**🧱 1. Basics of HTML - Part I**

**1.1 👋 Introduction to HTML**

Knowing how to code is a great skill! Every website you see is built using **HTML**. Even the fanciest websites still use HTML as their foundation.

* Two important tools used to build websites are:
  + **HTML**: It gives structure to your content (like where text, images, or videos go).
  + **CSS**: It makes your website look good (like colors, fonts, and layout).

When building websites, it really helps to understand how HTML and CSS work together.

**1.2 💡 Understanding HTML**

**👉 What is HTML?**

* HTML stands for **HyperText Markup Language**.
* It’s just a **way of tagging** a simple text file to tell a browser what things are (like headings, images, links, etc.).
* Once you tag a file properly, it becomes an **HTML document**.
* Both web developers and browsers follow this same set of rules (the HTML standard) so that everything works the way it should.

**🌱 HTML Versions**

* HTML has had **5 versions** so far.
* The latest version is **HTML5**, and that’s what you’ll be using in this course.

**📢 What is DOCTYPE?**

* DOCTYPE is **not an HTML tag**.
* It’s just a message at the very top of your file that tells the browser which version of HTML you're using.

**Examples:**

* For HTML5: <!DOCTYPE html> ✅
* For older HTML4: <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd"> ❌ (don’t worry about this one!)

We use **HTML5** because:

* It’s easier to use
* It handles errors better
* It supports video and audio
* It has cool new tags like <header>, <footer>, <article>, etc.

**🎯 Why learn HTML?**

* The main reason is to **tell browsers what each part of your document is**.
  + For example, how do you tell the browser “this is a title”? You use tags.
  + Want a paragraph? Use a paragraph tag.
* Learning HTML means learning how to tag things the right way so browsers can understand and display them properly.

**1.3 🛠️ How to Write HTML Code in Visual Studio Code (VSC)**

Here’s what you’ll commonly do in **Visual Studio Code**:

* Open a folder or file
* Create new folders or files
* Edit and save your code
* Rename stuff

**📦 Must-Have Extensions for VSC**

These extensions add cool features to help you code easier:

1. **Open in Browser** – lets you open your HTML file quickly in your browser
2. **Live Server** – shows your website live and reloads as you make changes
3. **Material Icon Theme** – adds icons to your files/folders
4. **Prettier** – automatically formats your code to look clean and neat
5. **Auto Rename Tag** – if you change one tag, it changes the other (e.g., opening and closing tags)
6. **CSS Peek** – lets you check what a CSS class or ID is doing right from the HTML file
7. **Indent Rainbow** – shows colorful lines to make your indentation easier to read
8. **JS JSX Snippet** – gives shortcut code for JavaScript and React (not super needed now, but helpful later)

**1.4 🔖 Basic Rules of HTML Tags**

**🧾 What do tags do?**

Tags are like **instructions** for the browser.

Example:

<h1>This is a heading</h1>

<p>This is a paragraph</p>

**📜 Rules of HTML Tags:**

1. **Tags are written inside angle brackets** like this: < >
   * Example: <p> is the start of a paragraph
2. **Most tags come in pairs**:
   * An **opening tag** like <p>
   * And a **closing tag** like </p>

Example:

<p>This is a paragraph</p>

1. **Some tags don’t need a closing tag**. These are called **non-container tags**:
   * <br> (line break)
   * <hr> (horizontal line)
   * <img> (image tag)
2. **Tags can have attributes**:
   * Attributes give extra info to the tag (like size, source, or link)

Example 1 (Image):

<img src="apple.png" width="500px" height="400px" alt="Apple's logo">

* + src, width, height, and alt are all attributes.

Example 2 (Link):

<a href="https://www.apple.com/">Apple Website</a>

1. 🧱 **The basic structure of every web page looks like this:**

<html>

<head>

<title>Title goes here</title>

</head>

<body>

<!-- Main content goes here -->

</body>

</html>

* <html>: Wraps the whole document
* <head>: Contains invisible info like the title
* <title>: Shown in the browser tab
* <body>: Where your actual content goes

**1.5 🚀 Building Your First HTML Page**

**✅ Step-by-step:**

1. **Create a folder** for your project
   * Name it something related to what you’re working on
2. **Open the folder in VSC**
   * File > Open > Folder or right-click on the folder and choose "Open in VS Code"
3. **Create a new file**
   * Save it with .html at the end (like index.html)
4. **Start with the DOCTYPE**
5. <!DOCTYPE html>
6. **Add the HTML Boilerplate**

You can do this quickly by:

* + Typing html and choosing the “html5” suggestion
  + OR pressing ! and then Enter

1. **Give your page a title**
   * Inside the <title> tag in the <head> section
2. **Start adding content in the <body>**
   * This is what shows up in the browser
   * Add text, headings, images, links, etc.

**1.6 🔣 Most Common HTML5 Tags**

**🏗️ Structure Tags**

* <html>, <head>, <body>
* <header>, <footer>
* <nav> – navigation bar
* <section> – sections of the page
* <div> – container for grouping
* <h1> to <h6> – headings
* <a> – links
* <p> – paragraph
* <br> – line break
* <hr> – horizontal line

**🧾 Metadata Tags (inside <head>)**

* <title> – title of the page
* <meta> – extra info like encoding or keywords
* <link> – links to external files like CSS
* <style> – internal CSS styles

**📝 Form Tags**

* <form> – form container
* <input> – input field
* <textarea> – large text box
* <button> – clickable button

**✍️ Formatting Tags**

* <b> – bold
* <em> – emphasized (italic)
* <small> – smaller text
* <strong> – strong importance (bold)
* <center> – center the text (not recommended in modern HTML)
* <sup> – superscript (like x²)

**📋 List Tags**

* <ul> – unordered list (bullets)
* <ol> – ordered list (numbers)
* <li> – list item

**🧠 Scripting Tag**

* <script> – used to add JavaScript

**📹 Embedded Content Tags**

* <img> – add images
* <video> – add video
* <iframe> – embed other content like maps or YouTube

**💬 Comments in HTML**

You can add comments in your code that **do not show** in the browser. These help you or other developers understand the code.

Syntax:

<!-- This is a comment -->

You can also **hide parts of your code** by commenting them out.

**📘 Final Tip:**

Want to explore more HTML tags?  
Check out this full list:  
👉 <https://www.tutorialrepublic.com/html-reference/html5-tags.php>

Go through the tags listed above and see what they do in the browser by experimenting!