

IT1208 WEB TECHNOLOGIES

Fundamentals of HTML



Learning Outcomes

- Identify Front-End Development and Back-End Development
- Define HTML
- Identify elements of HTML tags
- Use HTML to create web page

Web Development

- Web programming, also known as web development, is the creation of dynamic web applications.
- Examples of web applications are social networking sites like Facebook or e-commerce sites like Amazon, etc.
- There are two broad divisions of web development.
 1. Front-end development (client-side development)
 2. Back-end development (server-side development)

Web Development

Front-end development (client-side development)

- Front end is what we see when we open a web page or app.
- The front end is built out of three languages: HTML, CSS, and JavaScript.

HTML	Allow to put content on webpage: text, headers, images, buttons, links, and etc.
CSS	Used to style the webpage. It allows the contents to have different text colors, background colors, as well as dealing with the positioning of the content on the page.
JavaScript	Makes webpage dynamic. It allows for the content to change on a mouse hover or click and also lets us submit data and have data rendered on our page (such as submitting a new blog post or having your feed populated when you open Facebook).

Web Development

Back-end development (server-side development)

- The back end is the place we don't see as users.
- This consists of data storage (databases) and servers running to provide data for the front end.
- Back-end scripts are written in many different coding languages and frameworks, such as
 - PHP, Ruby on Rails, ASP.NET, Perl, Java, Node.js, Python

Fundamentals of HTML

What is HTML?

- HTML stands for Hyper Text Markup Language used to generate web document.
- HTML was created as a language when the first visual web browsers came into existence in the early 90s.
- It is read by the browser and then used as a blueprint for displaying information on your screen.
- **HTML file must have an .htm or .html file extension.**
- HTML files can be created with
 - **Text editors:** NotePad, NotePad ++, PSPad
 - **HTML editors (WYSIWYG Editors):** Microsoft FrontPage, Adobe Dreamweaver
- HTML is not considered a “programming language”, but is rather what we call a “markup language”.

Fundamentals of HTML

HTML Elements

- Consist of three parts
 - Begin tag, which can contain attributes
 - Contents
 - End tag

- Example:

```
<p id="intro">Welcome</p>
```

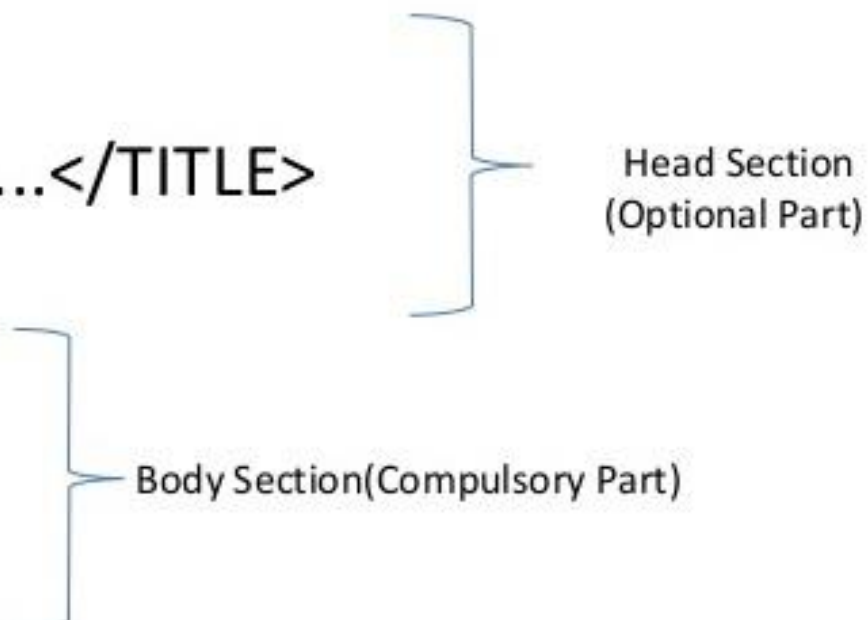
Fundamentals of HTML

HTML Tags

- Markup language is consists of Markup Tags.
- HTML tags are keywords (tag names) surrounded by angle brackets like <html>
- HTML tags normally come in pairs like **<html>** and **</html>**
- The first tag in a pair is the **start tag (opening tag)**, the second tag is the **end tag (closing tag)**
- The end tag is written like the start tag, with a forward slash before the tag name.
- HTML tags are not case sensitive.

