CERTIFIED QUIZ

Introduction to HTML

HTML (Hypertext Markup Language) is the standard markup language for creating web pages and web applications. It is the backbone of most websites, defining the structure of content on the internet and allowing for multimedia and text to be arranged within a browser. HTML consists of various 'tags' that provide instructions to the browser on how to display elements. HTML documents usually end with the .html or .htm extension.

Basic Syntax

HTML syntax is based on a series of tags that enclose content. Tags are written inside angle brackets (e.g., <tagname>), with a corresponding closing tag (e.g., </tagname>). Each HTML document begins with a declaration <!DOCTYPE html> to inform the browser of the document type. The primary sections in an HTML document include the <html>, <head>, and <body> tags.

HTML Structure

HTML documents follow a specific structure:
<!DOCTYPE html>
<html>
<head>
<title>Document Title</title>
</head>
<body>
Content goes here
</body>
</html>

In this structure:
- <!DOCTYPE html>: This tag specifies the document type.
- <html>: The root element of the document.
- <head>: Contains meta information, the document title, and links to stylesheets or scripts.
- <body>: Encloses the visible page content, such as text, images, and other media.

HTML Tags and Elements

HTML consists of various tags used to format content:

- <h1> to <h6>: Header tags, where <h1> is the largest header.
- <p>: Defines a paragraph.
- <a href='URL'>: Creates a hyperlink.
- <img src='URL' alt='description'>: Adds an image.

Example:
<p>This is a paragraph.</p>

The content is enclosed within the tags, making it easy to nest and organize.

Attributes in HTML

HTML tags often include attributes, which provide additional information about elements. Attributes are added within the opening tag and consist of a name and value, separated by an equal sign. Common attributes:

- <a href='https://example.com'>: 'href' specifies the link URL.
- <img src='image.jpg' alt='Description'>: 'src' provides the image URL, 'alt' offers a text description.

Attributes allow for added functionality and customization within tags.

HTML Forms

Forms collect user data. A basic form example:
<form action='/submit' method='POST'>
<label>Name: </label>
<input type='text' name='username'>
<input type='submit' value='Submit'>
</form>

Form tags include:
- <form>: The container for form elements, specifying 'action' and 'method'.
- <input>: Creates user inputs. Common types: 'text', 'submit', 'email'.
- <label>: Labels form inputs for accessibility.

HTML Tables

Tables display data in a grid format. Example:
<table>
<tr>
<th>Header 1</th>
<th>Header 2</th>
</tr>
<tr>
<td>Data 1</td>
<td>Data 2</td>
</tr>
</table>

Key tags:
- <table>: Starts the table.
- <tr>: Creates rows.
- <th>: Header cells.
- <td>: Regular cells.

HTML Lists

HTML supports ordered and unordered lists.
- Unordered lists (<ul>) use bullet points.
- Ordered lists (<ol>) use numbers.

Example:

Item 1
Item 2

This allows structured, organized lists of items on the page.

Multimedia in HTML

Multimedia elements like images, audio, and video enhance webpages:

- <img src='image.jpg'>: Displays images.
- <audio controls>: Adds audio with play controls.
- <video controls>: Embeds videos.

Example:
<video src='movie.mp4' controls></video>

Multimedia allows for a richer user experience by incorporating media files directly into the HTML.

Semantic HTML

Semantic HTML uses tags that provide meaning to the content. Examples include:
- <header>, <footer>, <article>, <section>: These tags improve accessibility and SEO by identifying content types.

Example:
<article>
<header>
<h1>Article Title</h1>
</header>
<p>Content of the article.</p>
</article>

HTML Best Practices

Best practices for writing clean and efficient HTML:

1. Use semantic tags for meaning.
2. Close all tags properly.
3. Indent nested elements.
4. Use alt attributes in images for accessibility.

Example:
<img src='image.jpg' alt='Description'>

Following best practices ensures code clarity, accessibility, and SEO benefits.