

HTML Basics

HTML Boilerplate

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Your Title</title>
</head>
<body>

</body>
</html>
```

Headings and Paragraphs

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

HTML Attributes

```
<a href="https://example.com">Link</a>

<br>
<b>Bold Text</b>
<i>Italic Text</i>
<u>Underlined Text</u>
```

HTML Comments

```
<!-- This is a comment -->
```

Use of Ctrl + / in HTML

This shortcut is often used to comment/uncomment selected lines of code.

Case Sensitivity in HTML

HTML is not case-sensitive, but it's a good practice to use lowercase for tags and attributes.

Inline vs Block Elements

Inline Elements

```
<span>Inline Element</span>  
<a href="#">Inline Link</a>
```

Block Elements

```
<div>Block Element</div>  
<p>Paragraph</p>
```

Subscript and Superscript

```
<sub>Subscript</sub>  
<sup>Superscript</sup>
```

Semantic Tags

```
<header>Header Section</header>  
<main>Main Content</main>  
<footer>Footer Section</footer>  
<nav>Navigation Menu</nav>  
<article>Article Content</article>  
<section>Section of Content</section>  
<aside>Aside Content</aside>
```

HTML Entities

```
& = &amp;  
< = &lt;  
> = &gt;
```

Tables in HTML

```
<table border="1">  
  <caption>Table Caption</caption>  
  <thead>
```

```
<tr>
  <th>Header 1</th>
  <th>Header 2</th>
</tr>
</thead>
<tbody>
  <tr>
    <td>Data 1</td>
    <td>Data 2</td>
  </tr>
  <tr>
    <td>Data 3</td>
    <td>Data 4</td>
  </tr>
</tbody>
<tfoot>
  <tr>
    <td>Footer 1</td>
    <td>Footer 2</td>
  </tr>
</tfoot>
</table>
```

Forms in HTML

```
<form action="https://www.google.com">
  <input type="text" placeholder="Enter name">
  <label for="name">Name</label>
  <label for="button">Button
    <button type="button"></button>
  </label>
  <input type="submit" value="Click">
  <input type="submit">
  <input type="checkbox">
  <input type="radio" name="gender">
  <input type="radio" name="gender">
  <select name="x" id="x">
    <option value="a">Option A</option>
```

```
<option value="b">Option B</option>
</select>
<input type="range" min="0" max="100">
<textarea name="a" id="b" cols="30" rows="10"></textarea>
</form>
```

For grouping radio buttons or checkboxes, use the same `name` attribute.

HTML Project

Here's a simple HTML project that combines these elements:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML Project</title>
</head>
<body>

  <header>
    <h1>My HTML Project</h1>
  </header>

  <nav>
    <ul>
      <li><a href="#section1">Section 1</a></li>
      <li><a href="#section2">Section 2</a></li>
    </ul>
  </nav>

  <main>
    <section id="section1">
      <h2>Section 1</h2>
```

```
<p>This is the content of section 1.</p>
</section>

<section id="section2">
  <h2>Section 2</h2>
  <p>This is the content of section 2.</p>
</section>
</main>

<footer>
  <p>&copy; 2024 My HTML Project</p>
</footer>

</body>
</html>
```

`<!DOCTYPE html>`: This declaration defines the document type and version of HTML being used, in this case, HTML5.

`<html lang="en">`: The root element of the HTML document. The `lang` attribute is set to "en" for English.

`<head>`: This section contains metadata about the HTML document, such as character set, viewport settings, and the document title.

- `<meta charset="UTF-8">`: Specifies the character encoding for the document as UTF-8, which supports a wide range of characters.
- `<meta name="viewport" content="width=device-width, initial-scale=1.0">`: Sets the viewport properties to control the page's dimensions and scaling for various devices.
- `<title>HTML Project</title>`: Sets the title of the HTML document, which appears in the browser tab.

`<body>`: This is the main content of the HTML document.

- `<header>`: Contains the heading of the page.
 - `<h1>My HTML Project</h1>`: The main heading of the page.
- `<nav>`: Defines a navigation section.
 - ``: Represents an unordered (bullet-pointed) list.
 - ``: Represents a list item.
 - `Section 1`: Creates a hyperlink to Section 1 within the same page.

- `Section 2`: Creates a hyperlink to Section 2 within the same page.
- `<main>`: Contains the main content of the page.
 - `<section id="section1">`: Represents a section with a unique identifier.
 - `<h2>Section 1</h2>`: Sub-heading for Section 1.
 - `<p>This is the content of section 1.</p>`: Paragraph describing the content of Section 1.
 - `<section id="section2">`: Represents a section with a unique identifier.
 - `<h2>Section 2</h2>`: Sub-heading for Section 2.
 - `<p>This is the content of section 2.</p>`: Paragraph describing the content of Section 2.
- `<footer>`: Contains footer information.
 - `<p>© 2024 My HTML Project</p>`: Paragraph displaying copyright information.

In summary, this HTML project creates a simple webpage with a header, navigation menu, two sections of content, and a footer. It also includes hyperlinks in the navigation menu that allow users to jump directly to specific sections on the page. The content is organized and semantically structured using HTML5 elements.