

The Blueprint of the Web



Constructing Your First Web Page with HTML

The Architect's Objectives

By the end of this session, you will be equipped to:



1. **Describe the Blueprint:** Explain the fundamental structure of an HTML5 document.



2. **Lay the Foundation:** Use basic tags to construct the content of a web page.



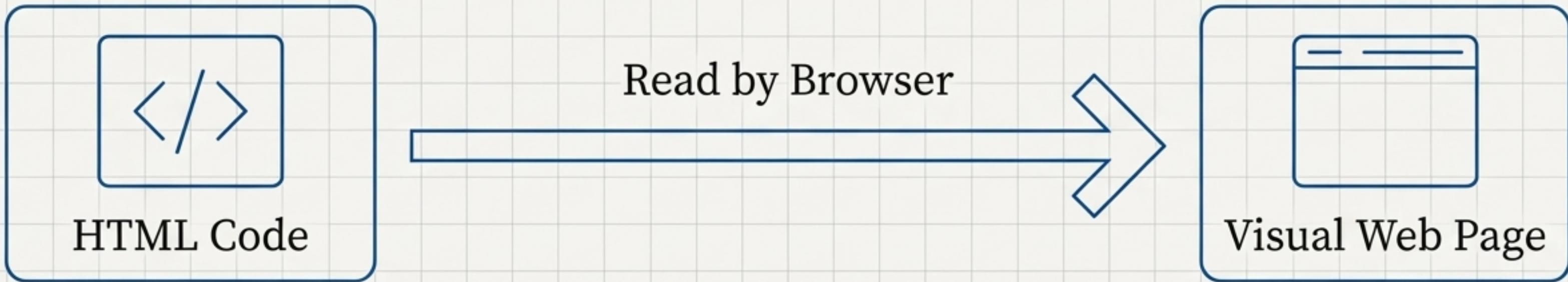
3. **Build the Connections:** Link multiple web pages together to form a cohesive site.



4. **Inspect the Structure:** Open and inspect a local web page using browser Developer Tools.

The Core Material: What is HTML?

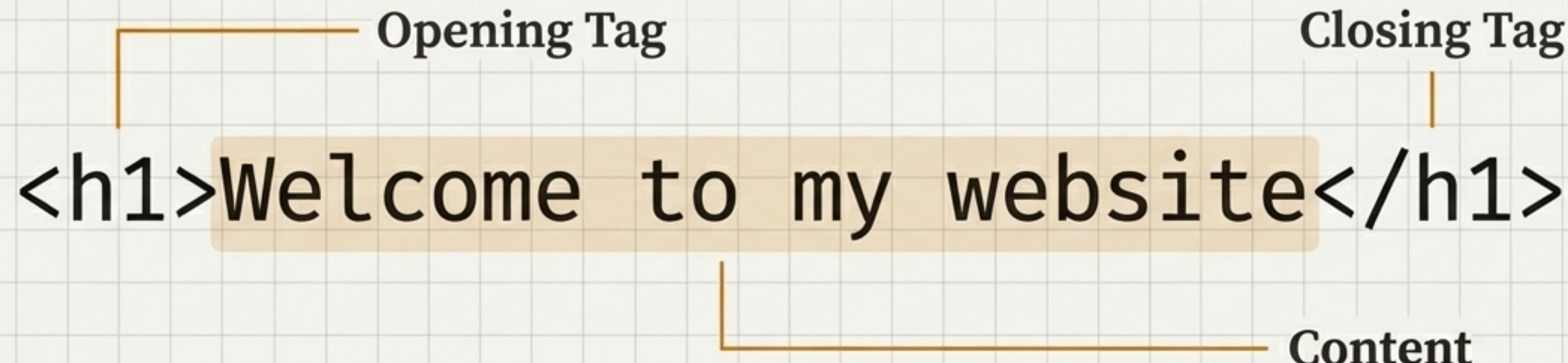
HTML stands for **HyperText Markup Language**. It's the standard language used to create the **structure** of a web page.



The browser reads your HTML blueprint and constructs the visual page that users see.

The Anatomy of a Building Block: The HTML Tag

HTML uses **tags** to define the type of content.



