
SmartCliff
CAREER MOBILITY SOLUTIONS
We are on a mission to address the digital skills gap for 10 Million+ young professionals, train and empower them to forge a career path into future tech

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Hypertext Markup Language (HTML)

JUNE, 2023

Web Page

- A **Web page** is a document commonly written in **HTML** (Hypertext Markup Language) that can be displayed in all **Internet browsers**
- It is accessed by entering a **URL address** and may contain **text, graphics, and hyperlinks to other web pages and files**
- Web pages can be either **static or dynamic**
- **Static pages** show the same content each time they are viewed.
- **Dynamic pages** provides custom content based on the results of a search or request.

Webserver

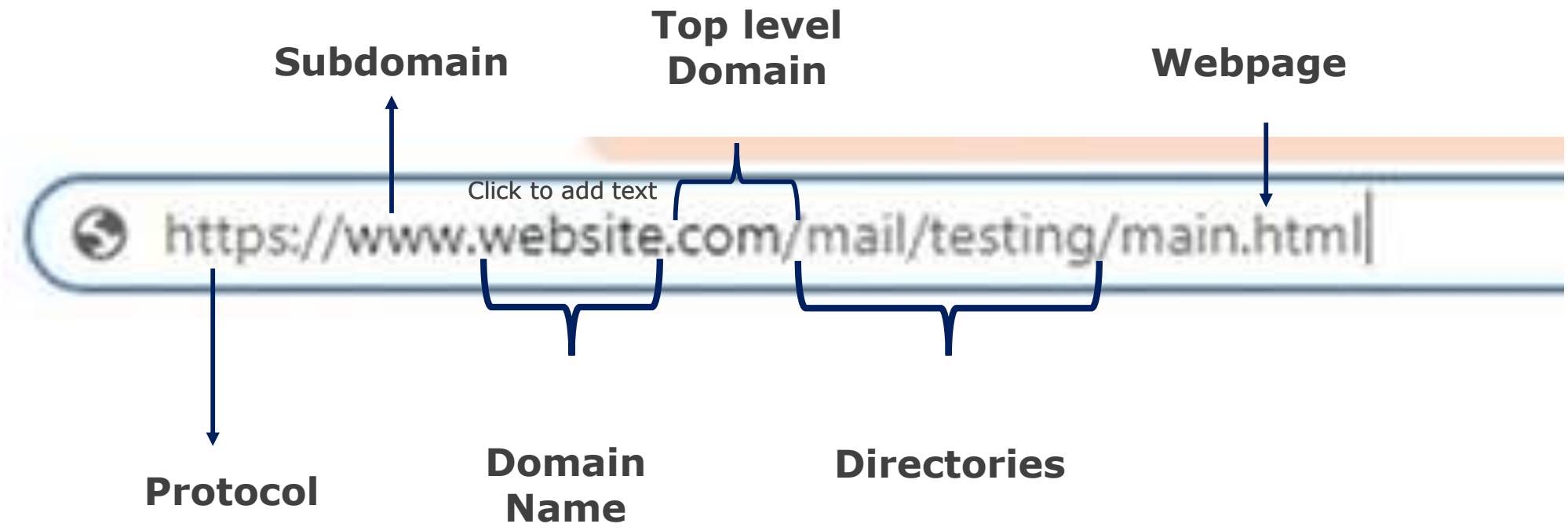
- A **Computer or a system that hosts a website** on to the internet
- **Hosting** means that all the web pages and their supporting files are available on that computer
- The **Web server** helps to send any web page from the website.
- Without a Webserver, a website **cannot be viewed globally**.

WebSite vs. Web Application

Website	Web Application
A collection of multiple web pages that are grouped together and connected in various ways often called a "web site" or a "site“.	Web Application or Web App - is a kind of software application that can be accessed over the internet using Browser.
A website is a collection of linked web pages that share a unique domain name	Sometimes the Web App require Authentication to access the functionality
Each web page of a website provides have explicit links that allows the user to move from one page to other.	It combines server-side code (backend) and client-side script (Frontend)to make a Web Application.
Example: Amazon, Youtube, Blogs, etc.	Example: Google Apps

Access Web App Globally = Frontend script + Backend code + Web Server + Domain

URL


Subdomain
Top level Domain
Webpage
Click to add text
https://www.website.com/mail/testing/main.html
Protocol
Domain Name
Directories

Markup Language

- A **Markup language** is a computer **language** that uses tags to define elements within a document.
- It is human-readable, meaning **Markup** files contain standard words, rather than typical programming syntax.
- The **language** specifies code for formatting, both the layout and style, within a text file. The code used to specify the formatting are called tags.
- HTML and XML (eXtensible Markup Language) is an example of a widely known and used **Markup languages**.

Introduction to HTML

- HTML was built on the Standard Generalized Markup Language (SGML)
- It includes all of the functionality of previous HTML versions.
- HTML is language used to describe the structure of a document
- HTML5 is the newest version of HTML
- HTML and XML (eXtensible Markup Language) is a an example of a widely known and used **Markup languages**.

HTML TAGS

HTML Vs CSS Vs JavaScript

HTML (Structure)

HTML + CSS (Presentation)

HTML + CSS + JavaScript (Functionality)

Why learn HTML?

- Every webpage you look at is written in a language called **HTML.**
- You can think of **HTML as the skeleton** that gives every **webpage structure.**
- **Web browsers** can read HTML files and render them into visible or audible web pages.
- **Browsers do not display the HTML tags and scripts**, but use them to interpret the content of the page.

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HTML Basics

First HTML Page

- The essence of HTML programming is **tags**
- A tag is a **keyword** enclosed by **angle brackets** (Example: <…..>)
- There are **opening and closing tags** for many but
- **few tags do not have closing tag**.
- The text appearing on the web page is between the two tags
- A tag is also named as **element**
- All Web pages share a **common structure**
- Tags are **not case-sensitive**

First HTML Page

- An HTML file must have an **.htm** or **.html** file extension
- HTML files can be created with **text editors**:

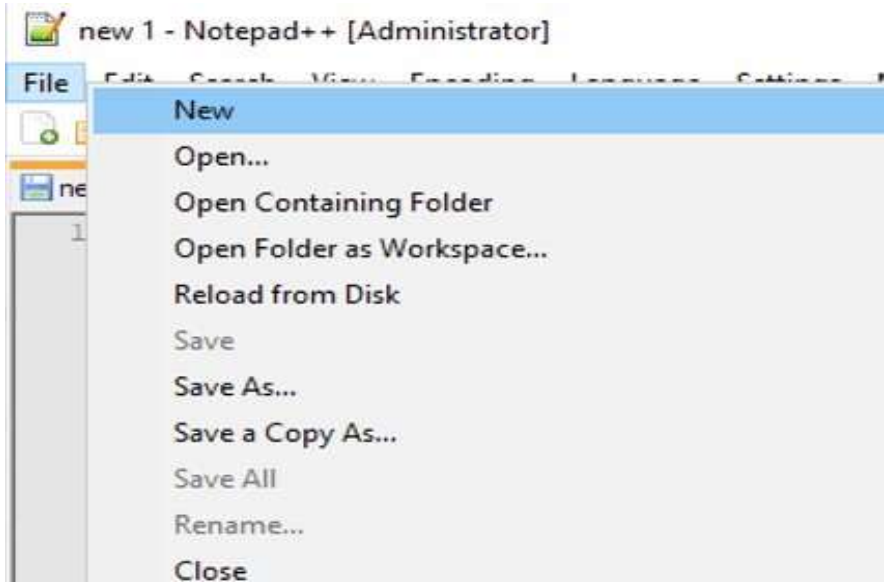
  - NotePad, NotePad ++, PSPad, etc.,

- Or HTML editors (**WYSIWYG** (What You See Is What You Get) Editors):
- Macromedia Dreamweaver
- Visual Studio Code, Etc.,

First HTML Page

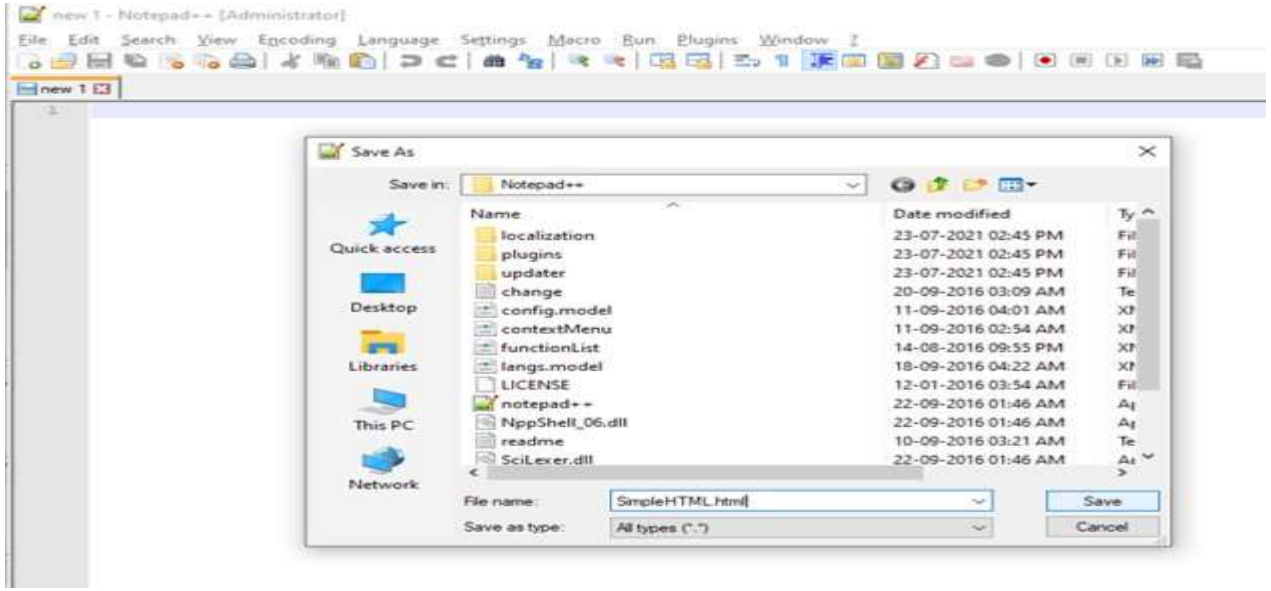
Step 1: Open any text editor like Notepad, Notepad++, Wordpad, etc.,

