HTML

HTML, or HyperText Markup Language, is a standard markup language used to create and design the structure of web pages. It is the backbone of web development and is essential for creating the basic structure of a webpage. HTML provides a set of elements or tags that are used to define the different parts of a webpage, such as headings, paragraphs, links, images, forms, and more.

Here's a basic overview of HTML:

1. **HTML Document Structure:**
   - An HTML document is structured as a tree of elements.
   - The root element is `<html>`, and it contains two main sections: `<head>` and `<body>`.
   - The `<head>` section typically includes metadata like the page title, character set, links to stylesheets, and scripts.
   - The `<body>` section contains the content of the webpage.

```html
<!DOCTYPE html>
<html>
<head>
    <title>Page Title</title>
</head>
<body>
    <!-- Content goes here -->
</body>
</html>
```

2. **HTML Elements:**
   - HTML elements are represented by tags. Tags are enclosed in angle brackets (`< >`).
   - Elements can be nested inside each other.

```html
<h1>This is a Heading</h1>
<p>This is a paragraph.</p>
```

3.**Attributes:**
   - HTML elements can have attributes, which provide additional information about the element.
   - Attributes are added to the opening tag and usually come in name/value pairs.

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

4. Headings:

- HTML has six levels of headings, `<h1>` to `<h6>`, with `<h1>` being the largest and `<h6>` the smallest.

```html
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<!-- ... -->
<h6>Heading 6</h6>
```

5. Paragraphs:

- Paragraphs are defined using the `<p>` tag.

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

6. Links:

- Links are created using the `<a>` (anchor) tag.

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

7. Images:

- Images are displayed using the `<img>` tag.

```html
<img src="image.jpg" alt="Description">
```

8. Lists:

- There are two types of lists: ordered (`<ol>`) and unordered (`<ul>`).
- List items are represented by the `<li>` tag.

```html
<ul>
    <li>Item 1</li>
    <li>Item 2</li>
</ul>


<ol>
    <li>Item 1</li>
    <li>Item 2</li>
</ol>
```

9.Forms:

- Forms are created using the `<form>` tag, and form controls like text input, buttons, etc., are used inside the form.

```html
<form>
    <label for="username">Username:</label>
    <input type="text" id="username" name="username">
    <input type="submit" value="Submit">
</form>
```

10.Comments:

- Comments can be added to HTML code using `<!-- -->`.

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

11.Semantic Elements:

- HTML5 introduces semantic elements like `<header>`, `<nav>`, `<main>`, `<section>`, `<article>`, `<aside>`, and `<footer>`. These elements provide a more meaningful structure to the document.

```html
<header>
    <!-- Header content goes here -->
</header>
<nav>
    <!-- Navigation links go here -->
</nav>
<main>
    <!-- Main content of the page -->
</main>
<footer>
    <!-- Footer content goes here -->
</footer>
```

This is just a basic overview of HTML. To create fully functional and styled web pages, you would typically use HTML in conjunction with CSS (Cascading Style Sheets) for styling and layout, and JavaScript for interactivity.