Rendered Example

```
<h1>Welcome to my website</h1>
```

Welcome to my website

The Master Blueprint: Basic Document Structure

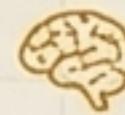
```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>My First Page</title>
  </head>
  <body>
    <h1>Hello HTML!</h1>
    <p>This is content in the body section.</p>
  </body>
</html>
```

This is the universal starting point for every modern web page.

We will now deconstruct each part of this plan.

‘The Foundation Permit: `<!DOCTYPE html>`

- This declaration must always be the **very first line**.
- It instructs the browser to interpret the document using the **HTML5 standard**.
- It ensures the browser renders the page in **Standards Mode** for consistency and correctness.
- Note: This tag has no closing tag.



Architect’s Note

Function: Its job is to define the “document type” so the browser can correctly interpret the structure that follows. Think of it as telling the city inspector which building code you’re using.

The Site Framework: <html lang="...">

This is the **root of the document**. All other elements are contained within it.

The `lang` Attribute

- Specifies the primary language of the page's content.
- Crucial for SEO, screen readers, and proper word hyphenation.

Examples

```
<html lang="en"> for English content.
```

```
<html lang="th"> for Thai content.
```

The Control Room: <head>

This section contains **metadata**—information *about* the document. It is not displayed on the visible page.

What goes inside?

- Character encoding (<meta charset>)
- Page title (<title>)
- Page descriptions (<meta name="description">)
- Links to stylesheets (<link>) and <script>)
- Scripts (<script>)



Architect's Note

Impact: The <head> section is critical for browser processing, SEO, and linking external resources, even though visitors don't see its contents directly.

The Living Space: <body>

This section contains all the **visible content** of the web page.

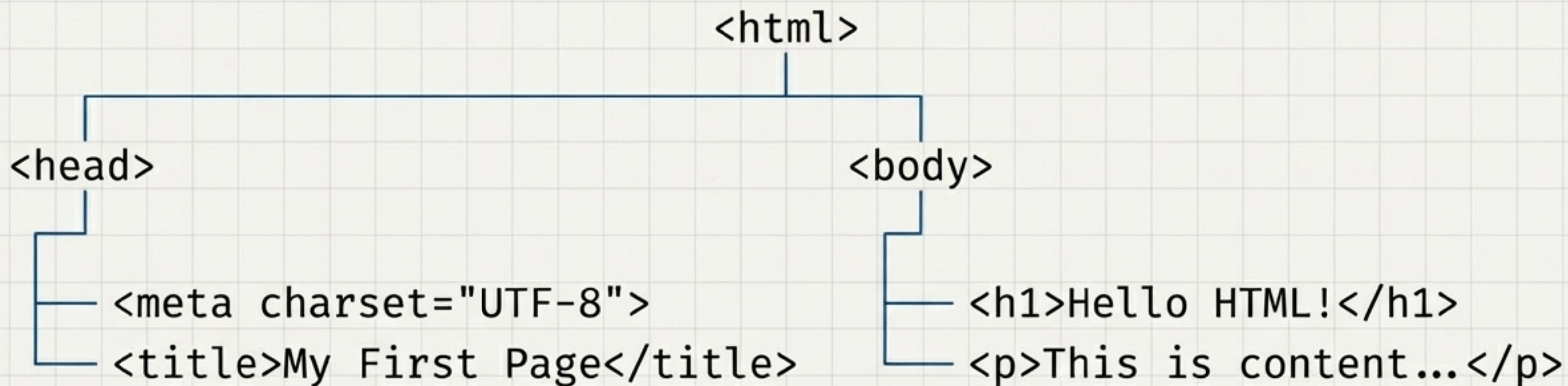
What goes inside?

- Headings (<h1>–<h6>)
- Paragraphs (<p>)
- Images ()
- Links (<a>)
- Forms (<form>)
- And much more.

If you want a user to see it, it must go inside the <body> tags.