Step 2:



First HTML Page

Step 3: Create HTML file, For example SimpleHTML.html



First HTML Page

Step 4: Type the below contents in the text editor

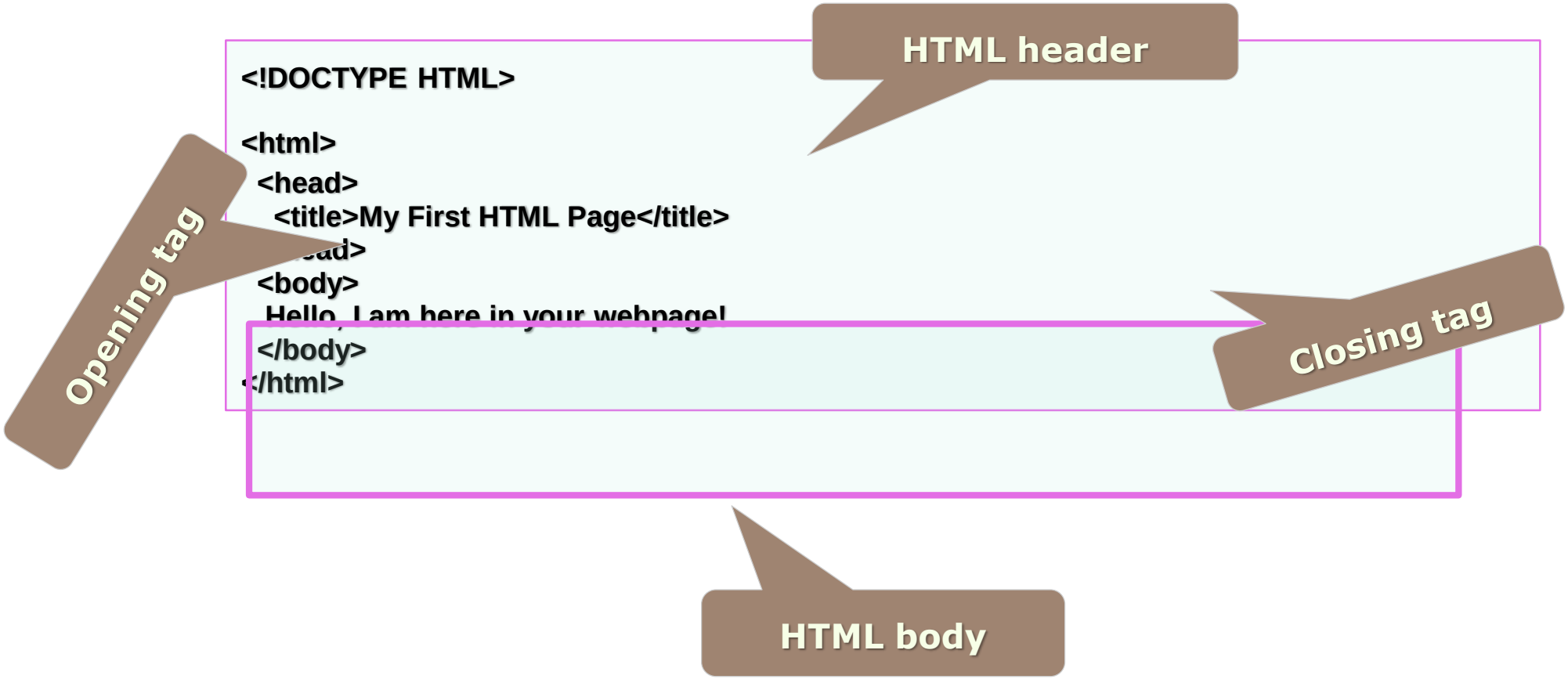
```
<!DOCTYPE html>
<html>
<head>
<title>My First Simple HTML Page</title>
</head>
<body>
Hello, I am here in your webpage!
</body>
</html>
```

First HTML Page

Step 5: Save it

Step 6: Launch or run your html file using any browser like Google Chrome, your page should look like this

First HTML Page



First HTML Page: <!DOCTYPE>

- The **<!DOCTYPE>** declaration must be the very first thing in your HTML document, before the <html> tag.
- The **<!DOCTYPE>** declaration is **not an HTML tag**; it is an **instruction** to the web browser about what **version of HTML** the page is written in.
- **HTML 4.01/XHTML**
- -<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" http://www.w3.org/TR/xhtml1/ DTD/xhtml1-strict.dtd">
- -The DTD specifies the rules for the markup language, so that the browsers render the content correctly.
- **HTML 5**
- - <!DOCTYPE html>

First HTML Page: <html>

- The <html> tag tells the browser that this is an HTML document.
- The <html> tag represents the **root of an HTML document**.
- The <html> tag is the **container for all other HTML elements** (except for the <!DOCTYPE> tag).

First HTML Page: <head>

- The <head> element is a **container for all the head elements**.
- The <head> element can include a title for the document, scripts, styles, meta information, and more.
- The following elements can go inside the <head> element:
  - <title> (this element is required in an HTML document)
  - <style>
  - <base>
  - <link>
  - <meta>
  - <script>
  - <noscript>

First HTML Page: <title>

- The <title> tag is **required in all HTML documents** and it defines the title of the document.

The <title> element:

- defines a title in the browser toolbar
- provides a title for the page when it is added to favourites
- displays a title for the page in search-engine results

First HTML Page: <body>

- The <body> tag defines the **document's body**.
- The <body> element contains all the contents of an HTML document, such as **text, hyperlinks, images, tables, lists,** etc.

HTML Code Formatting

- The HTML source code should be formatted to **increase readability and facilitate debugging.**
- Every block element should **start on a new line**.
- Every nested (block) element should be **indented**.
- Browsers ignore multiple whitespaces in the page source, so **formatting is harmless**.
- For performance reasons, **formatting can be sacrificed.**

HTML Display

- Large or small screens, and resized windows will **create different results**.
- With HTML, you **cannot change the output** by adding **extra spaces** or **extra lines** in your HTML code.
- The browser will **remove extra spaces** and **extra lines** when the page is displayed.
- Any number of spaces, and any number of new lines, count as **only one space**.

HTML Display

- Every HTML element has a default display value depending on what type of element it is.
- The default display value for most elements is **block** or **inline**.

Block-level Elements

- A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).
- **Examples:**

–

– <h1> - <h6>

– <p>

– <form>

– Etc.,

HTML Display

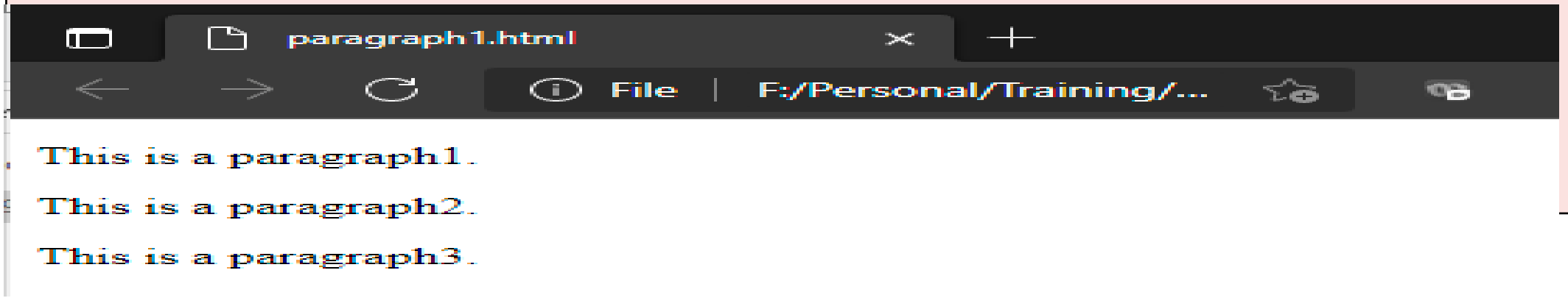
Inline Elements

- An inline element **does not start on a new line** and only **takes up as much width as necessary.**
- **Examples:**
  -
  - <a>
  - <img>
  - Etc.,

Basic HTML Tag: <p>

- HTML documents are **divided into paragraphs**.
- Browsers automatically add an **empty line** before and after a paragraph.

