# **Introduction to HTML with Code Snippets**

## **What is HTML?**

**HTML (HyperText Markup Language) is the standard language for creating web pages. It describes the structure of web pages using markup. HTML elements are represented by tags, and browsers use these tags to render content on the screen.**

## **Basic Structure of an HTML Document**

**An HTML document has a basic structure that includes the <!DOCTYPE html> declaration, the <html> element, a <head> section, and a <body> section.**

**html**

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**<!DOCTYPE html>**

**<html lang="en">**

**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial-scale=1.0">**

**<title>HTML Elements Example</title>**

**</head>**

**<body>**

**<!-- Content goes here -->**

**</body>**

**</html>**

## **Head Section Elements**

**The <head> section contains metadata about the document, such as the character set, viewport settings, and the title of the document.**

**html**

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**<head>**

**<meta charset="UTF-8">**

**<meta name="viewport" content="width=device-width, initial-scale=1.0">**

**<title>HTML Elements Example</title>**

**</head>**

## **Header and Navigation**

**The <header> element represents the header of a document or section and often contains navigational links.**

**html**

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**<header>**

**<h1>Main Header</h1>**

**<nav>**

**<ul>**

**<li><a href="#">Home</a></li>**

**<li><a href="#">About</a></li>**

**<li><a href="#">Services</a></li>**

**<li><a href="#">Contact</a></li>**

**</ul>**

**</nav>**

**</header>**

## **Main Content - Section and Text Elements**

**The <main> element represents the main content of the document. Inside it, sections like <section> can be used to group content, and text elements such as <h2>, <p>, <strong>, <em>, and <a> are used to format text.**

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**<main>**

**<section>**

**<h2>Section Heading</h2>**

**<p>This is a paragraph of text.</p>**

**<p>This is another paragraph with <strong>bold</strong>, <em>italic</em>, and <a href="#">a link</a>.</p>**

**</section>**

**</main>**

## **Lists**

**HTML supports ordered and unordered lists using <ol> and <ul>, respectively. Each list item is enclosed in an <li> element.**

**html**

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**<ul>**

**<li>Unordered list item 1</li>**

**<li>Unordered list item 2</li>**

**<li>Unordered list item 3</li>**

**</ul>**

**<ol>**

**<li>Ordered list item 1</li>**

**<li>Ordered list item 2</li>**

**<li>Ordered list item 3</li>**

**</ol>**

## **Tables**

**Tables are created using the <table> element, with table rows defined by <tr>, table headers by <th>, and table data by <td>.**

**html**

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**<table border="1">**

**<caption>Table Caption</caption>**

**<thead>**

**<tr>**

**<th>Header 1</th>**

**<th>Header 2</th>**

**<th>Header 3</th>**

**</tr>**

**</thead>**

**<tbody>**

**<tr>**

**<td>Data 1</td>**

**<td>Data 2</td>**

**<td>Data 3</td>**

**</tr>**

**<tr>**

**<td>Data 4</td>**

**<td>Data 5</td>**

**<td>Data 6</td>**

**</tr>**

**</tbody>**

**<tfoot>**

**<tr>**

**<td>Footer 1</td>**

**<td>Footer 2</td>**

**<td>Footer 3</td>**

**</tr>**

**</tfoot>**

**</table>**

## **Forms**

**Forms are used to collect user input and are defined using the <form> element. Common form controls include text inputs, password inputs, textareas, select dropdowns, checkboxes, and radio buttons.**

**html**

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**<form>**

**<label for="text">Text input:</label>**

**<input type="text" id="text" name="text"><br><br>**

**<label for="password">Password input:</label>**

**<input type="password" id="password" name="password"><br><br>**

**<label for="textarea">Textarea:</label>**

**<textarea id="textarea" name="textarea"></textarea><br><br>**

**<label for="select">Select:</label>**

**<select id="select" name="select">**

**<option value="option1">Option 1</option>**

**<option value="option2">Option 2</option>**

**</select><br><br>**

**<fieldset>**

**<legend>Checkboxes:</legend>**

**<input type="checkbox" id="checkbox1" name="checkbox1" value="value1">**

**<label for="checkbox1">Checkbox 1</label><br>**

**<input type="checkbox" id="checkbox2" name="checkbox2" value="value2">**

**<label for="checkbox2">Checkbox 2</label><br>**

**</fieldset><br>**

**<fieldset>**

**<legend>Radio buttons:</legend>**

**<input type="radio" id="radio1" name="radio" value="value1">**

**<label for="radio1">Radio 1</label><br>**

**<input type="radio" id="radio2" name="radio" value="value2">**

**<label for="radio2">Radio 2</label><br>**

**</fieldset><br>**

**<input type="submit" value="Submit">**

**</form>**

## **Media Elements**

**HTML allows embedding images, videos, and audio files using the <img>, <video>, and <audio> elements.**

**html**

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**<img src="https://via.placeholder.com/150" alt="Placeholder image">**

**<figure>**

**<img src="https://via.placeholder.com/150" alt="Placeholder image">**

**<figcaption>Figure caption</figcaption>**

**</figure>**

**<video controls>**

**<source src="movie.mp4" type="video/mp4">**

**Your browser does not support the video tag.**

**</video>**

**<audio controls>**

**<source src="audio.mp3" type="audio/mp3">**

**Your browser does not support the audio tag.**

**</audio>**

## **Embedded Content**

**HTML supports embedding external content such as other web pages or interactive content using the <iframe> element.**

**html**

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**<iframe src="https://www.example.com" title="Example iframe"></iframe>**

## **Footer**

**The <footer> element is used to define the footer of a document or section, typically containing information about the author, copyright, or links to related documents.**

**html**

**Copy code**

**<footer>**

**<p>Footer content here.</p>**

**</footer>**

**This documentation provides an overview of HTML elements with code snippets to help understand their structure and usage.**