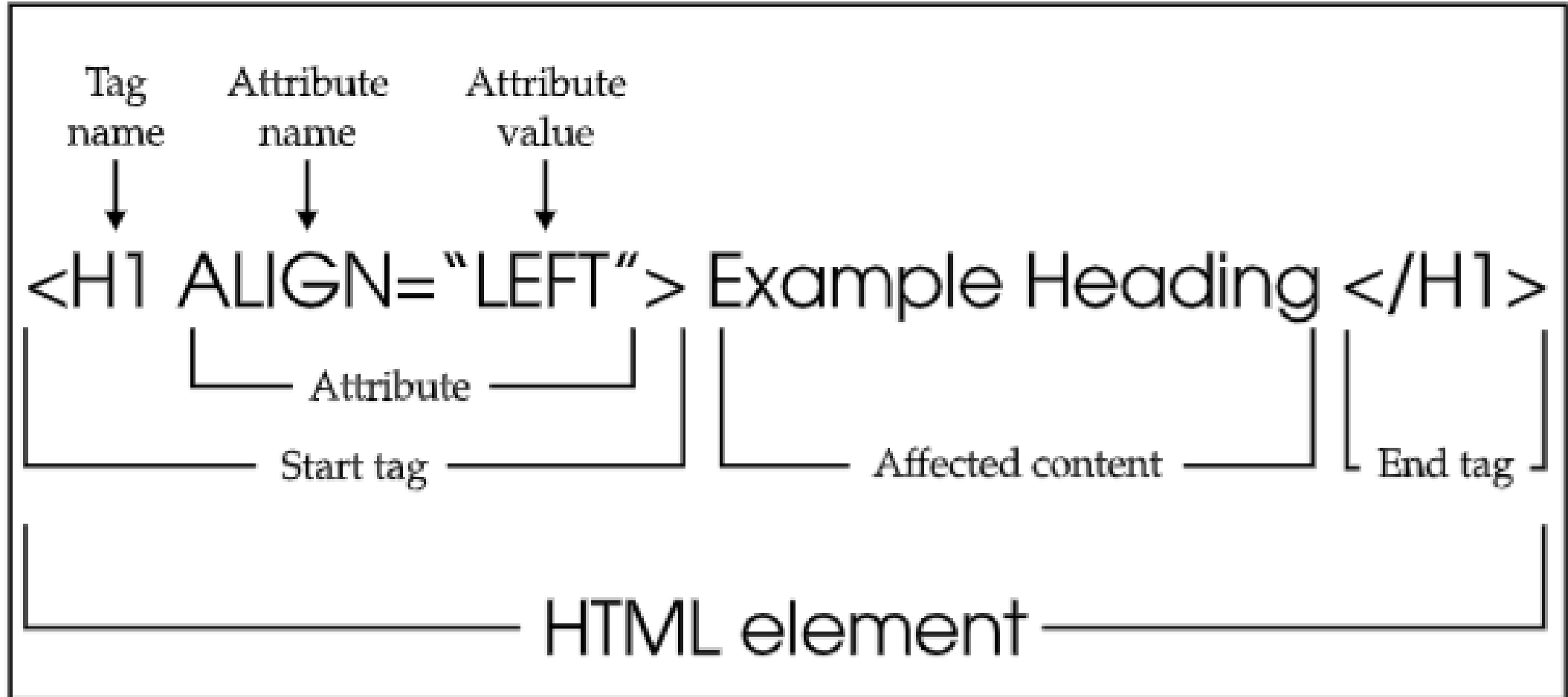CSCSE11 : Bachelor of Science (I$^{st}$ Semester)

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# Recap

1. Hypertext Markup Language (HTML) is the text markup language.

2. An HTML document is simply a **text file** with **.html** file extension.

3. An HTML document begins with a <!DOCTYPE> declaration, indicating the version of HTML used by the document.

4. It contains two primary sections, the head and the body, enclosed by the <HEAD> and <BODY> elements, respectively.

# Recap

# Recap

<HEAD> ELEMENT

# Recap

# <HEAD> ELEMENT

**Inside <head> :**

❑ The <LINK> element.

❑ The <META> element.

❑ The <SCRIPT> element.