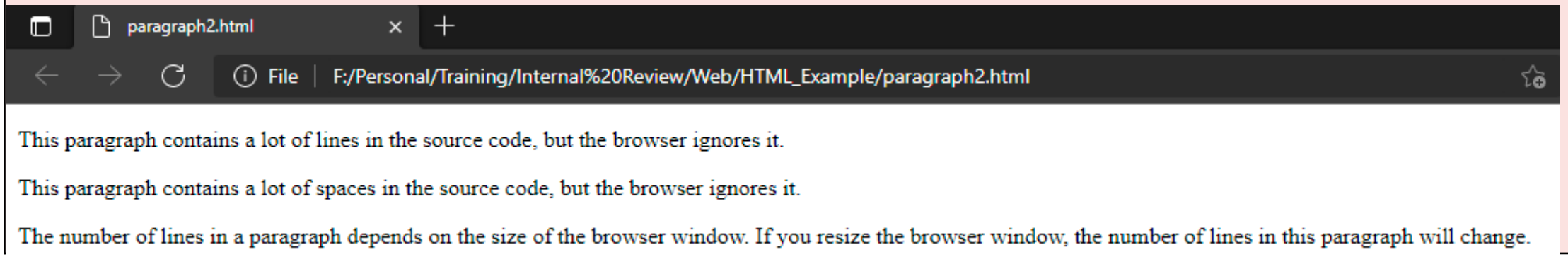
```
<!DOCTYPE html>
<html>
<body>
<p>This is a paragraph1.</p>
<p>This is a paragraph2.</p>
<p>This is a paragraph3.</p>
</body>
</html>
```



Basic HTML Tag: <p>

```
<p>
This paragraph
contains a lot of lines
in the source code,
but the browser
ignores it.
</p>
<p>
The number of lines in a paragraph depends on the size of the browser window. If you resize the browser window, the number of lines in this paragraph will change.
</p>
```

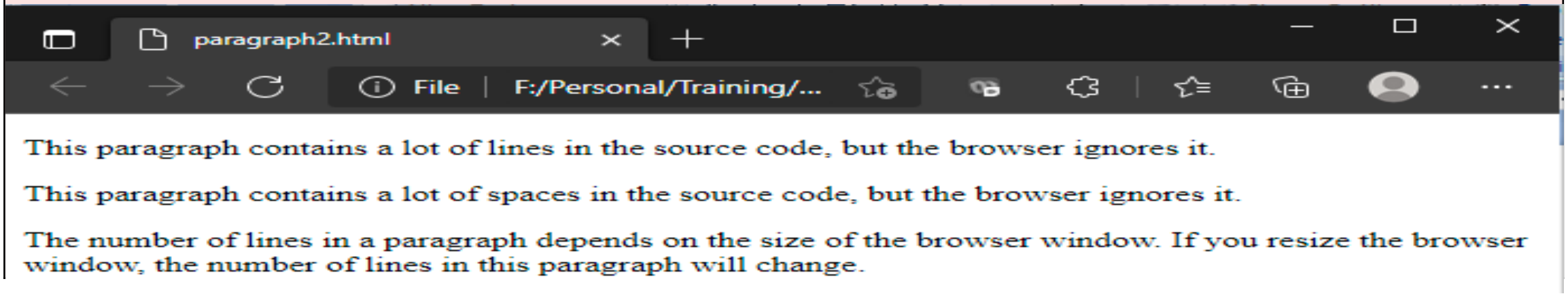
Before resize the Browser Window



Basic HTML Tag: <p>

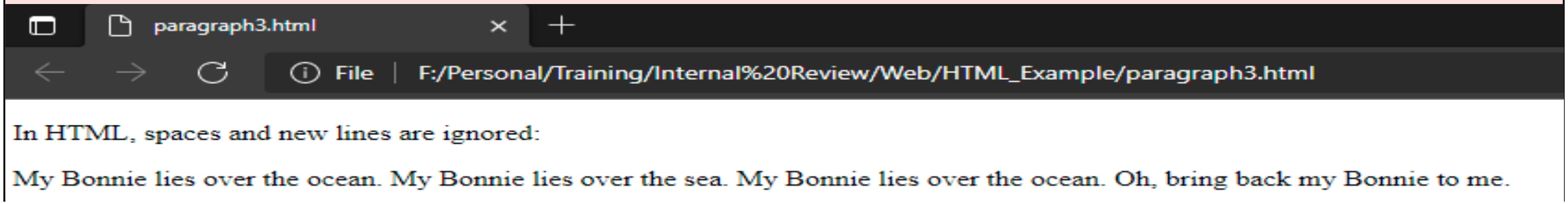
```
<p>
This paragraph
contains a lot of lines
in the source code,
but the browser
ignores it.
</p>
<p>
The number of lines in a paragraph depends on the size of the browser window. If you resize the browser window, the number of lines in this paragraph will change.
</p>
```

After resize the Browser Window



Basic HTML Tag: <p>

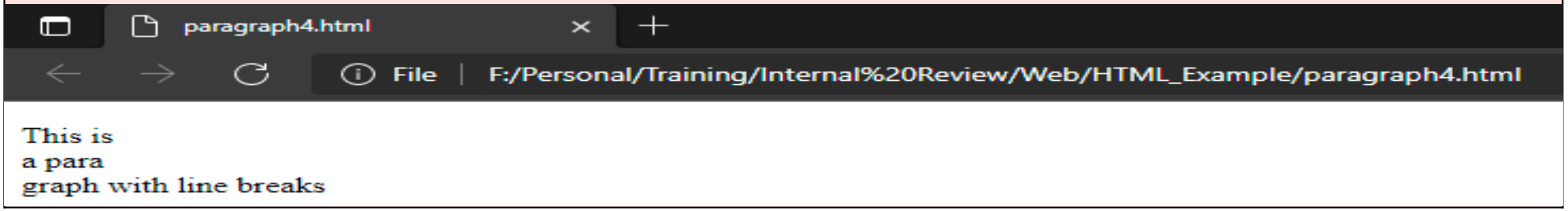
```
<p>In HTML, spaces and new lines are ignored:</p>
<p>

 My Bonnie lies over the ocean.

 My Bonnie lies over the sea.

 My Bonnie lies over the ocean.

 Oh, bring back my Bonnie to me.

</p>
```



Basic HTML Tag:

- The
 tag inserts a **single line break**.
- The
 tag is an **empty tag** which means that it has **no end tag**.

```
<!DOCTYPE html>
<html>
<body>
<p>This is<br>a para<br>graph with line breaks</p>
</body>
</html>
```

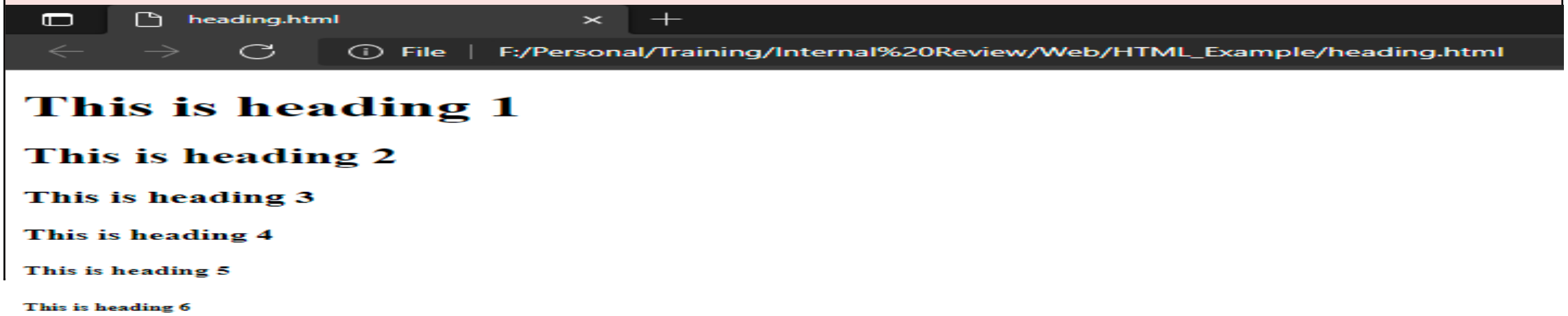


Basic HTML Tag: <h1> to <h6>

- The <h1> to <h6> tags are used to define **HTML headings.**

  <h1> defines the **most important heading**. <h6> defines the **least important heading.**

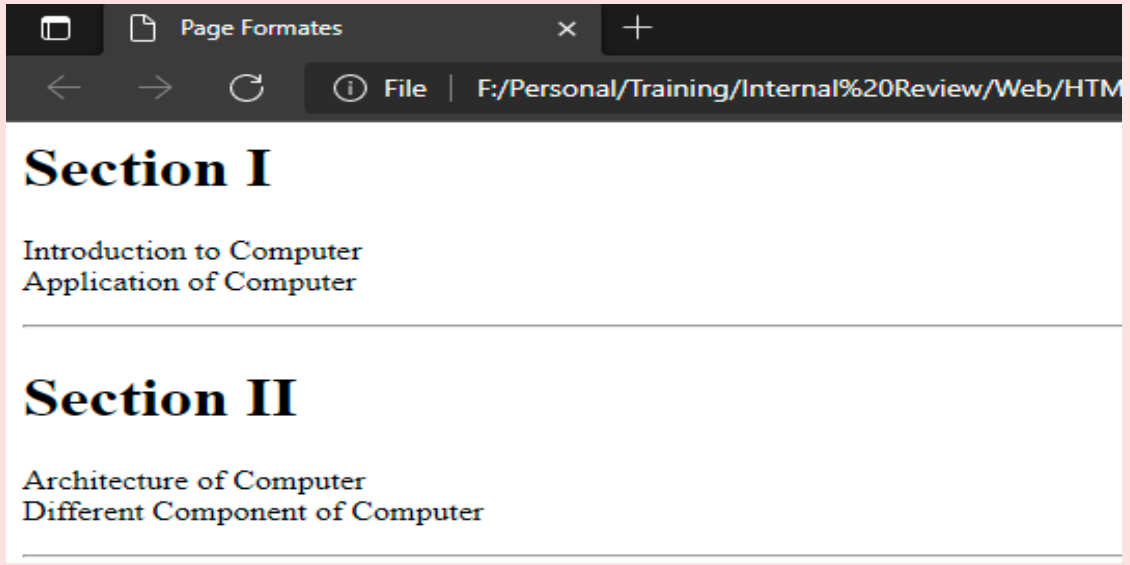
```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<h5>This is heading 5</h5>
<h6>This is heading 6</h6>
```



Basic HTML Tag: <hr>

- The **<hr> tag** is used to break the **page into various parts**, creating **horizontal margins** with help of a horizontal line running from left to right hand side of the page.
- This is also an **empty tag** which means that it has **no end tag.**

