Web Programming - I

Chapter 1

Prerequisites

- what HTML is used for—creating static web page content.

Reference: https://www.w3schools.com

What is HTML?

HTML is the standard markup language for creating Web pages.

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- HTML describes the structure of Web pages using markup
- The Markup tags tell the web browser **how to display** the page
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page.
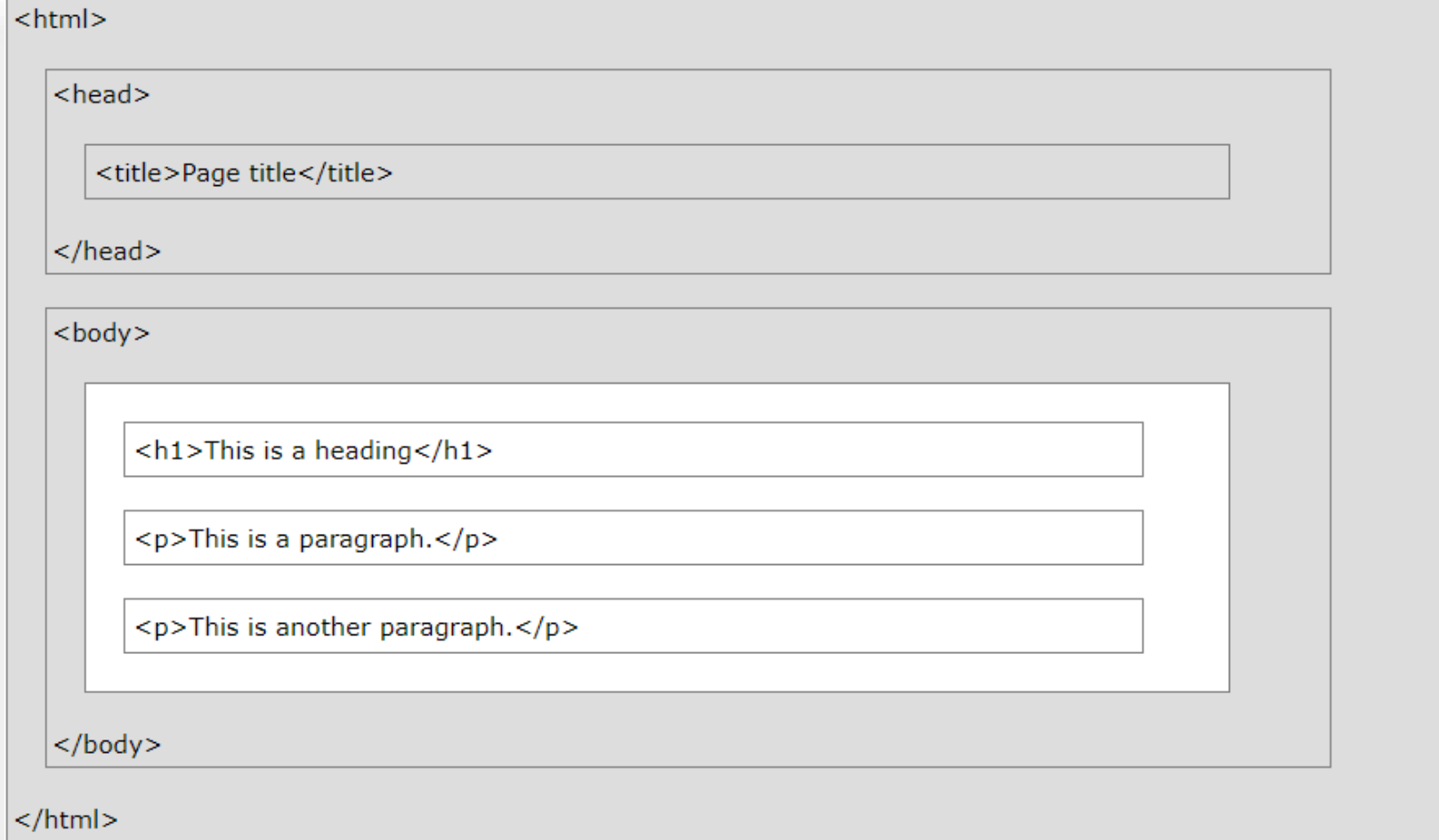- An HTML file must have an **.htm** or **.html** file extension