HTML Structure

```
<HTML>
  <HEAD>
    <TITLE> .....</TITLE>
  </HEAD>
  <BODY>....
  ....
  </BODY>
</HTML>
```



The diagram illustrates the structure of an HTML document. It shows the following elements and their groupings:

- Head Section (Optional Part):** This section is indicated by a right-facing curly bracket on the right side of the diagram. It encompasses the `<HEAD>` tag, the `<TITLE></TITLE>` tag, and the `</HEAD>` tag.
- Body Section (Compulsory Part):** This section is indicated by a right-facing curly bracket on the right side of the diagram. It encompasses the `<BODY>....` tag, the `....` text, and the `</BODY>` tag.

The entire structure is enclosed within the `<HTML>` and `</HTML>` tags.

HTML Structure

HTML: Describe to browser that this file contains HTML code.

HEAD: First part in HTML document code. Consist of a title

TITLE: This title will be display in windows browser, bookmark, and search engine such as Yahoo! and Google.

BODY: Second part in HTML code document. Consists of site contents.

The text between `<body>` and `</body>` is the visible page content

How to Start

- Write html code in text editor
Ex: notepad, notepad++
- Save the file with (.html)/(.htm) extension.
Ex: practical.html
- View the page in any web browser
Ex: chrome, Firefox, internet explorer

Fundamentals of HTML

HTML Attributes

- Always only used in the element begin tag.
- Three types
 - **Optional attributes:** Varies with element type
 - **Standard attributes:** id, class, title, style, dir, lang, xml:lang
 - **Event attributes:** onclick, ondblclick, onmousedown, onmouseup, onmouseover, onmousemove, onmouseout, onkeypress, onkeydown, onkeyup (used in scripting)

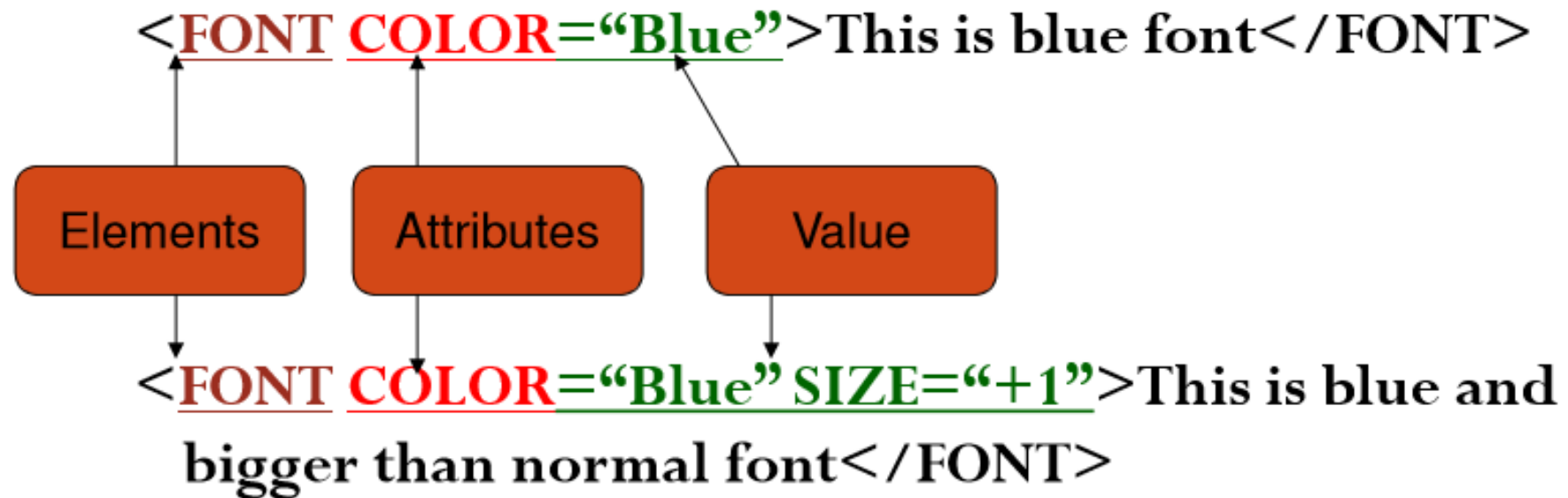
Fundamentals of HTML

Empty Elements

- Some elements have no content and therefore also have no end tag
 - ``
 - `
`
 - `<hr />`
 - `<link rel="stylesheet" type="text/css" href="main.css" />`
- In XHTML, which requires end tags on all elements, a single tag represents both the begin and end tag