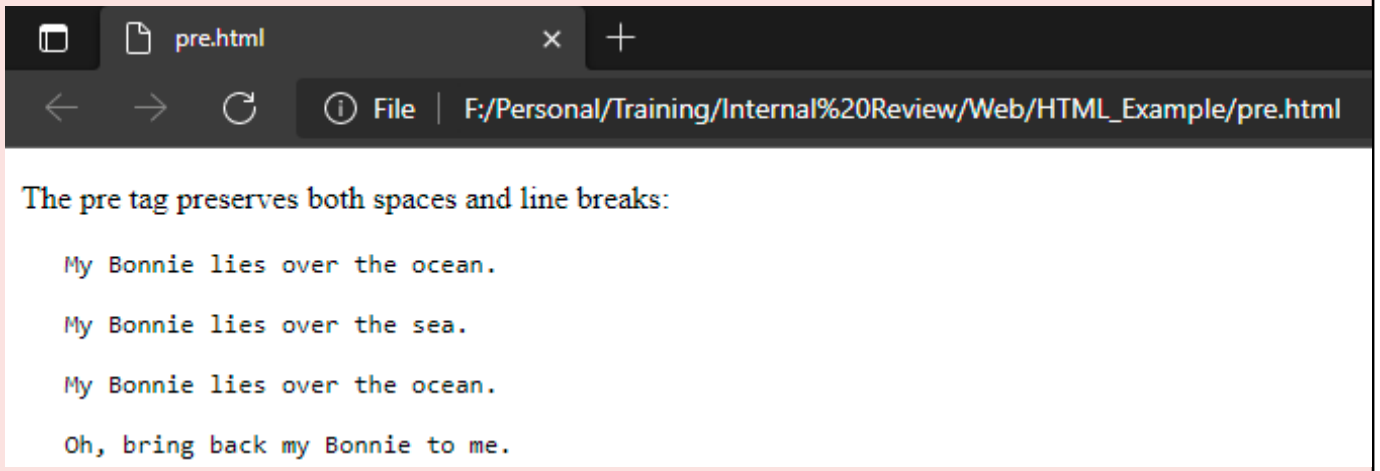
```
<h1>Section I</h1>
<p>
    Introduction to Computer<br>
    Application of Computer<br>
</p>
<hr>
<h1>Section II</h1>
<p>
    Architecture of Computer<br>
    Different Component of Computer<br>
</p>
<hr>
```



Basic HTML Tag: <pre>

- The <pre> tag defines **preformatted text**.
- Text in a <pre> element is displayed in a fixed-width font (usually Courier), and it **preserves both spaces and line breaks**.

```
<p>The pre tag preserves both spaces and line breaks:</p>
<pre>
   My Bonnie lies over the ocean.

   My Bonnie lies over the sea.

   My Bonnie lies over the ocean.

   Oh, bring back my Bonnie to me.
</pre>
```



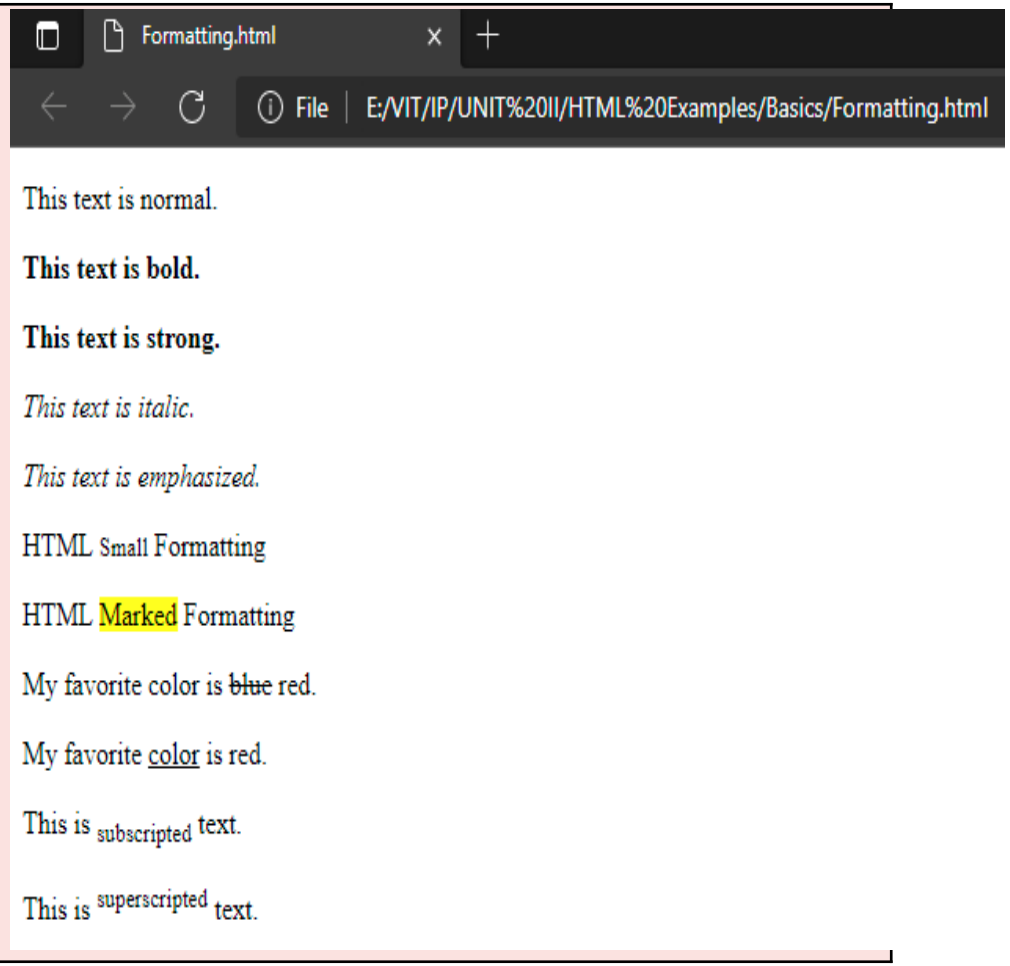
HTML Formatting Elements

- **Formatting elements** were designed to display **special types of text**:
  - Bold text …
  - Important text …

    Italic text …
  - Emphasized text…
  - Marked text <mark>…</mark>
  - Small text <small>…</small>
  - Deleted text ~~…~~
  - Inserted text <ins>…</ins>
  - Subscripts _…
  - Superscripts […]

HTML Formatting Elements

```
<p>This text is normal.</p>
<p><b>This text is bold.</b></p>
<p><strong>This text is strong.</strong></p>
<p><i>This text is italic.</i></p>
<p><em>This text is emphasized.</em></p>
<p>HTML <small>Small</small> Formatting</p>
<p>HTML <mark>Marked</mark> Formatting</p>
<p>My favorite color is <del>blue</del> red.</p>
<p>My favorite <ins>color</ins> is red.</p>
<p>This is <sub>subscripted</sub> text.</p>
<p>This is <sup>superscripted</sup> text.</p>
```



HTML Formatting Elements

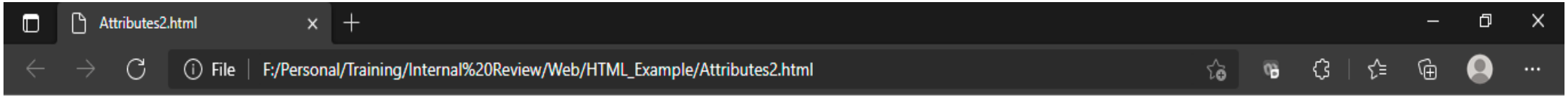
- Browsers display as <b>, and as <i>.
- However, there is a **difference** in the **meaning of these tags**:
- <b> and <i> defines **bold and italic text**
- and means that the text is **"important".**

HTML Attributes

- HTML elements can contain **multiple attributes**
- Attributes have **added information** about tags
- Attributes are **embedded** with the starting tag
- Attributes have **name/value pairs** (name="value“)

HTML Attributes

```
<p style="text-align: right">My First Paragraph with style attribute.</p>

<p class="leftAlignStyle">My Second Paragraph with class attribute.</p>

<p id="firstLeftAlign">My Third Paragraph with id attribute.</p>

<p style=text-align:center>My Paragraph aligned center.</p>
```



My First Paragraph with style attribute.

My Second Paragraph with class attribute.

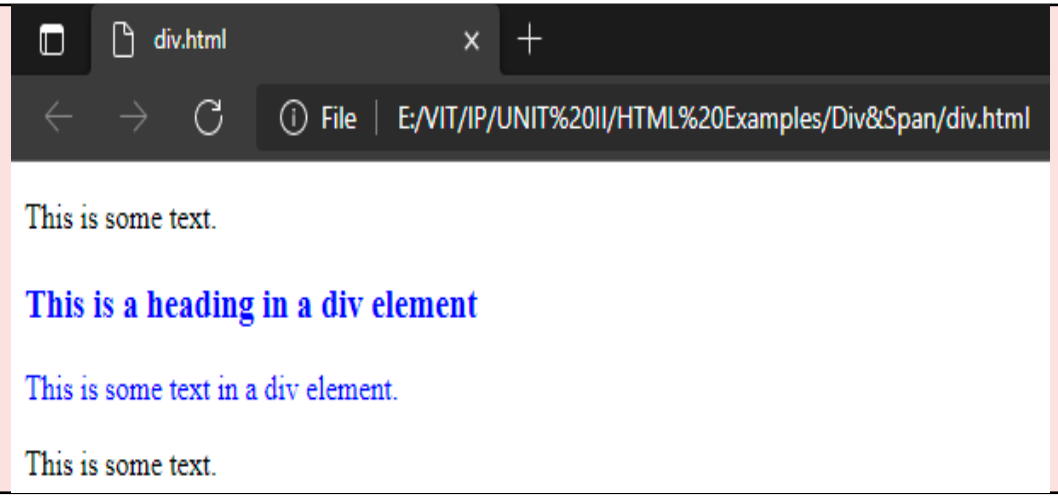
My Third Paragraph with id attribute.

My Paragraph aligned center.

