

Basic Structure

HTML (HyperText Markup Language) is the standard language for creating web pages.

```
<!DOCTYPE html> <!-- Document type
declaration -->
<html lang="en"> <!-- Root element -->
<head>
  <meta charset="UTF-8"> <!-- Encoding
-->
  <title>Page Title</title> <!-- Tab
title -->
</head>
<body>
  <h1>Main Title</h1> <!-- Heading
level 1 -->
  <p>This is a paragraph.</p>
</body>
</html>
```

Content Elements

- Headings: `<h1>` to `<h6>` (importance decreases from 1 to 6).
- Text Formatting:
 - ``: Important text (bold).
 - ``: Emphasized text (italic).
 - `<mark>`: Highlighted text.
 - `<code>`: Inline code.
- Lists:
 - ``: Unordered list (bullets), used with ``.
 - ``: Ordered list (numbers), used with ``.
- Links and Media:
 - `Link Text`: Hyperlink.
 - ``: Embedded image.
 - `<video>`, `<audio>`: Multimedia embedding.

Structural (Semantic) Elements

Tags that define the structure and meaning of web content.

- `<header>`: Site or section header.
- `<nav>`: Navigation links.
- `<main>`: Core content of the document.

- `<section>`: Generic section of content.
- `<article>`: Self-contained content (blog posts, news).
- `<aside>`: Sidebar or auxiliary content.
- `<footer>`: Site or section footer.

Forms and Input

```
<form action="/submit" method="POST">
  <label for="name">Name:</label>
  <input type="text" id="name"
name="name" required>

  <label>Message:</label>
  <textarea name="message"></textarea>

  <button type="submit">Send</button>
</form>

• Input types: text, password, email, number,
checkbox, radio, file, submit.
```

Table

```
<table>
  <thead>
    <tr> <!-- Table row -->
      <th>Item</th> <!-- Table
header -->
      <th>Price</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Coffee</td> <!-- Table
data -->
      <td>5.0</td>
    </tr>
  </tbody>
</table>
```

Attributes

- `id`: Unique identifier for an element.
- `class`: Identifier for a group of elements.
- `title`: Extra information about an element (displayed as tooltip).
- `data-*`: Custom data attributes.
- `href`: Link address for `<a>` tags.

- `src`: Resource source for ``, `<script>`, `<audio>`, `<video>`.
- `alt`: Alternative text for ``.
- `disabled`: Disables `input`, `button`, etc.
- `placeholder`: Sample text for `input`, `textarea`.
- `required`: Mandatory field for form submission.

Google Style Guide

Common Principles

- Protocol: Use **HTTPS** for all resources including images.
- Indentation: 2 spaces (no tabs).
- Capitalization: Use lowercase only for all code (tags, attributes, selectors, etc.).
- Encoding: Use **UTF-8** (no BOM). Specify `<meta charset="utf-8">` in HTML.

HTML Guide

- Doctype: Always use `<!doctype html>`.
- Validity: Write valid HTML. Utilize W3C validators.
- Semantics: Use tags according to their purpose (e.g., use `<a>`, `<p>`, `<header>` instead of `<div>`).
- Multimedia: Providing alternative text via the `alt` attribute is mandatory.
- Optional Tags: For file size optimization, optional tags (`html`, `body`, `li`, etc.) can be omitted.
- Quotation: Use double quotes (") for attribute values.

CSS Guide

- Class Naming: Use semantic or generic names (functional focus). Separate words with hyphens (-).
- ID Selectors: Avoid using ID selectors (`#id`); use Class selectors instead.
- Shorthand: Use shorthand properties (`font`, `margin`, etc.) whenever possible.
- 0 & Units: Omit units if value is 0 (e.g., `margin: 0;`).
- Hex Notation: Use 3-character hex codes where possible (`#abc`).
- Important: Refrain from using `!important`. Leverage selector specificity instead.

Formatting and Conventions

- Order: Alphabetical sorting for CSS declarations is recommended.
- Spacing: 1 space before the opening brace, 1 space after the property colon (:).
- Comments: Write section-partitioning comments for complex code.
- Separation: Strictly separate structure (HTML), presentation (CSS), and behavior (JS).