Introduction to HTML

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What is HTML?

- **HTML** stands for **HyperText Markup Language**.
- It is the standard language for creating web pages.
- HTML describes the structure of a webpage.

Basic Structure of an HTML Document

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Page Title</title>
    </head>
    <body>
        <h1>This is a Heading</h1>
        <p>This is a paragraph.</p>
    </body>
</html>
```

Key Elements

- `<!DOCTYPE html>`: Defines the document type and version.
- `<html>`: The root element of an HTML page.
- `<head>`: Contains meta-information about the document.
- `<title>`: Sets the title of the webpage.
- `<body>`: Contains the content of the webpage.

The `<head>` and `<body>` Tags

- **`<head>` Tag**:
  - Contains metadata and links to resources.
  - Includes elements like `<title>`, `<meta>`, `<link>`, and `<style>`.
  - Does not display content directly on the webpage.
- **`<body>` Tag**:
  - Contains the content of the webpage.
  - Includes text, images, links, and other media.
  - Everything inside is rendered in the browser window.

HTML Tags, Elements, and Attributes

Tags

- Tags are used to create elements.
- They usually come in pairs: an opening tag and a closing tag.
- Example: `<p>...</p>`

Elements

- An element consists of a start tag, content, and an end tag.
- Example: `<h1>This is a heading</h1>`

Attributes

- Attributes provide additional information about elements.
- They are always included in the opening tag.
- Example: `<a href="https://example.com">Visit Example</a>`

HTML Syntax

- **Tags**: Enclosed in angle brackets, e.g., `<tagname>`.
- **Elements**: Consist of a start tag, content, and an end tag.
- **Nesting**: Elements can contain other elements.
- **Attributes**: Key-value pairs in the opening tag, e.g., `id="header"`.
- **Self-closing Tags**: Some tags don't require a closing tag, e.g., `<br />`.
- **Case Sensitivity**: HTML tags and attributes are not case-sensitive, but lowercase is recommended.

HTML Editors

- **Visual Studio Code**: Popular, extensible, and free.
- **Sublime Text**: Lightweight and fast with powerful features.
- **Notepad++**: Simple and efficient for Windows users.
- **Vim**: Highly configurable and powerful for advanced users.
- **Nano**: Simple, easy-to-use terminal-based editor.
- **Any Text Editor Will Work**

HTML Standard and Resources

- **HTML Standard**: WHATWG HTML Standard
- **HTML Tags List**: W3Schools HTML Tags Reference

Famous HTML Tags with Examples

Headings

```
<h1>Main Heading</h1>
<h2>Subheading</h2>
```

Paragraphs

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

Links

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

Cont.

Images

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

Lists

- **Ordered List**

```
<ol>
  <li>First item</li>
  <li>Second item</li>
</ol>
```

- **Unordered List**

```
<ul>
  <li>First item</li>
  <li>Second item</li>
</ul>
```

Cont.

Div and Span

- **Div**

```
<div>A block-level container.</div>
```

- **Span**

```
<span>An inline-level container.</span>
```

Forms

```
<form action="/submit" method="post">
  <label for="name">Name:</label>
  <input type="text" id="name" name="name">
  <input type="submit" value="Submit">
</form>
```