Basic HTML Tag:

- The element is a **block-level element** that is often used as a **container for other HTML elements**.
- The element has **no required attributes**, but **style and class are common**.
- When used together with CSS, the element can be used to **style blocks of content.**

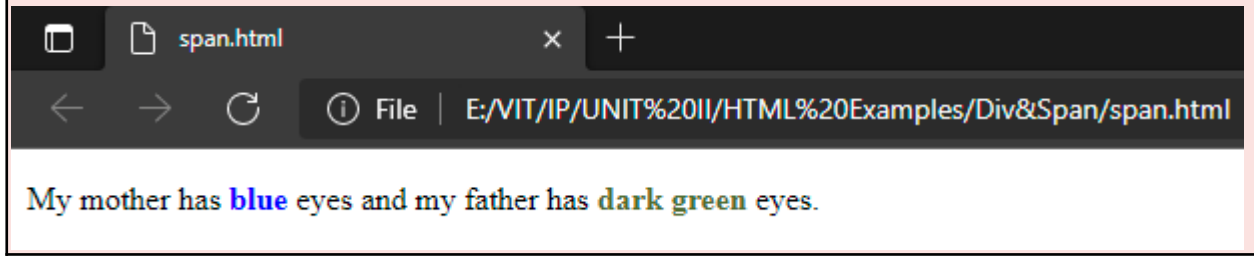
```
<p>This is some text.</p>
<div style="color:#0000FF">
  <h3>This is a heading in a div element</h3>
  <p>This is some text in a div element.</p>
</div>
<p>This is some text.</p>
```



Basic HTML Tag:

- The element is an **inline element** that is often used as a **container for some text.**
- The element has **no required attributes**, but **style and class are common**.
- When used together with CSS, the element **can be used to style parts of the text.**

```
<p>My mother has <span style="color:blue;font-weight:bold">blue</span> eyes and my father has <span
style="color:darkolivegreen;font-weight:bold">dark green</span> eyes.</p>
```



Basic HTML Tag: <a>

- HTML links are **hyperlinks**.
- An **anchor tag** is a HTML element that creates a link to a target URL.
- A hyperlink is a **text or an image** you can click on, and jump to another document.

Example: link text

- The href attribute specifies the **destination address**
  - **Internal Link**: Address location may be **absolute / relative**
  - **External Link**: Website URL

Basic HTML Tag: <a>

When you move the **mouse over a link**, two things will normally happen:

- The mouse arrow will turn into a little hand
- The color of the link element will change

By default, a link will appear like this (in all browsers):

- An **unvisited** link is underlined and **blue**
- A **visited** link is underlined and **purple**
- An **active** link is underlined and **red**

```
<p> External Link:</p>

<p>Learn HTML : <a href="http://www.w3schools.com" >Visit W3Schools!</a></p>

<p> Internal Link:</p>

<a href="information_about_the_planet_venus.txt">About planet venus!</a>
```

Basic HTML Tag: <a>

The **target attribute** specifies where to open the linked document.

_**blank:** Opens the linked document in a new window or tab

_**self**: Opens the linked document in the same frame as it was clicked (this is default)

_**parent:** Opens the linked document in the parent frame

_**top:** Opens the linked document in the full body of the window

```
<p>Open link in a new window or tab: <a href="http://www.w3schools.com" target="_self" >Visit W3Schools!</a></p>
```

Basic HTML Tag: <a>

Create Bookmarks

- HTML bookmarks are used to allow readers to **jump to specific parts** of a Web page.
- Bookmarks are practical if your website has long pages.
- To make a bookmark, you must first create the bookmark, and then add a link to it.
- When the link is clicked, the page will scroll to the location with the bookmark.

```
<!DOCTYPE html>
<html>
<head></head>
<body>
<a href="#bookmark">text</a>
.
.
.
<a name="bookmark">text</a>
</body>
</html>
```

Creating Bookmarks - Example

```
<html>
  <head>
    <title>HTML Bookmark Example</title>
  </head>
  <body>
    <h1>Tutorials</h1>
    <p>
      <a href="#script">Scripting Languages</a>
    </p>
    <h2>Programming</h2>
    <p>C Programming</p>
    <p>C++ Programming</p>
    <p>Java Programming</p>
```

```
<p>Python Programming</p>
    <h2>Web Design</h2>
    <p>HTML 5</p>
    <p>CSS3</p>
    <h2>Databases</h2>
    <p>Oracle</p>
    <p>MySQL</p>
     <h2>
      <a name="script">Scripting Languages</a>
    </h2>
    <p>Javascript</p>
    <p>PHP</p>
  </body></html>
```

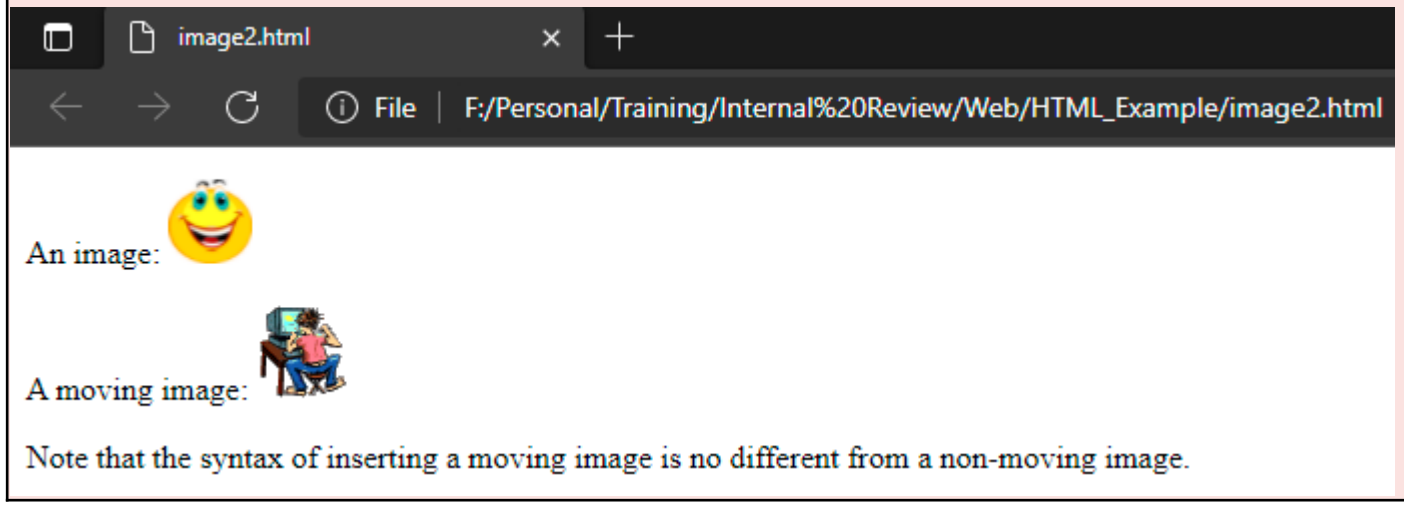
Basic HTML Tag: <img>

- Use the HTML <img> element to **define an image.**
- Use the HTML **src attribute** to define the URL of the image.
- Use the HTML **alt attribute** to define an alternate text for an image, if it cannot be displayed.
- Use the HTML **width** and **height** attributes to define the size of the image.

```
<img src="daisy_pollen_flower.jpg" alt="Flower">
```

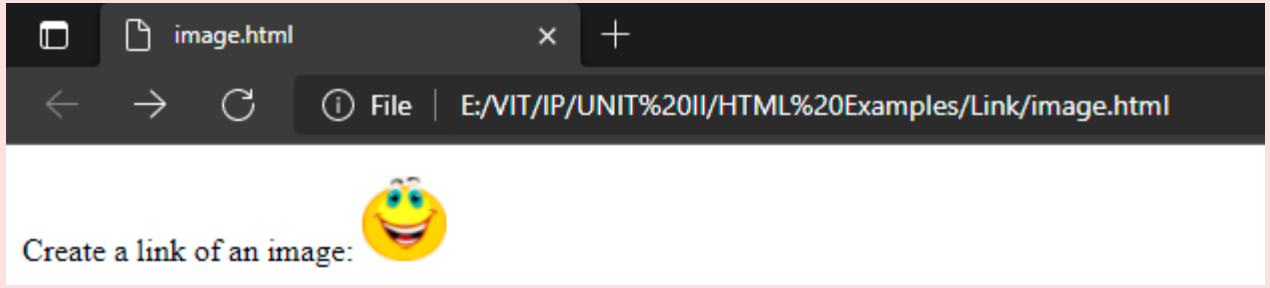
Basic HTML Tag: <img>

```
<p>An image:
<img src="smiley.png" alt="Smiley face" width="42" height="42"></p>
<p>A moving image:
<img src="programming.gif" alt="Computer man" width="48" height="48"></p>
<p>Note that the syntax of inserting a moving image is no different from a non-moving image.</p>
```



Basic HTML Tag: <img>

```
<p>Create a link of an image:
<a href="information_about_the_planet_smiley.txt"><img src="smiley.png" alt="HTML tutorial" width="42" height="42"></a></p>
```



Basic HTML Tag: <img>

```
<p>Image from the same folder as the current page:<p>
<img border="0" src="images/sun.gif" alt="Sun" width="104" height="142">
<img border="0" src="./images/programming.gif" alt="Computer_man" width="104" height="142">

<p>Insert an image from One Level down of the current web site:</p>
<img border="0" src="images/Test/merglobe.gif" alt="Merglobe" width="104" height="142">

<p>Insert an image from a web site:</p>
<img src="https://images.pexels.com/photos/60597/dahlia-red-blossom-bloom-60597.jpeg" alt="pexels.com" width="104"
height="142">
```

Basic HTML Tag: <img>

```
<p>Insert an image from root of the current web site:</p>
<img border="0" src="/images/smiley.png" alt="Smiley" width="104" height="142">

<p>Insert an image from One Level up of the current web site:</p>
<img border="0" src="../planets.gif" alt="Planets" width="104" height="142">

<p>Insert an image from One Level up of the current web site:</p>
<img border="0" src="../images/venglobe.gif" alt="Venglobe" width="104" height="142">
```

Basic HTML Tag: Image Maps

- Use the **<map>** tag to define an **image-map**.
- An image-map is an image with **clickable areas**.
- The name attribute of the <map> tag is associated with the <img>'s **usemap** attribute and creates a relationship between the image and the map.
- The <map> tag contains a number of <area> tags, that defines the clickable areas in the image-map
- **Shape**: To define the shape of the clickable area, and you can choose one of these values:
  - **rect** - defines a rectangular region
  - **circle** - defines a circular region
  - **poly** - defines a polygonal region
  - **default** - defines the entire region

Basic HTML Tag: Image Maps

```
<p>Click on the sun or on one of the planets to watch it closer:</p>

<img src="planets.gif" width="145" height="126" alt="Planets" usemap="#planetmap">

<map name="planetmap">
  <area shape="rect" coords="0,0,82,126" alt="Sun" href="sun.html">
  <area shape="circle" coords="90,58,3" alt="Mercury" href="merglobe.gif">
  <area shape="circle" coords="124,58,8" alt="Venus" href="information_about_the_planet_venus.txt">
</map>
```

Basic HTML Tag: <figure>

- The **<figure>** element identifies **self-contained content** related to the main content, such as an image, table, or chart.
- The **<figcaption>** element is often nested within a <figure> element to add a **caption** to the content identified by the <figure> tags.
- A caption can be associated with the <figure> element by inserting a <figcaption>inside it (as the first or the last child).
- The first <figcaption> element found in the figure is presented as the figure's caption.