❑ The <STYLE> element.

# &lt;Body&gt; ELEMENT

**HTML COMMENT:**

An HTML comment is text in your code that is **completely ignored by the browser**. It is not displayed on the web page.

Its purpose is to leave notes, explanations, or reminders for yourself or other developers reading the code.

1. Single line comment:

<!-- Some notes -->

2. Multi-line comment:

<!--

Some other notes
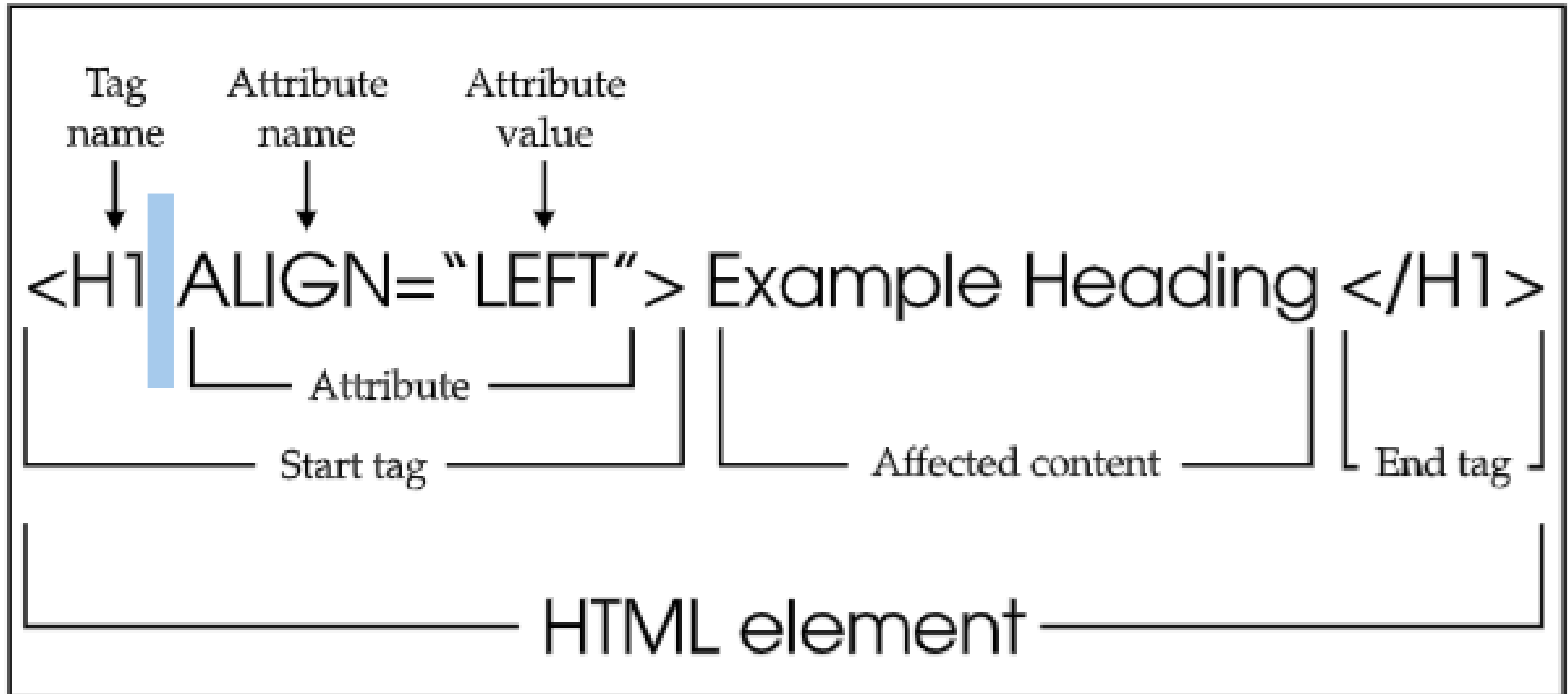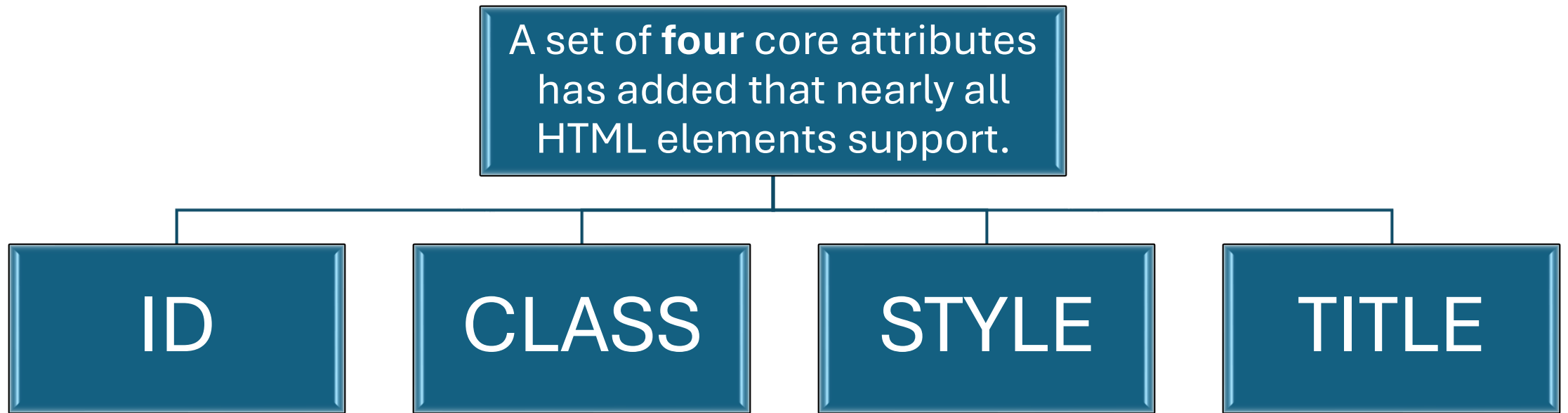
-->

