Introduction to HTML

What is HTML?

HTML stands for HyperText Markup Language. It is the standard language used to create and structure the content of webpage seen in web browsers. Unlike programming language (which compute logic) HTML marks up text and other content to tell the browser how to display it.

- "Markup" means: adding annotations to content that define structure

- Think of HTML as the skeleton of a web page — it gives structure and meaning to content.

The Browser & HTML

When your browser loads a .html file:

1) It reads the HTML tags
2) It interprets them to render structure and element (headings, paragraphs, links, images, lists, etc).
3) It renders visually based on that structure.

You don't need to run HTML like a script - the browser just reads and displays.

Anatomy of an HTML Document

Every HTML document you create should follow this pattern:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <!-- Visible page content goes here -->
  </body>
</html>
```

Breakdown:

- `<!DOCTYPE html>` → tells the browser this is an HTML page
- `<html>` ... `</html>` → root element containing everything
- `<head>` ... `</head>` → Contains metadata eg:- page title, linked files
- `<title>` ... `</title>` → the title shown in browser tab
- `<body>` ... `</body>` → everything inside here visibly appears on the webpage

HTML tags

Tags are the building blocks of HTML. Think of them as labels you put on your content

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Typical Structure :
- Opening tag : <tagname>
- Content goes there
- closing tag: </tagname>

for eg:-
<p> This is a paragraph </p>
- <p>: paragraph tag
- /p : end of paragraph

Common HTML Tags & what they Mean
Text Structure
- <h1> - <h6>: Heading
  - <h1> is biggest/most important; <h6> is Smallest/least important
  - Use these to Create visual hierarchy in your text.

Ex:-
<h1> Main Heading </h1>
<h2> Subheading </h2>
<p> Some text under a heading </p>

paragraphs
- <p> → denotes a block of text

HTML ignores plain Spaces and line breaks - only <p> defines a Separate paragraph on Screen

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Links (Anchor Tags)

Used to link between pages or to other websites

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

- href means "hypertext reference" – the URL to go to when clicked
- The linked text appears clickable in the browser

Images

Insert pictures with the img tag:

```
<img src="cat.jpg" alt="A cute cat">
```

- src: file path or web URL of the image
- alt: alternative text shown if image fails to load
- Important for accessibility (screen readers) and SEO.

Lists

HTML provides two common list types:

Unordered list

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

- Shows with bullets

Ordered list

```
<ol>
  <li> first </li>
  <li> second </li>
</ol>
```

- shows with numbers

lists are great for menus or any structured grouping

Line Breaks and Horizontal Rules

- `<br>` → line break (like pressing Enter in text)
- `<hr>` → horizontal rule (a dividing line)

These don't need closing tags and help organize content visually.

Semantic HTML

Semantic elements clearly describe their meaning.

Tag	Meaning
`<header>`	Header section
`<nav>`	Navigation links
`<main>`	Main page content
`<footer>`	footer area

Using Semantic tags makes your page:

- Easier to read
- better for accessibility
- better for search engines

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HTML Project Structure

Once you start building bigger websites you Organize files like this:

```
project-folder/
├→ index.html
├→ about.html
├→ contact.html
├→ images/
└→ css/
```

This keeps things tidy and lets you reuse photos and styles across pages

Practice Makes Perfect

Doing mini challenges is how you absorb HTML.

- build a personal homepage
- add headings and paragraphs
- Create navigation between pages
- insert images with meaningful alt text

Pro Tips from the Course

- Always use semantic tags when possible - Search engines and accessibility tools love them
- Keep your folder structure organized - think ahead as project grows
- Don't just copy code - type it yourself to solidify muscle memory.