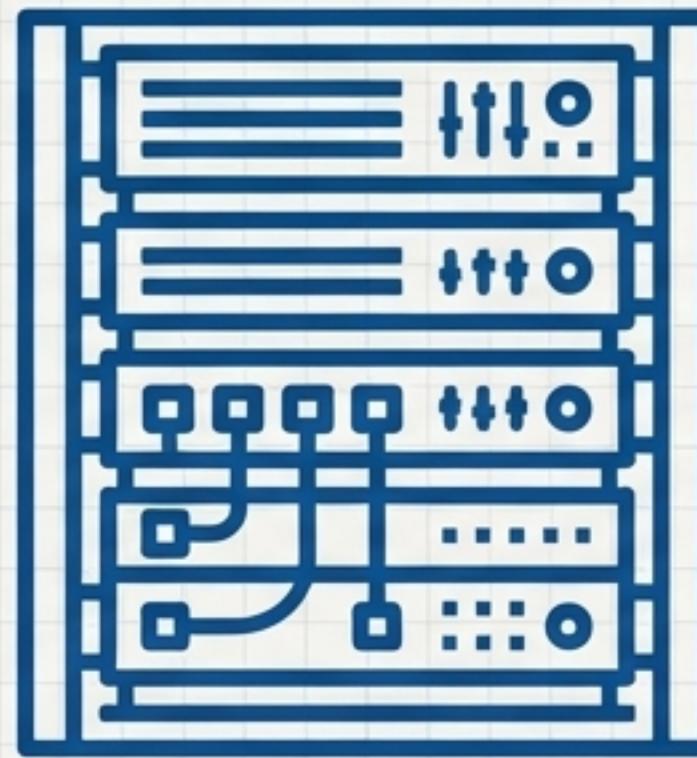
The Structural Hierarchy (The HTML Tree)

HTML is a ‘tree of tags’ where elements are nested inside one another, creating layers of structure.



Analogy: Think of it like a building plan where the main foundation (<html>) contains floors (<head>, <body>), and each floor contains rooms (<h1>, <p>).

Phase I: Installing the Infrastructure



A closer look at the critical tags inside the <head>.

These elements work behind the scenes to ensure your page is functional, discoverable, and displays correctly.

Ensuring Universal Communication: <meta charset="UTF-8">

- **Purpose:** Specifies the character encoding for the document.
- **Why UTF-8?:** It is a universal standard that supports characters from most languages, including Thai.
- **The Problem it Solves:** Prevents text from displaying as garbled characters like '?????'.

📍 Architect's Note

Placement Rule: This tag should be the **very first line inside the** <head> to ensure the browser reads it before processing any text content.

The Official Nameplate: <title>

Sets the **title of the web page**.

Where it appears:



On the browser tab.



As the headline in search engine results.



In browser bookmarks.



Architect's Note

Best Practice: Write a descriptive and meaningful title. Instead of <title>Home</title>, use <title>Nolchai's Personal Portfolio - Welcome</title>.

Phase II: Furnishing the Interior



Structuring visible content with core body tags.

These are the tags you'll use most often to build out the text, images, and links that your users will interact with.

Creating Structure with Headings: <h1> to <h6>

Purpose: Used to define headings and subheadings, creating a clear document outline.

Hierarchy: <h1> is the most important, top-level heading. <h6> is the least important.

The <h1> Rule: A page should typically have **only one <h1> element**, representing the main topic of the page.



SEO & Accessibility

Search engines use headings (especially <h1>) to understand your content's structure and importance. Screen readers use them to help users navigate the page.

Adding Text with Paragraphs: <p>

Tag: Fira Code Regular

- **Purpose:** Used to group text into paragraphs.
- **Function:** Browsers automatically add vertical space between <p> elements.
- **Usage:** Each distinct paragraph of text should be wrapped in its own <p> tags.



Best Practice

Use <p> for paragraphs, not multiple
 (line break) tags. This creates a more structured and accessible document.

Inter Bold: Displaying Artwork & Views: ``

Embeds an image into the page. This is a self-closing tag.

Essential Attributes	
Attribute	Function
src	The source or path to the image file.
alt	Alternative text displayed if the image fails to load.
width	Sets the display width of the image (e.g., '500').
height	Sets the display height of the image (e.g., '300').



Critical for Accessibility

The `alt` text is vital for SEO and for screen readers, which read it aloud to visually impaired users. Always write a concise, descriptive `alt` text.