# HTML Attributes

- An HTML start tag can sometimes contain ***attributes*** that modify the element's meaning. Attributes within a tag's brackets must be separated from the element's name by at least one space.

# HTML Attributes

# HTML Attributes: Core Attributes

A set of **four** core attributes has added that nearly all HTML elements support.

ID

CLASS

STYLE

TITLE

# HTML Attributes: Core Attributes

1. The ID attribute is used to set a unique name for a tag in a document. Naming a tag is useful for manipulating the enclosed contents with a style sheet.

```
<h2 id="main-headline">Today's Top Story</h2>
```

2. The CLASS attribute is used to indicate the class or classes that a tag may belong to. Like ID, CLASS is used to associate a tag with a name.

```
<p class="highlight-text">
  This paragraph has the "highlight-text" class. It will share its style
  with other elements that also have this class.
</p>
```
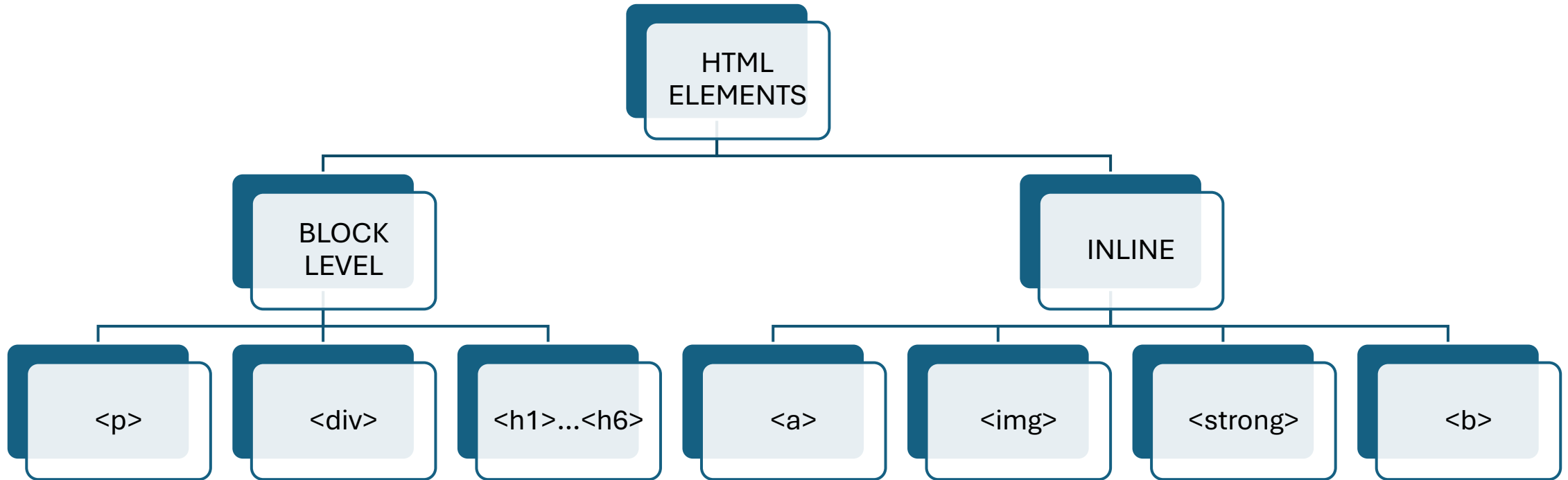
# HTML Attributes: Core Attributes

