**Web technologies, Introduction to HTML-**

HTML, short for Hypertext Markup Language, is a fundamental building block of the World Wide Web. It is a markup language used for creating the structure and content of web pages. HTML is responsible for defining the elements and layout of a web page, such as headings, paragraphs, images, links, forms, and more.

Here's a brief **introduction to HTML**:

**Structure:**

HTML documents are structured using a set of predefined tags, which are enclosed in angle brackets ("<" and ">"). The basic structure of an HTML document includes the following elements:

* <!DOCTYPE>: Specifies the document type and version of HTML being used.
* <html>: The root element that contains all other elements in the document.
* <head>: Contains metadata and information about the web page, such as the page title and linked CSS stylesheets.
* <body>: Contains the visible content of the web page, including text, images, links, and other elements.

**Elements and Tags**:

HTML elements are defined using tags, which consist of an opening tag and a closing tag. The opening tag denotes the start of an element, and the closing tag denotes its end. For example:

* html
* Copy code
* <h1>This is a heading</h1>
* <p>This is a paragraph. </p>
* <img src="image.jpg" alt="Description of the image">
* <a href="https://example.com">Link text</a>
* In the above example, <h1> represents a heading, <p> represents a paragraph, <img> represents an image, and <a> represents a hyperlink.

**Attributes:**

HTML elements can have attributes, which provide additional information about the element. Attributes are placed inside the opening tag of an element. For example:

* html
* Copy code
* <img src="image.jpg" alt="Description of the image">
* <a href="https://example.com">Link text</a>

In the above example, the <img> element has attributes like src (source) and alt (alternative text), which specify the image source file and provide a description for the image. The <a> element has the href attribute, which specifies the URL that the link points to.

**Nesting and Hierarchy:**

* HTML elements can be nested within other elements, creating a hierarchical structure. For example:
* html
* Copy code
* <div>
* <h2>Heading</h2>
* <p>Paragraph text</p>
* </div>

In the above example, the <h2> and <p> elements are nested within a <div> element. This nesting allows for organizing and structuring content on a web page.