Creating Doors & Hallways: `<a> (Anchor)

Creates a hyperlink to other web pages or resources.

Key Attributes

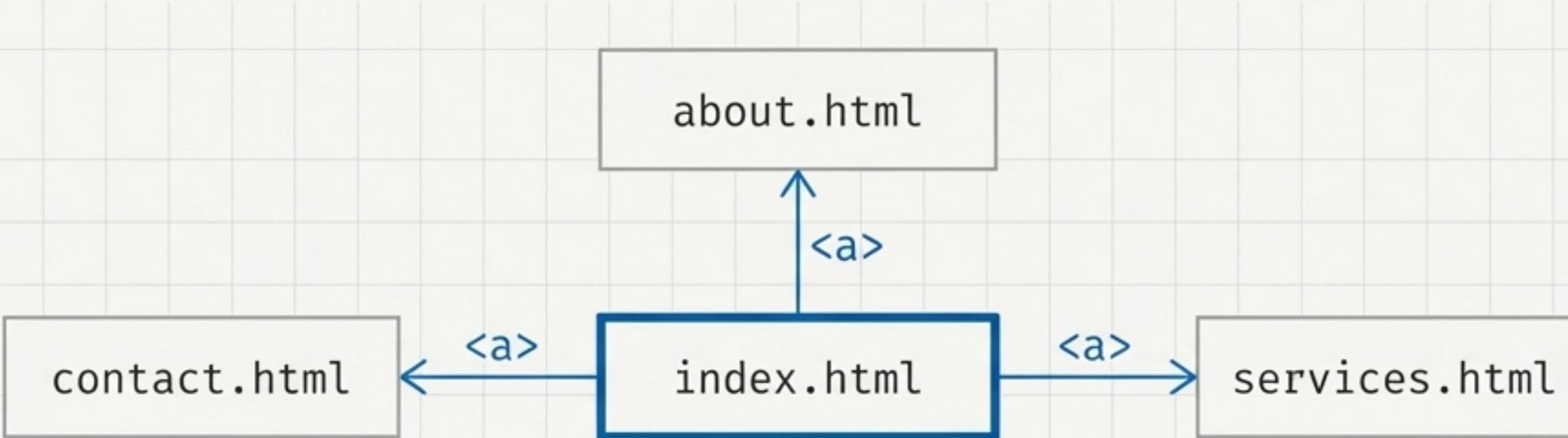
Attribute	Function
`href`	The hyperlink reference or destination URL.
`target`	Specifies where to open the link. `_blank` opens in a new tab. `_self` (default) opens in the same tab.
`title`	Provides extra information, often shown as a tooltip on hover.

****Example**:** Learn More About Us

Phase III: Building a Neighborhood

Connecting Multiple Pages

A website is a collection of HTML files linked together. You can create a navigation menu using a list of `<a>` tags.