3. The STYLE attribute is used to add style sheet information directly to a tag.

```html
<p style="color: blue; font-weight: bold;">
  This line is blue and bold, while the line above is not.
</p>
```
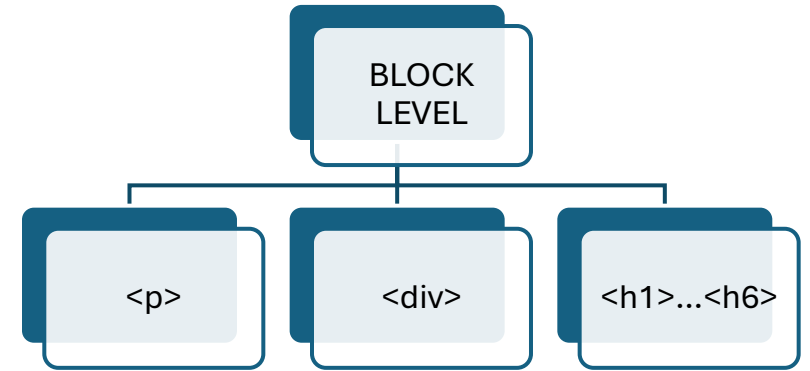
4. Title Attribute provides extra information about the element. Most browsers display this information as a tooltip when the user hovers over the element.

```html
<p title="This is the tooltip message!">
  Hover your mouse over this sentence.
</p>
```
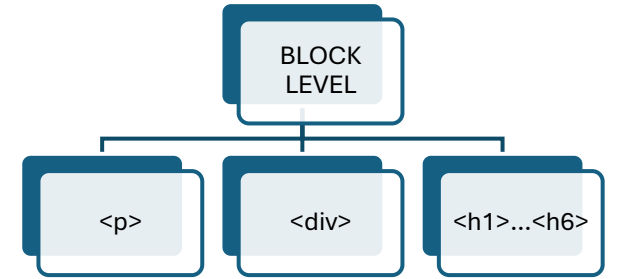
# HTML ELEMENTS

# BLOCK LEVEL ELEMENTS



A **block-level element** is an HTML element that creates a distinct "block" or "box" on a web page. It's used for the main structural components of your layout, like paragraphs, headings, lists, or generic containers.
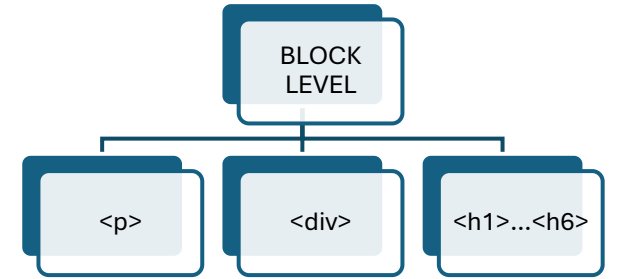
# BLOCK LEVEL ELEMENTS



**Key Characteristics:**

1. **Always Starts on a New Line:** A block-level element will always begin on a new line in the browser, forcing any content that came before it to end.

2. **Takes Up Full Available Width:** By default, a block element stretches horizontally to fill 100% of the width of its parent container.