HTML Versions

Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML5	2014

HTML Page Structure

```
<html>

    <head>

        <title>Page title</title>

    </head>

    <body>

            <h1>This is a heading</h1>

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

            <p>This is another paragraph.</p>

    </body>

</html>
```

Introduction to HTML

Build a Web Page

Content Management Systems
- Joomla
- WordPress
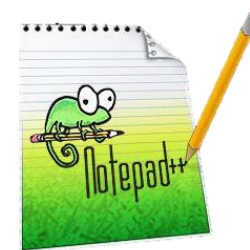- Drupal

Web designing tools
- Dreamviewer

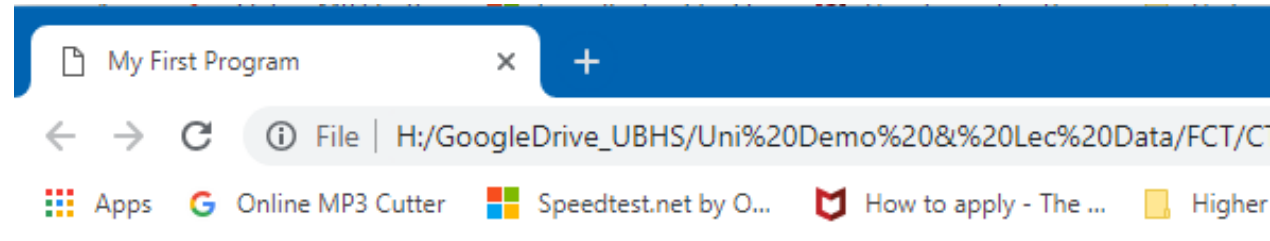Using a **simple text editor**

[NotePad, NotePad++, **Brackets**, Atoms,....]