Fundamentals of HTML

Tags contains Elements, attribute and value:



Heading Tags

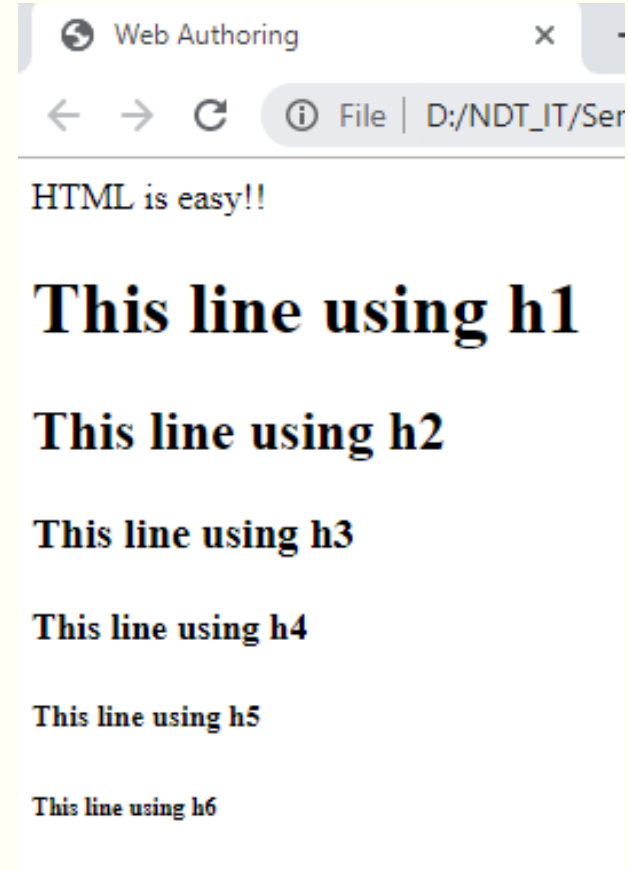
- There are six heading elements
- `<H1>`,`<H2>`,`<H3>`,`<H4>`, `<H5>`,`<H6>`.
- All the six heading elements are container tag and requires a closing tag.
- `<h1>` will print the largest heading
- `<h6>` will print the smallest heading

Heading Tags

EXAMPLE:

```
<html>
  <head>
    <title>Web Authoring</title>
  </head>

  <body>
    <p>HTML is easy!!</p>
    <h1>This line using h1</h1>
    <h2>This line using h2</h2>
    <h3>This line using h3</h3>
    <h4>This line using h4</h4>
    <h5>This line using h5</h5>
    <h6>This line using h6</h6>
  </body>
</html>
```



