10-HTML Crash Course

Chapter 11: Crash Course in HTML

HTML (HyperText Markup Language) is the backbone of web development. It provides the structure of web pages, enabling us to organize and display content. This chapter gives you a quick overview of HTML basics.

11.1 The Structure of an HTML Document

An HTML document consists of elements enclosed in tags. Here's the basic structure:

```
1   <!DOCTYPE html>
2   <html>
3     <head>
4       <title>My Web Page</title>
5     </head>
6     <body>
7       <h1>Welcome to HTML</h1>
8       <p>This is a paragraph.</p>
9     </body>
10  </html>
```

- `<!DOCTYPE html>` : Declares the document type as HTML5.
- `<html>` : The root element containing all other elements.
- `<head>` : Includes metadata, page title, and linked resources (like stylesheets).
- `<body>` : Contains the visible content of the webpage.

11.2 Common HTML Tags

Here are essential tags every beginner should know:

1. **Headings:** Use tags `<h1>` to `<h6>` for titles and subtitles.

```
1   <h1>Largest Heading</h1>
2   <h3>Smaller Heading</h3>
```

2. **Paragraphs:** Use `<p>` for blocks of text.

```
1   <p>This is a paragraph.</p>
```

3. **Links:** Use `<a>` to create hyperlinks.

```
1   <a href="https://example.com">Visit Example</a>
```

4. **Images:** Use `<img>` to add images.

```
1   <img src="image.jpg" alt="A descriptive text">
```

5. **Lists:**
   - **Ordered Lists:** `<ol>` for numbered items.

```
1   <ol>
2     <li>First item</li>
3     <li>Second item</li>
4   </ol>
```

   - **Unordered Lists:** `<ul>` for bullet points.

```
1   <ul>
2     <li>Item A</li>
3     <li>Item B</li>
4   </ul>
```

6. **Tables:** Use `<table>` to display structured data.

```
1    <table>
2      <tr>
3        <th>Name</th>
4        <th>Age</th>
5      </tr>
6      <tr>
7        <td>Rick</td>
8        <td>30</td>
9      </tr>
10   </table>
```

7. **Forms:** Use `<form>` to create user input forms.

```
1   <form action="/submit" method="post">
```

```
2    <label for="username">Username:</label>
3    <input type="text" id="username" name="username">
4    <button type="submit">Submit</button>
5  </form>
```

11.3 Attributes

HTML attributes provide additional information about elements. They are written inside the opening tag.

Example:

```
1    <img src="logo.png" alt="Logo Image" width="200">
```

- `src` : Specifies the source of the image.
- `alt` : Provides alternative text.
- `width` : Sets the width of the image.

11.4 Nesting and Hierarchy

HTML elements can be nested within each other to create a hierarchy.

Example:

```
1    <div>
2      <h1>Heading</h1>
3      <p>This is a paragraph inside a div.</p>
4    </div>
```

11.5 Practical Examples

1. **Building a Simple Webpage:**

```
1    <!DOCTYPE html>
2    <html>
3      <head>
4        <title>My First Web Page</title>
```

```
 5      </head>
 6      <body>
 7        <h1>Welcome to My Page</h1>
 8        <p>This is a paragraph describing the page.</p>
 9        <a href="https://example.com">Learn More</a>
10      </body>
11    </html>
```

2. **Creating a Contact Form:**

```
 1    <!DOCTYPE html>
 2    <html>
 3      <body>
 4        <h2>Contact Us</h2>
 5        <form action="/submit">
 6          <label for="email">Email:</label>
 7          <input type="email" id="email" name="email" required>
 8          <button type="submit">Send</button>
 9        </form>
10      </body>
11    </html>
```

11.6 Tips for Writing HTML

- Use semantic tags like `<header>`, `<footer>`, `<section>`, and `<article>` to improve accessibility and SEO.
- Always include `alt` text for images to make your site accessible.
- Validate your HTML using the W3C Validator.