A Simple HTML Document

```
<!DOCTYPE html>
<html>
  <head>
    <title>My First Program</title>
  </head>
  <body>
    <h1>Welcome to Web Programming!</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```


- The <!DOCTYPE html> declaration defines this document to be HTML5
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the document
- The <title> element specifies a title for the document
- The <body> element contains the visible page content
- The <h1> element defines a large heading

- The <p> element defines a paragraph
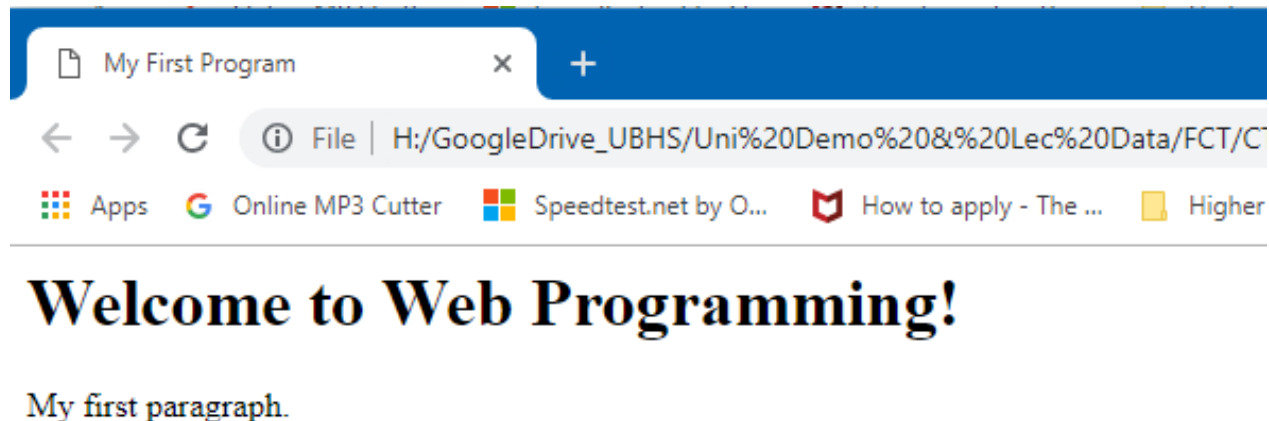
HTML Tags

- HTML tags are used to **mark-up HTML elements**

- HTML tags are surrounded by the two characters **'<'**and **'>'**

- The surrounding characters are called **angle brackets**

- HTML tags normally come in **pairs** like **<p>**and **</p>**

- The first tag in a pair is the **start tag**, the second tag is the **end tag**

- The text between the **start** and the **end** tags is the element content

- HTML tags are not case sensitive, **<P>**means the same as **<P>** (*But use lowercase tags as recommended by* ***W3C***)

<tagName> Content... **</tagName>**

Web Browser

- The purpose of a web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them.

- The browser does not display the HTML tags, but uses them to determine how to display the document:
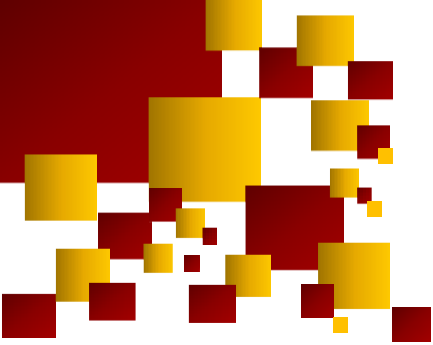
The <!DOCTYPE> Declaration

- The <!DOCTYPE> declaration represents the document type, and helps browsers to display web pages correctly.

- It must only appear once, at the top of the page (before any HTML tags).

- The <!DOCTYPE> declaration is not case sensitive.

- The <!DOCTYPE> declaration for HTML5 is:

<!DOCTYPE html>

Learning objectives

Mastery of HTML Elements and Attributes
- Differentiate between HTML elements and attributes.
- Recognize common HTML elements such as <html>, <head>, <body>, <title>, etc.
- Understand the purpose and usage of attributes like href, src, etc.

HTML Syntax
- Describe the syntax of HTML tags.
- Use proper HTML syntax for creating headings, paragraphs, links, images, and tables

Usage of Specific HTML Elements:
- Utilize header tags (<h1> to <h6>) for creating structured content.
- Create paragraphs using the <p> tag.
- Insert images with the <img> tag and appropriate attributes.
- Construct hyperlinks using the <a> tag and setting the href attribute.
- Construct tables with the <table>, <tr>, <td>, and <th> tags

Basic HTML Tags

- Headings
  <h1> Heading 1 </h1>
  <h2> Heading 2 </h2>
  <h3> Heading 3 </h3>
  <h4> Heading 4 </h4>
  <h5> Heading 5 </h5>
  <h6> Heading 6 </h6>

- Paragraph
  <p> This is a simple paragraph. </p>
  <p> This is another paragraph. </p>

- BreakLines

 use for line breaker. (This tag is empty and there is no closing tag.)
  <p> This is a simple paragraph.
  *
 This is the same paragraph after line breaker. </p>*

- Thematic Breaker
  <hr>

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

This is a simple paragraph.

This is another paragraph.

This is a simple paragraph.
This is the same paragraph after line breaker.

Introduction to HTML

HTML Attributes

- All HTML elements can have **attributes**

- Attributes provide **additional information** about an element

- Attributes are always specified in **the start tag**

- Attributes usually come in name/value pairs like: **name="value"**

- Attributes names and its values are also case-insensitive. (W3c recommends lower case attributes/attributes vales)

- Attributes values should always be enclosed in quotes.

- Double style quotes are the most common

- But single style quotes also allowed

- In rare, when the attribute value itself contains quotes, it's necessary to use single quotes:

    name = 'John "ShotGun" Nelson'

Introduction to HTML

Comments in HTML

<!--This is a comment -->

```
<h5> heading 5 </h5>
<h6> Heading 6 </h6>

<p> This is a simple paragraph. </p>
<hr><!--horizontal line also doesn't have a close tag-->
<p> This is another paragraph. </p>

<p> This is a simple paragraph.<br> This is the same para
```

Exercise 1

- Go to the unicomtic web site. (https://www.unicomtic.org/)

- Go the its source code.

- Find different tags that appears within source code.

Exercise 2

1. What is a HTML file?

2. What is the purpose of Markup tags?

3. What is an empty tag? Give some examples.

4. Write the html code to display following web page.