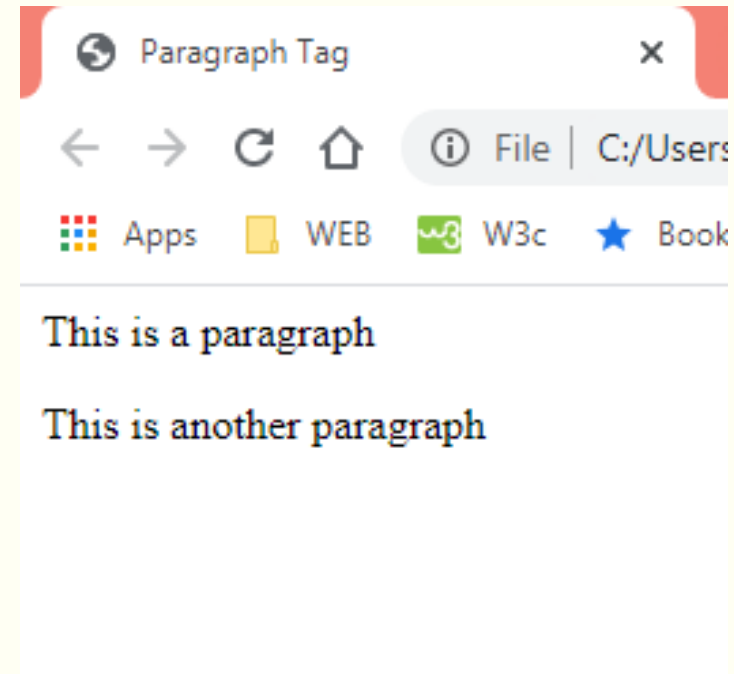
Paragraph Tags

- HTML documents are divided into paragraphs.
- Paragraphs are defined with the <p> tag.

```
<html>
<head>
  <title>Paragraph Tag</title>
</head>
<body>

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

</body>
</html>
```



Line Break & Horizontal Line Tag

Line Break

- If you want a line break or a new line without starting a new paragraph Use the `
` tag.

Horizontal Line Tag

- Defines a horizontal line use `<hr/>` tag.
- `
` `<hr/>` element are empty HTML element.

Text Formatting Tags

Formatting elements were designed to display special types of text:

- `` - Bold text
- `` - Important text
- `<i>` - Italic text
- `` - Emphasized text
- `<mark>` - highlight the text
- `<small>` - Small text
- `` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
- `<sup>` - Superscript text

Text Formatting Tags

```
<html>
<head>
  <title>Text Formating</title>
</head>
<body>
  <b>This text is Bold</b>
  <br/><em>This text is Emphasized</em>
  <br/><i>This text is Italic</i>
  <br/><small>This text is Small</small>
  <br/>This is<sub> Subscript</sub> and
  <br/>Superscript</sup>
  <br/><strong>This text is Strong</strong>
  <br/><big>This text is Big</big>
  <br/><u>This text is Underline</u>
  <br/><strike>This text is Strike</strike>
  <br/><tt>This text is Teletype</tt>
</body>
</html>
```

This text is Bold

This text is Emphasized

This text is Italic

This text is Small

This is _{Subscript} and ^{Superscript}

This text is Strong

This text is Big

This text is Underline

~~This text is Strike~~

This text is Teletype

Font Tag

- Font combinations determine how a browser displays text in your web page. A browser uses the first font in the combination that is installed on the user's system; if none of the fonts in the combination are installed, the browser displays the text as specified by the user's browser preferences.
- This element is used to format the size, typeface and color of the enclosed text.
- The commonly used fonts for web pages are Arial, Comic Sans MS , Lucida Sans Unicode, Arial Black, Courier New, Times New Roman, Arial Narrow, Impact, Verdana.
- The size attribute in font tag takes values from 1 to 7.
- Example:

` This is Arial, Tahoma, and Lucida Sans font `

Font Tag

```
<html>
<head>
  <title>Font Tag</title>
</head>
<body>
  <p><font face="Arial">This is used Arial font face</font></p>
  <font color="#cc6699">I don't know what color it is</font color>
</body>
</html>
```