3. **Creates Line Breaks:** It also creates a line break *after* it, forcing the next element to start on a new line below it.

4. **Can Contain Other Elements:** Block-level elements can "nest" other block-level elements and inline elements inside them. (e.g., you can put a <p> inside a <div>).

5. **Height and Width Can Be Controlled:** You can use CSS to explicitly set the width, height, margin, and padding of a block-level element.
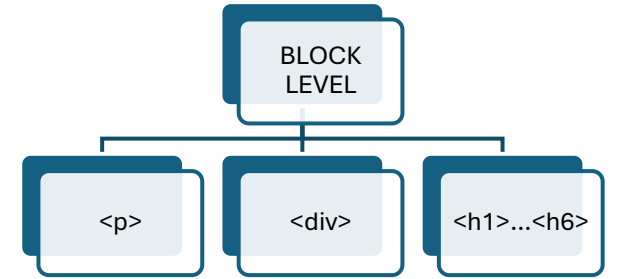
# BLOCK LEVEL ELEMENTS



**Example:**

1.    **<div>:** The most common generic container for grouping other elements.

2.    **<p>:** Defines a paragraph.

3.    **<h1> to <h6>:** Defines headings.

4.    **<ul>:** Defines an unordered list.

5.    **<ol>:** Defines an ordered list.

6.    **<li>:** Defines a list item.

7.    **<form>:** Defines an HTML form.

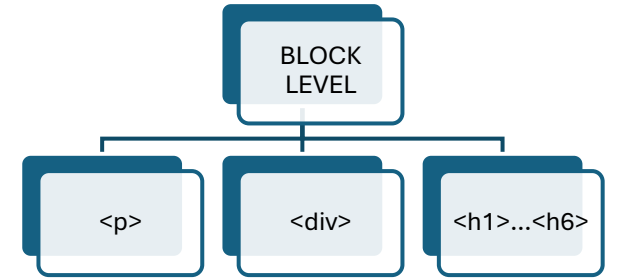8.    **<table>:** Defines a table.

# BLOCK LEVEL ELEMENTS



**<DIV>:**

The <div> tag in HTML is a container element used to group and organize content. Adding the ALIGN attribute enables you to align a portion of the document to the left, right, or center. By default, content within the <DIV> element is left-aligned.

| DIV Attributes | Description | Example |
|---|---|---|
| id | Assigns a unique identifier to the element | <div id="header"></div> |
| class | Assigns one or more class names (for CSS or JS) | <div class="container main"></div> |
| style | Inline CSS styling | <div style="background-color: lightblue;"></div> |
| title | Adds extra information shown as a tooltip | <div title="Profile Section"></div> |
| hidden | Hides the element from view | <div hidden></div> |
| tabindex | Sets the tab order when navigating with keyboard | <div tabindex="1"></div> |
| contenteditable | Makes the content editable by the user | <div content editable="true">Edit me</div> |
| draggable | Specifies whether the element is draggable | <div draggable="true">Drag me</div> |
| lang | Specifies the language of the element's content | <div lang="en"></div> |
| dir | Sets text direction (ltr or rtl) | <div dir="rtl">Urdu text</div> |

# BLOCK LEVEL ELEMENTS



**<H1> to <H6>**:

In HTML, heading tags are used to define titles or subtitles on a web page. They help organize content and improve SEO (Search Engine Optimization) and readability.

Each **HTML heading tag (<h1> to <h6>)** has a **default font size** defined by the browser's stylesheet. These sizes can vary *slightly* across browsers.

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

| Tag | Default Font Size | Relative Size | Description |
| --- | --- | --- | --- |
| **<h1>** | 32px | 2em | Largest and most important heading |
| **<h2>** | 24px | 1.5em | Second-level heading |
| **<h3>** | 18.72px | 1.17em | Third-level heading |
| **<h4>** | 16px | 1em | Fourth-level heading (same as normal text, but bold) |
| **<h5>** | 13.28px | 0.83em | Fifth-level heading |
| **<h6>** | 10.72px | 0.67em | Smallest heading |

# &lt;h1&gt; &lt;b&gt;THANK YOU&lt;/b&gt; &lt;/h1&gt;