HTML Class Notes

Introduction to HTML

1. What is HTML?

HTML stands for

- **H**yper
- **T**ext
- **M**arkup
- **L**anguage

HTML is the standard markup language used to create and structure web pages. It uses tags to define different elements and their content on a webpage.

Key Points:

- HTML is not a programming language - it's a markup language
- It defines the structure and content of web pages
- Browsers read HTML and display it as formatted web pages
- HTML works together with CSS (for styling) and JavaScript (for functionality)

2. Paired Tags and Unpaired Tags

Paired Tags (Container Tags)

Paired tags have both an opening tag and a closing tag. They wrap around content.

Syntax:

```
<tagname>Content goes here</tagname>
```

Examples:

- **<p>** - Paragraph tag
- **<h1>** - Heading tag
- ** ** - Division tag
- **** - Span tag
- **<a>** - Anchor (link) tag

Unpaired Tags (Self-Closing Tags / Void Elements)

Unpaired tags don't have a closing tag. They are self-contained and don't wrap content.

Syntax:

```
<tagname> or <tagname />
```

Examples:

- **
** - Line break
- **<hr>** - Horizontal rule (line)

- **<img>** - Image tag
- **<input>** - Input field
- **<meta>** - Metadata tag

3. Structure of HTML Document

Every HTML document follows a basic structure:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
    <meta charset="UTF-8">
  </head>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```

Explanation of Each Part:

<!DOCTYPE html>

Declares that this is an HTML5 document. Must be the very first line.

<html>

The root element that contains all other HTML elements.

<head>

Contains metadata, title, links to CSS files, and other information not displayed on the page.

<title>

Sets the title shown in browser tabs and bookmarks.

<body>

Contains all the visible content of the webpage (text, images, links, etc.).

4. What are HTML Elements?

An HTML element consists of a start tag, content, and an end tag (for paired tags).

Example:

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

Components:

- **Start tag:** <p>
- **Content:** This is a paragraph.

- **End tag:**

Common HTML Elements:

- **Headings:** <h1>, <h2>, <h3>, <h4>, <h5>, <h6>
- **Paragraph:**
- **Link:** Link text
- **Image:** <img src="image.jpg" alt="description">
- **Lists:** , <ol>,
- **Division:**

5. Block Level Elements vs Inline Elements

Block Level Elements

Block level elements always start on a new line and take up the full width available (stretches from left to right).

Characteristics:

- Start on a new line
- Take up the full width available
- Can contain other block and inline elements
- Height and width can be controlled

Common Block Elements:

- ** ** - Division or section
- ** ** - Paragraph
- **<h1> to <h6>** - Headings
- **<ul>, <ol>, ** - Lists
- **<form>** - Form
- **<table>** - Table
- **<section>, <article>, <header>, <footer>** - Semantic elements

Example:

```
<div>
  <h1>This is a heading</h1>
  <p>This is a paragraph inside a div.</p>
</div>
```

Inline Elements

Inline elements do not start on a new line and only take up as much width as necessary.

Characteristics:

- Do not start on a new line
- Only take up necessary width
- Cannot contain block level elements
- Height and width cannot be set (with some exceptions)

Common Inline Elements:

- **** - Generic inline container
- **<a>** - Anchor/Link
- **** - Strong/Bold text
- **** - Emphasized/Italic text
- **<img>** - Image
- **
** - Line break
- **<input>, <button>** - Form elements

Example:

```
<p>This is <strong>bold</strong> and this is <em>italic</em>
text.</p>
```

Key Difference:

Block elements create a "block" and start on a new line, while inline elements flow within the text without breaking the line.

Summary

Today we covered the fundamentals of HTML:

- **HTML** is a markup language for creating web pages
- **Paired tags** have opening and closing tags (e.g.,)
- **Unpaired tags** are self-closing (e.g.,
, <img>)
- **HTML structure** includes DOCTYPE, html, head, and body
- **Elements** are the building blocks of HTML pages
- **Block elements** start on new lines and take full width
- **Inline elements** flow within text and take only necessary width

Practice Exercise

Create a simple HTML page with:

- A heading
- Two paragraphs
- An image
- A link to your favorite website

— End of Notes —