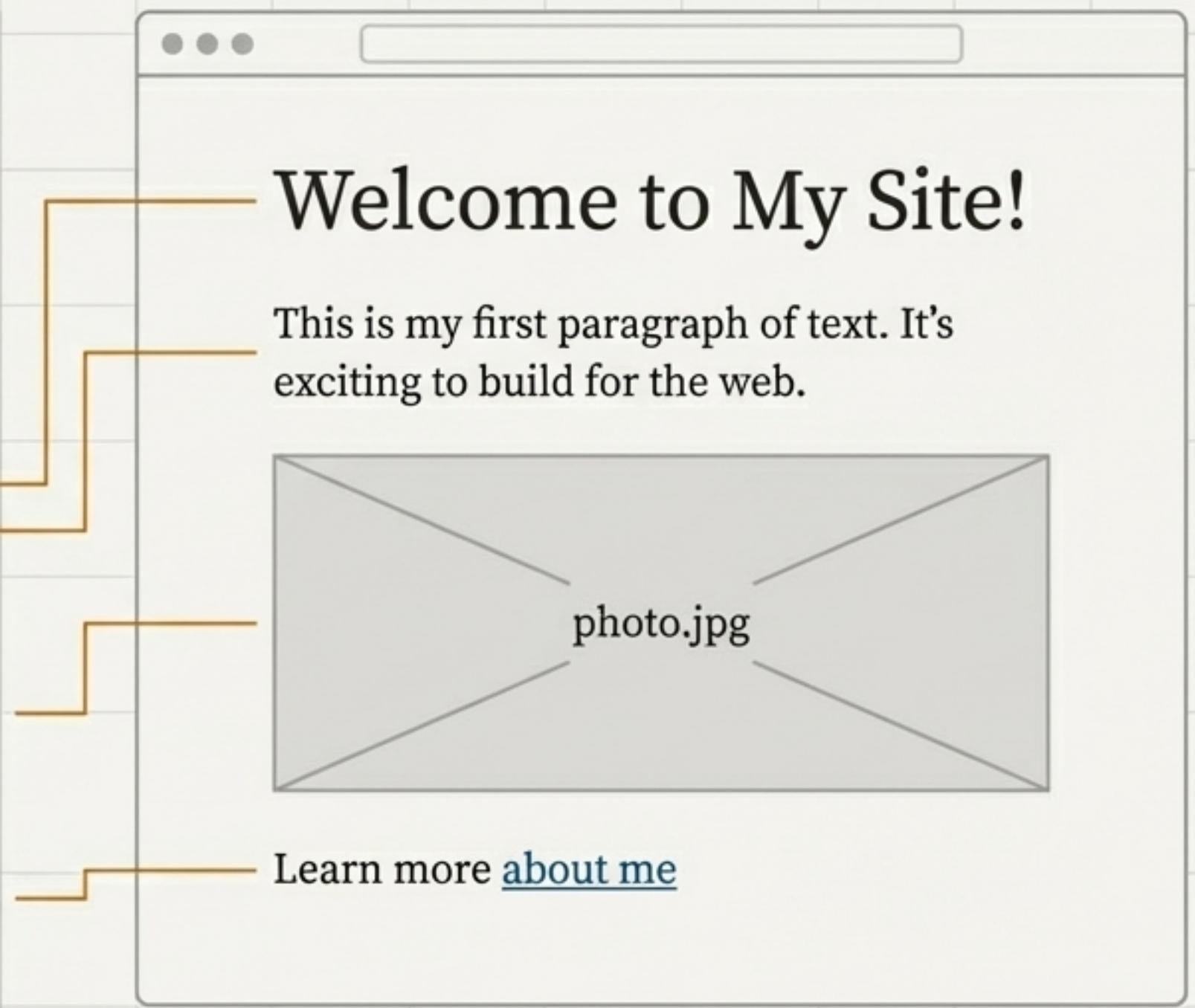


Code Snippet Example

```
<nav>
  <a href="index.html">Home</a>
  <a href="about.html">About</a>
  <a href="contact.html">Contact</a>
</nav>
```

The Complete Project Blueprint

```
<!DOCTYPE html>
<html lang="en">
<head>
  <!-- Metadata for the browser -->
  <meta charset="UTF-8">
  <title>My Awesome Website</title>
</head>
<body>
  <!-- Main visible content -->
  <h1>Welcome to My Site!</h1>
  <p>This is my first paragraph of text. It's exciting to build for the web.</p>
  <!-- An image with descriptive alt text -->
  
  <!-- A link to another page -->
  <p>Learn more <a href="about.html">about me</a>.</p>
</body>
</html>
```



The Final Inspection Checklist

Before publishing, ensure your structure is up to code.

Item	Status
<!DOCTYPE html>	✓
<meta charset="UTF-8"> is first in <head>	✓
<title> is descriptive and meaningful	✓
All visible content is inside <body>	✓
There is only one <h1> per page	✓
Paragraphs use <p>, not multiple tags	✓