This is used Arial font face

I don't know what color it is

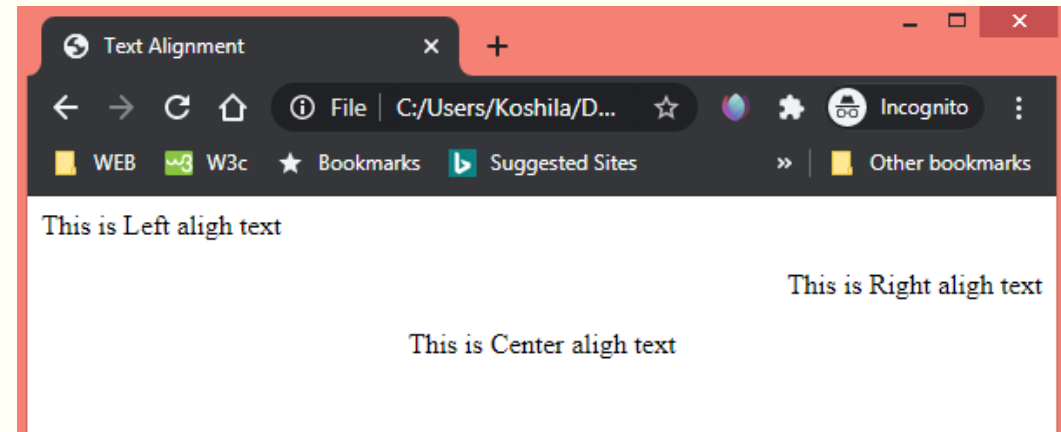
Text Alignment

- It is use to alignment of the text.
 - Left alignment <align="left">
 - Right alignment <align="right">
 - Center alignment <align="center">

```
<html>
<head>
  <title>Text Alignment</title>
</head>
<body>

  <p align="left">This is Left align text</p>
  <p align="right">This is Right align text</p>
  <p align="center">This is Center align text</p>

</body>
</html>
```



HTML Colors

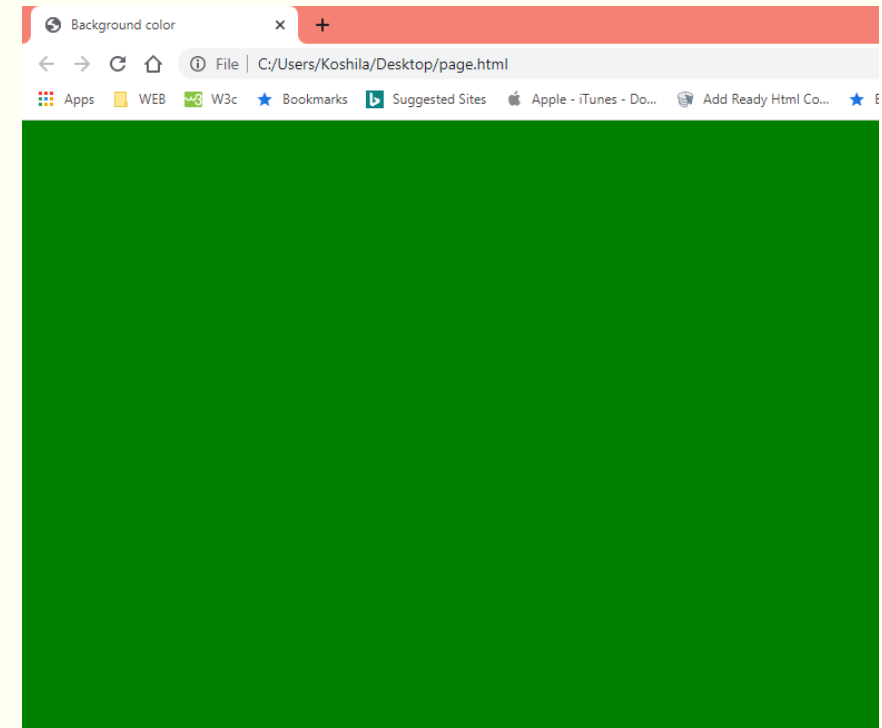
Body Background color

- The attribute bgcolor is used for changing the back ground color of the page.

<body bgcolor="Green" >

```
<html>
<head>
    <title>Background color</title>
</head>
<body bgcolor="green">






</body>
</html>
```



HTML Colors

- HTML Color Code Builder :
- <http://html-color-code>

Example

Color	Name
	Red
	Orange
	Yellow
	Cyan
	Blue

- RGB Value
 - In HTML, a color can also be specified as an RGB value, using this formula: RGB(red, green, blue)
 - Each parameter (red, green, and blue) defines the intensity of the color between 0 and 255.

HTML Comments

- Comments can be inserted into HTML code to make it more readable and understandable.
- Comments are ignored by the browser and they are not displayed.
- Comments are written like below:

`<!-- This is a comment -- >`

HTML Links

- Links are found in nearly all web pages. Links allow users to click their way from page to page. HTML links are hyperlinks.
- When you move the mouse over a link, the mouse arrow will turn into a little hand.
- A hyperlink is a reference (an address) to a resource on the web.
- Hyperlinks can point to any resource on the web: HTML page, an image, a sound file, a movie, etc.
- The HTML anchor element `<a>`, is used to define both hyperlinks and anchors.
- The href attribute defines the link address.