Basic HTML Tag: <figure>

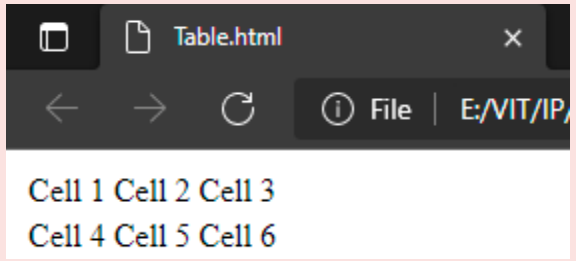
```
<img src="flamingo.jpg" alt="flamingo">
<p><i>Fig:1</i>Flamingo</p>

<figure>
        <img src="flamingo.jpg" alt="flamingo">
</figure>

<figure>
        <img src="elephant.jpg" alt="Elephant">
        <figcaption><i>fig. 1</i> An Elephant at Sunset</figcaption>
</figure>
```

Basic HTML Tag: Tables

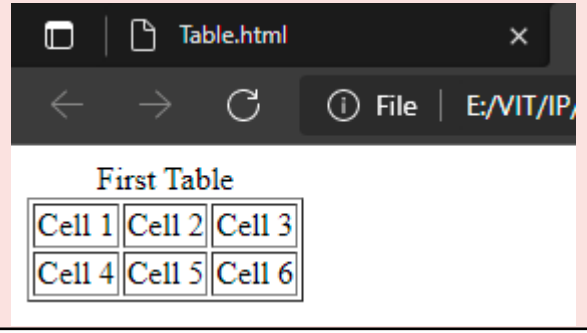
- The **<table>** HTML element represents tabular data — that is, information presented in a **two-dimensional table** comprised of **rows** and **columns** of cells containing data.
- Tables are divided into **table rows** with the **<tr>** tag.
- Table data <td> are the **data containers** of the table.
- They can contain all sorts of HTML elements like **text, images, lists, other tables**, etc.
- The **<caption>** tag defines a **table caption**.
- The <caption> tag must be inserted immediately after the <table> tag.
- A table row can also be divided into **table headings** with the <th> tag.

Basic HTML Tag: Tables

```
<table>
	<tr>
		<td>Cell 1</td>
		<td>Cell 2</td>
		<td>Cell 3</td>
	</tr>
	<tr>
		<td>Cell 4</td>
		<td>Cell 5</td>
		<td>Cell 6</td>
	</tr>
</table>
```

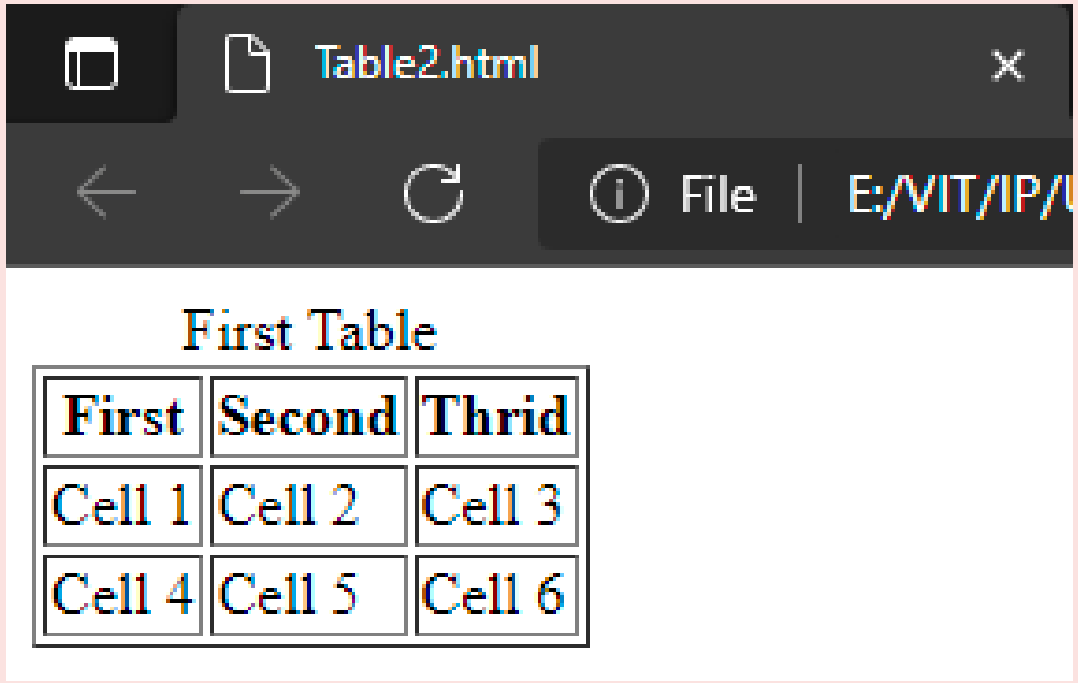



```
<table border="1">
<caption>First Table</caption>
	<tr>
		<td>Cell 1</td>
		<td>Cell 2</td>
		<td>Cell 3</td>
	</tr>
	<tr>
		<td>Cell 4</td>
		<td>Cell 5</td>
		<td>Cell 6</td>
	</tr>
</table>
```



Basic HTML Tag: Tables

```
<table border="1">
<caption>First Table</caption>
        <tr>
                <th>First</th>
                <th>Second</th>
                <th>Thrid</th>
        </tr>
        <tr>
                <td>Cell 1</td>
                <td>Cell 2</td>
                <td>Cell 3</td>
        </tr>
        <tr>
                <td>Cell 4</td>
                <td>Cell 5</td>
                <td>Cell 6</td>
        </tr>
</table>
```

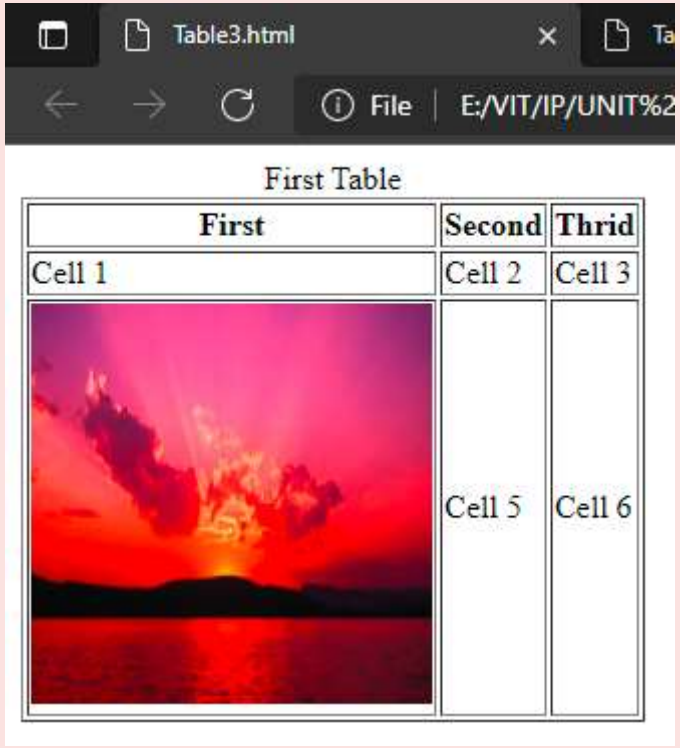


First Table

First	Second	Thrid
Cell 1	Cell 2	Cell 3
Cell 4	Cell 5	Cell 6

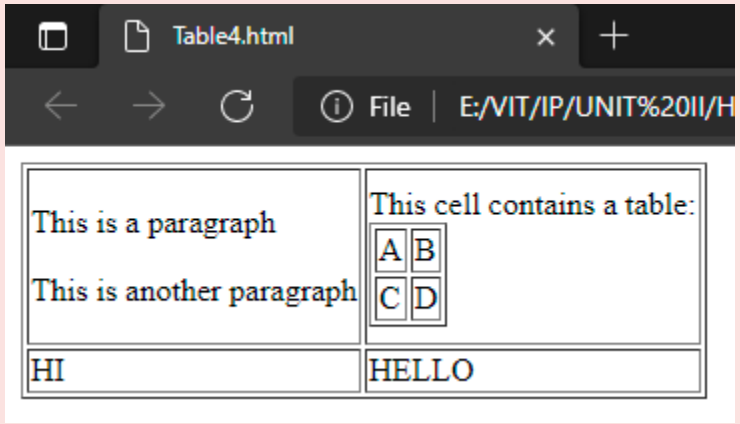
Basic HTML Tag: Tables

```
<table border="1">
<caption>First Table</caption>
                        <tr>
            <th>First</th>
            <th>Second</th>
            <th>Thrid</th>
      </tr>
      <tr>
            <td>Cell 1</td>
            <td>Cell 2</td>
            <td>Cell 3</td>
      </tr>
      <tr>
            <td><img src="Image/Sunset.jpg" width=200px height=200px></td>
            <td>Cell 5</td>
            <td>Cell 6</td>
      </tr>
</table>
```