The Builder's Essential Toolkit

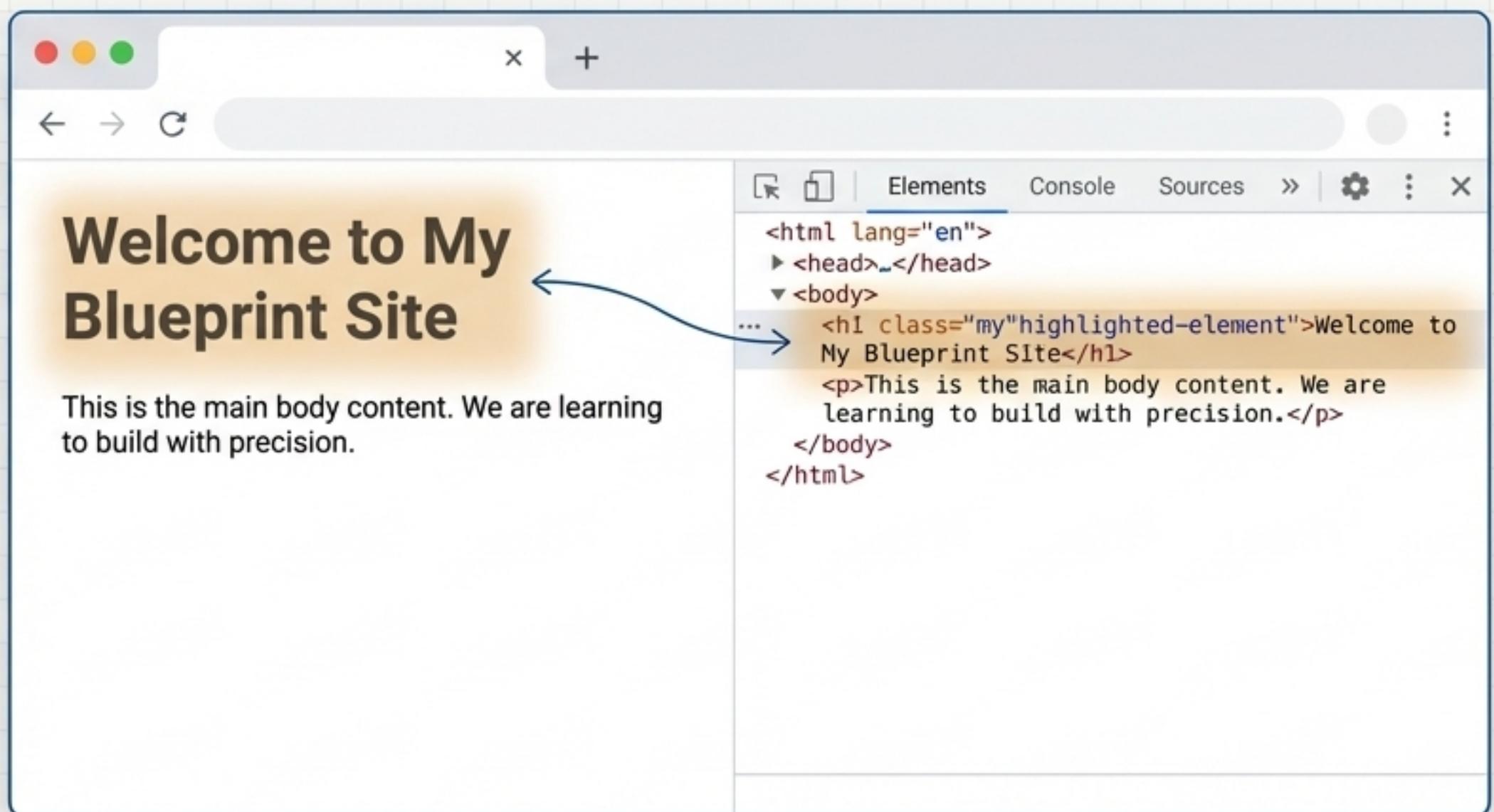
Tag	Primary Function	Key Attributes
<head>	Contains page metadata (title, meta, styles)	-
<body>	Contains all visible page content	-
<h1>-<h6>	Headings for content structure	-
<p>	A paragraph of text	-
	An image	src, alt, width, height
<a>	A hyperlink	href, target, title

Mastering these fundamental tags is the first step to building robust, professional websites.

Inspecting Your Own Construction

Your browser has powerful built-in tools to help you inspect your HTML structure in real-time.

1. Open your .html file in Chrome or Firefox.
2. Right-click anywhere on the page.
3. Select “**Inspect**” or “**Inspect Element**”.



Use this tool to see how the browser understands your blueprint and to diagnose any structural issues. You are now equipped to build.