`Link text`

- Example:

` This is a link`

HTML Links

HTML Links target Attribute

- **target** attribute specifies where to open the linked document.
- The target attribute can have one of the following values:
 - `_self` - Default. Opens the document in the same window/tab as it was clicked
 - `_blank` - Opens the document in a new window or tab
 - `_parent` - Opens the document in the parent frame
 - `_top` - Opens the document in the full body of the window
- Example:

```
<a href="https://www.w3schools.com/" target="_blank">Visit W3Schools!</a>
```

HTML Links

```
<html>
<body>

<h2>The target Attribute</h2>

<a href="https://www.w3schools.com/" target="_blank">Visit W3Schools!</a>

</body>
</html>
```

The target Attribute

[Visit W3Schools!](https://www.w3schools.com/)

HTML Links

Linking to Email Addresses

The following anchor tag creates a mail link:

```
<a href="mailto:username@domainname">Email user</a>
```

HTML Images

- HTML images are defined with the tag.

- **Syntax:**

- Attributes of Image tag :

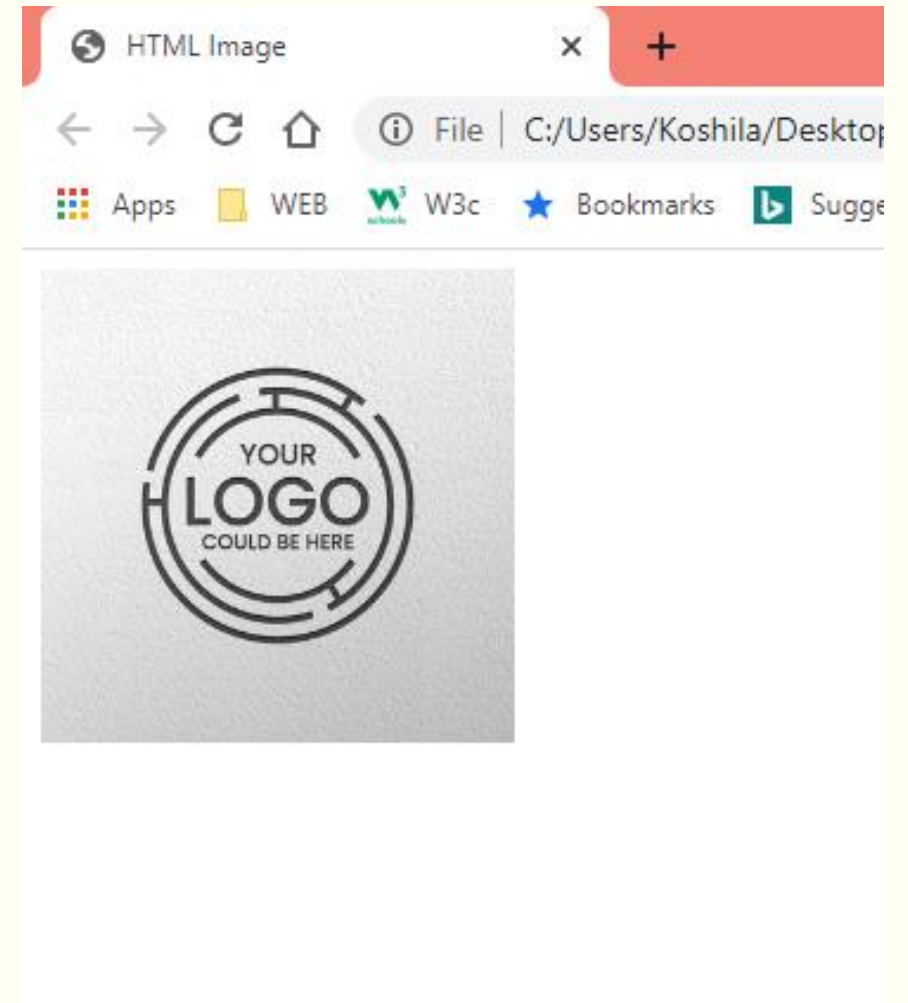
Height	Defines the height of the image
Width	Defines the width of the image
Title	title of the image
Border	Defines border of the image
Alt	Define "alternate text" for an image (Alt="name")

HTML Images

```
<html>
<head>
  <title>HTML Image</title>
</head>
<body>



</body>
</html>
```





THANK YOU

ANY Questions