Basic HTML Tag: Tables

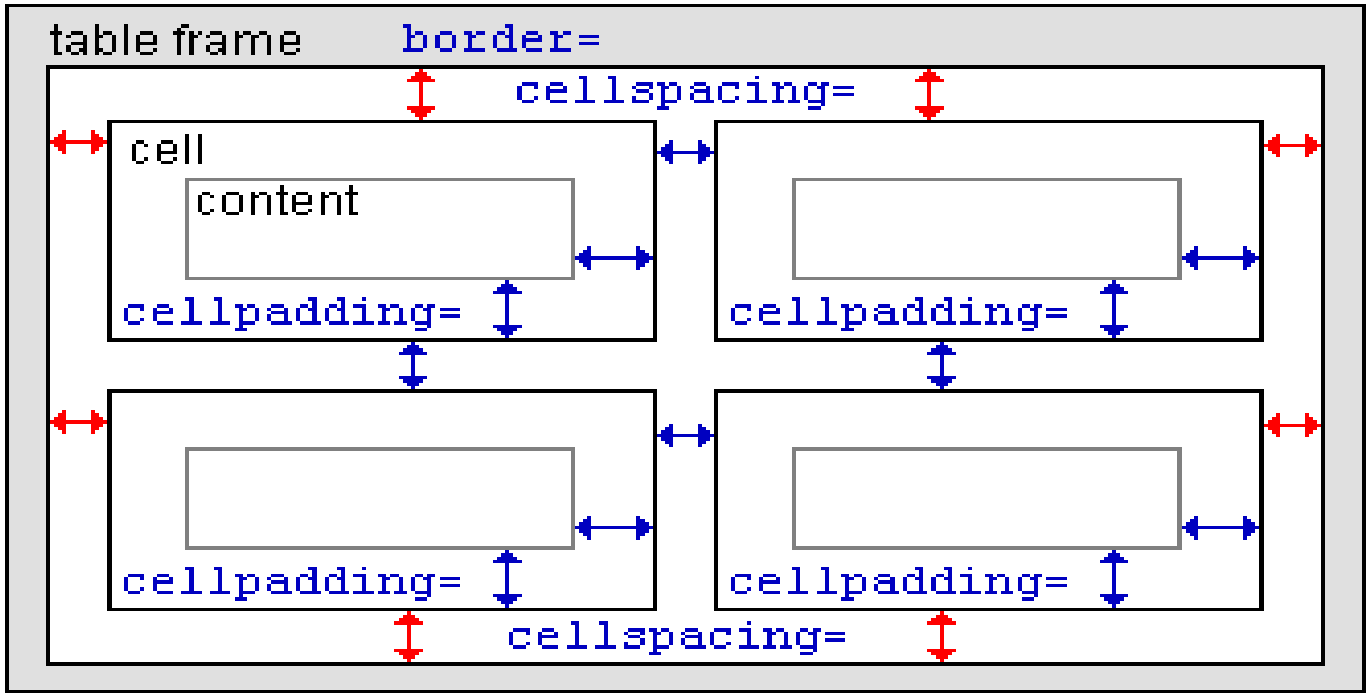
```
<table border="1">
<tr>
 <td>
  <p>This is a paragraph</p>
  <p>This is another paragraph</p>
 </td>
 <td>This cell contains a table:
  <table border="1">
  <tr>
    <td>A</td>
    <td>B</td>
  </tr>
  <tr>
    <td>C</td>
    <td>D</td>
  </tr>
 </table>
 </td>
</tr>
<tr>
 <td>HI</td>
 <td>HELLO</td>
</tr>
</table>
```



Basic HTML Tag: Tables

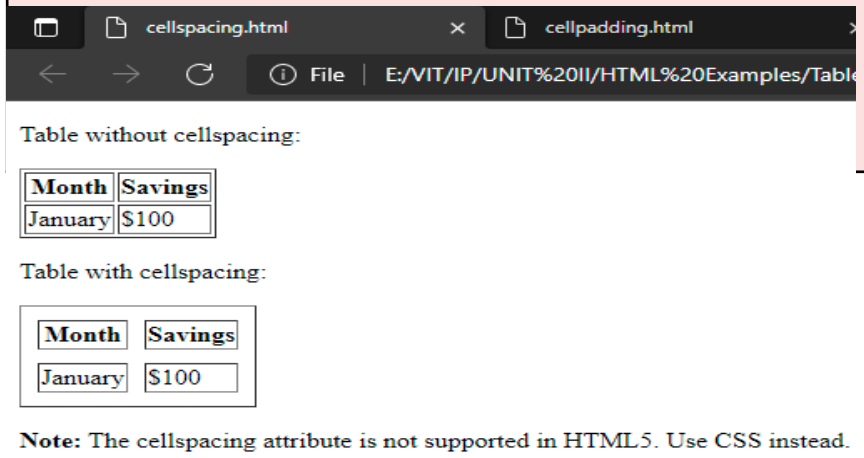
Cellspacing and Cellpadding

- To adjust the white space in your table cells.
- The cellspacing attribute defines the width of the border, while cellpadding represents the distance between cell borders and the content within a cell.



Basic HTML Tag: Tables

```
<p>Table without cellspacing:</p>
<table border="1">
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
</table>
```




```
<p>Table with cellspacing:</p>
<table border="1" cellspacing="10">
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
</table>

<p><b>Note:</b> The cellspacing attribute is not supported in HTML5. Use CSS instead.</p>
```

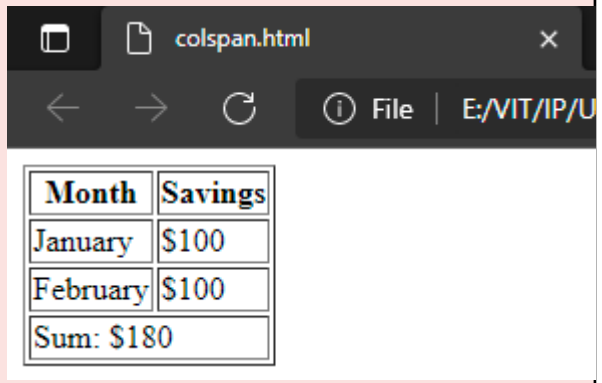
Basic HTML Tag: Tables

- **Colspan and rowspan**
- Table cells can **span** across **more than one column or row**.
- The attributes **COLSPAN** ("how many across") and **ROWSPAN** ("how many down") indicate how many columns or rows a cell should take up.
- Use the colspan attribute to make a cell **span many columns**
- Use the rowspan attribute to make a cell **span many rows**

Basic HTML Tag: Tables

```
<table border="1">
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
  <tr>
    <td>February</td>
    <td>$100</td>
  </tr>
  <tr>
    <td colspan="2">Sum: $180</td>
  </tr>
</table>
```

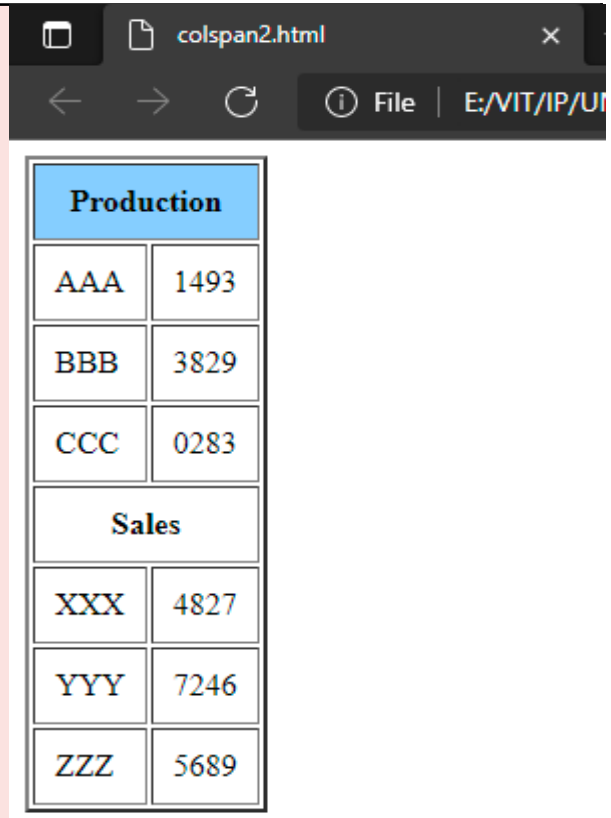
colspan Example I



Basic HTML Tag: Tables

colspan Example II

```
<table border=2 cellpadding=10>
<tr> <th colspan=2 bgcolor="#99CCFF">Production</th> </tr>
<tr> <td>AAA</td>     <td>1493</td> </tr>
<tr> <td>BBB</td>     <td>3829</td> </tr>
<tr> <td>CCC</td>     <td>0283</td> </tr>
<tr> <th colspan=2>Sales</th> </tr>
<tr> <td>XXX</td>     <td>4827</td> </tr>
<tr> <td>YYY</td>     <td>7246</td> </tr>
<tr> <td>ZZZ</td>     <td>5689</td> </tr>
</table>
```

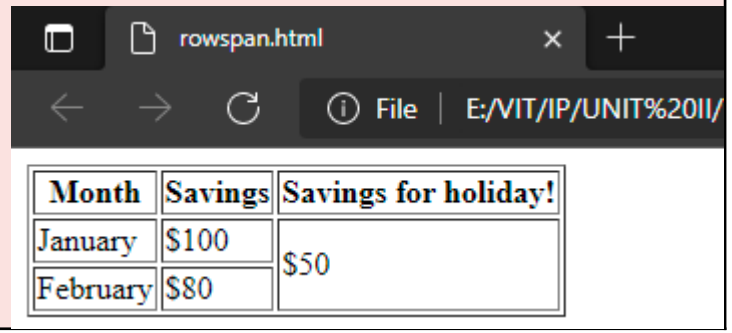


Production	
AAA	1493
BBB	3829
CCC	0283
Sales	
XXX	4827
YYY	7246
ZZZ	5689

Basic HTML Tag: Tables

```
<table border=1>
  <tr>
    <th>Month</th>
    <th>Savings</th>
    <th>Savings for holiday!</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
    <td rowspan="2">$50</td>

  </tr>
  <tr>
    <td>February</td>
    <td>$80</td>
  </tr>
</table>
```

rowspan Example



Month	Savings	Savings for holiday!
January	$100	$50
February	$80	

Basic HTML Tag: <colgroup>

- The <colgroup> tag specifies a **group of one or more columns** in a table for formatting.
- The <colgroup> tag is useful for **applying styles** to entire columns, instead of repeating the styles for each cell, for each row.
- To **define different properties** to a column within a <colgroup>, use the **<col>** tag within the <colgroup> tag.

```
<table>
  <colgroup>
    <col span="2" style="background-color:red">
    <col style="background-color:yellow">
  </colgroup>
  <tr>
    <th>ISBN</th>
    <th>Title</th>
    <th>Price</th>
  </tr>
  <tr>
    <td>3476896</td>
    <td>My first HTML</td>
    <td>$53</td>
  </tr>
  <tr>
    <td>5869207</td>
    <td>My first CSS</td>
    <td>$49</td>
  </tr>
</table>
```

Basic HTML Tag: List

- HTML lists are used to present **list of information** in well formed and semantic way. There are **three different types** of list in HTML and each one has a specific purpose and meaning.

