

# 1. HTML Elements (The Building Blocks)

**Definition:** An HTML element is everything from the start tag to the end tag. It consists of a tag name, attributes, and the content in between.

- **Structure:** `<tagname attribute="value"> Content </tagname>`
  - **Types:** \* **Block-level:** Starts on a new line (e.g., `<div>`, `<h1>`, `<p>`).
    - **Inline:** Does not start on a new line (e.g., `<span>`, `<a>`).
  - **Trends:** we focus on **Semantic HTML**—using tags like `<article>` or `<section>` instead of just `<div>` so that AI and screen readers can understand the content better.
- 

## 2. Buttons, Inputs, Headings, Paragraphs, and Forms

These are the "Interactivity" elements. They are how users talk to your website.

- **Headings (`<h1>` to `<h6>`) & Paragraphs (`<p>`):** Used for hierarchy and readability.
- **Buttons (`<button>`):** Used to trigger actions (like "Submit" or "Like").
- **Inputs (`<input>`):** Fields where users type. Types include `text`, `password`, `checkbox`, and `email`.
- **Forms (`<form>`):** A container used to collect user input and send it to a server.

**Hacking Effect (Security Warning):** If a developer doesn't limit the length of an `<input>` or filter the characters, a hacker can perform **Cross-Site Scripting (XSS)** by typing a `<script>` tag into a comment box.

---

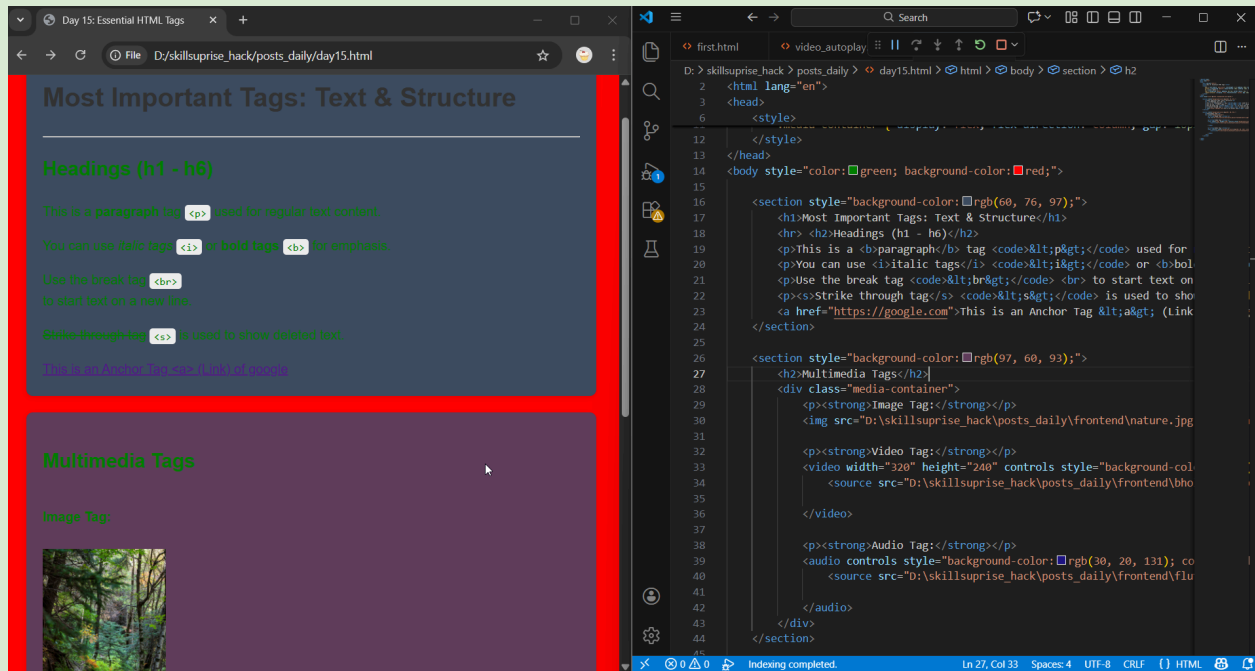
## 3. Media Tags: Audio, Video, and Image

Websites are no longer just text; they are multimedia experiences.

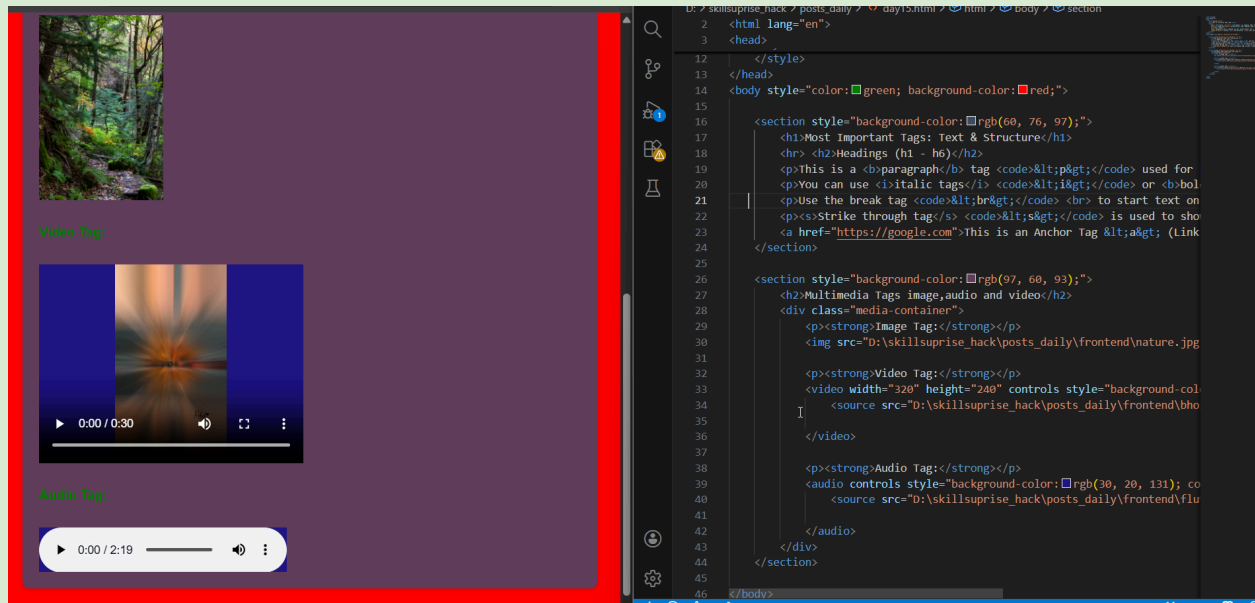
- **Image (`<img>`):** Embeds a picture. Requires a `src` (source) and `alt` (description for blind users).
- **Video (`<video>`) & Audio (`<audio>`):** Used to play files directly in the browser without needing third-party plugins (like the old Flash Player).
- **Working Procedure:** The browser doesn't "embed" the file into the HTML; it creates a link to the file on the server and streams it.

- **Trends:** Modern sites use **Lazy Loading**, which means the image/video only loads when you scroll down to it, making the site much faster
- 

Basic html tags used here:



media tags like <img> <audio> and <video> tags used here



.<h1>form tag used to create a form here</h1>