Ordered list

- Used to create a list of **related items**, in a **specific order**. All the list items are marked with **numbers** by default. It is also known as **numbered list**.

Unordered list

- Used to create a list of **related items**, in **no particular order**. All the list items are marked with **bullets**. It is also known as bulleted list.

Description list

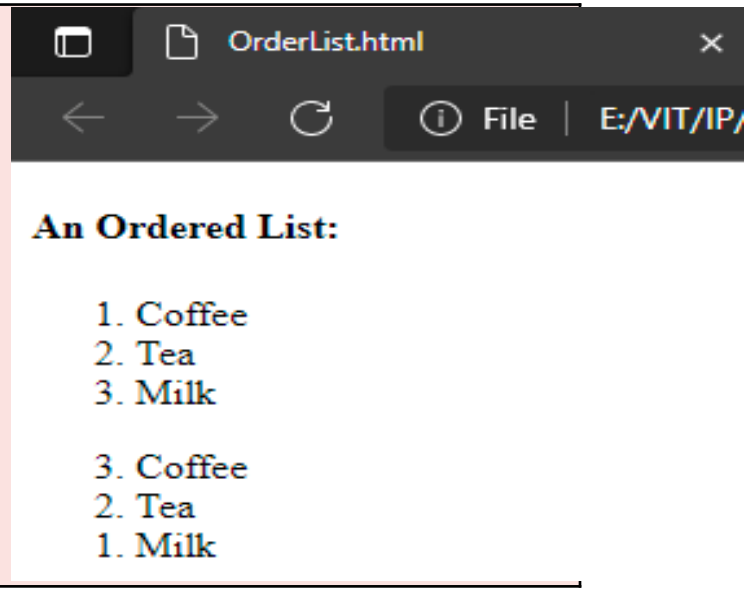
- Used to create a list of terms and their **descriptions**.

Basic HTML Tag: List

- The commonly used **HTML list tag** are as follows:
  - Defines an unordered list
  - Defines an ordered list
  - Defines a list item
  - <dl> Defines a description list
  - <dt> Defines the term in a description list
  - <dd> Defines the description in a description list

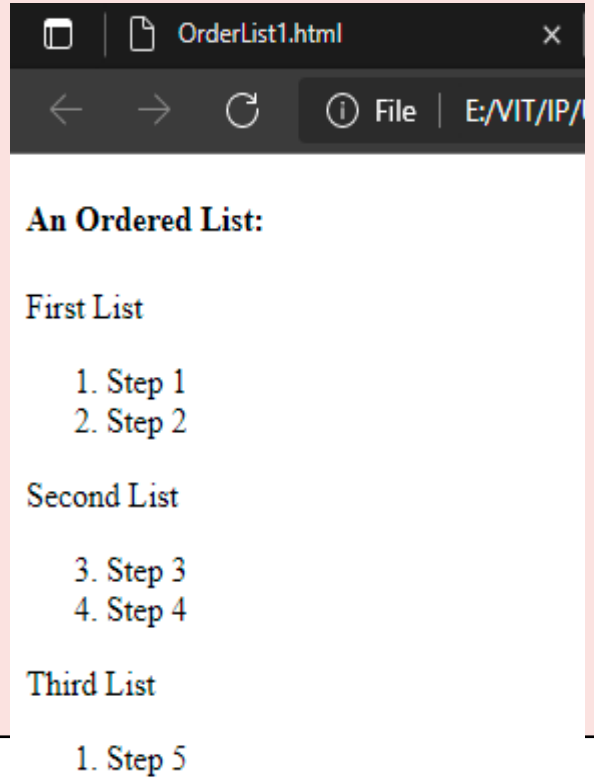
Basic HTML Tag: Ordered List

```
<h4>An Ordered List:</h4>
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
<ol reversed>
   <li>Coffee</li>
   <li>Tea</li>
   <li>Milk</li>
</ol>
```



Basic HTML Tag: Ordered List

```
<h4>An Ordered List:</h4>
<p>First List</p>
<ol>
		<li>Step 1</li>
		<li>Step 2</li>
</ol>
<p>Second List</p>
<ol start="3">
		<li>Step 3</li>
		<li>Step 4</li>
</ol>
<p>Third List</p>
<ol>
		<li>Step 5</li>
</ol>
```

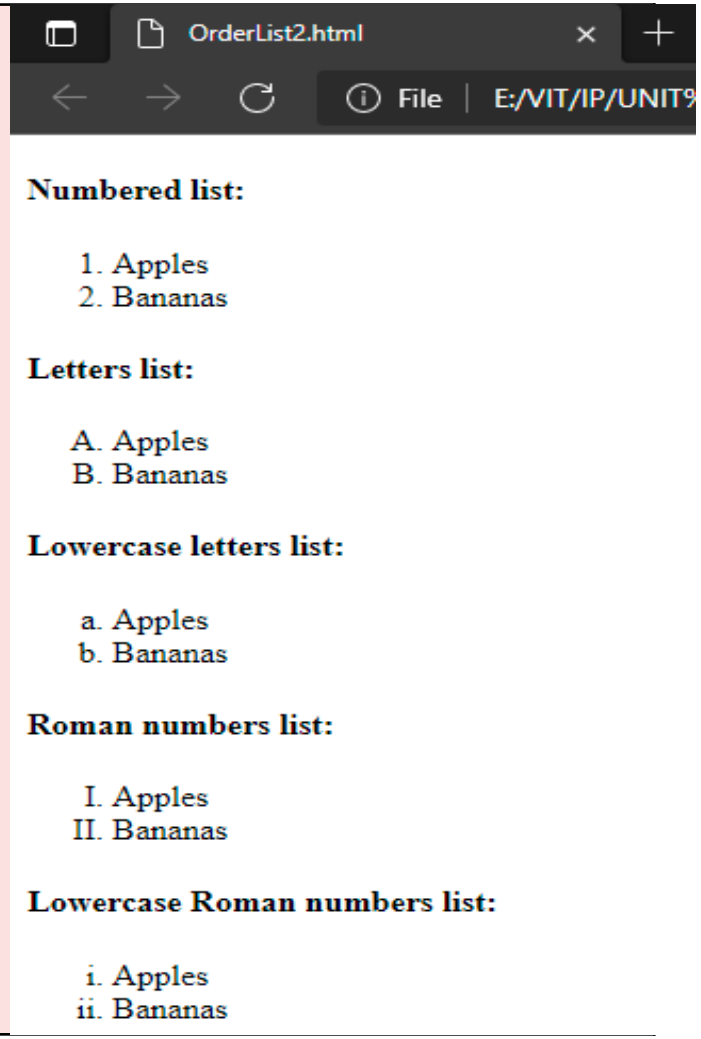


Note: we used the “start” attribute on the “ol” tag to restart the numbering at "3" following the break in the list above.

Basic HTML Tag: Ordered List

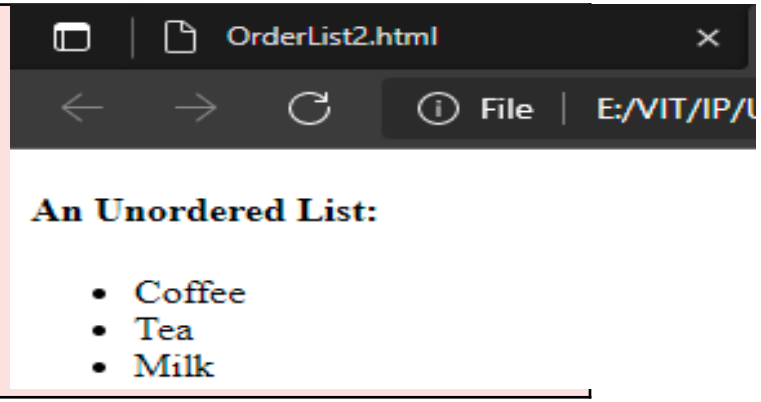
```
<h4>Numbered list:</h4>
<ol>
 <li>Apples</li>
 <li>Bananas</li>
</ol>
<h4>Letters list:</h4>
<ol type="A">
 <li>Apples</li>
 <li>Bananas</li>
</ol>
<h4>Lowercase letters list:</h4>
<ol type="a">
 <li>Apples</li>
 <li>Bananas</li>
</ol>
<h4>Roman numbers list:</h4>
<ol type="I">
 <li>Apples</li>
 <li>Bananas</li>
</ol>
```

```
<h4>Lowercase
Roman numbers list:</h4>
<ol type="i">
 <li>Apples</li>
 <li>Bananas</li>
</ol>
```



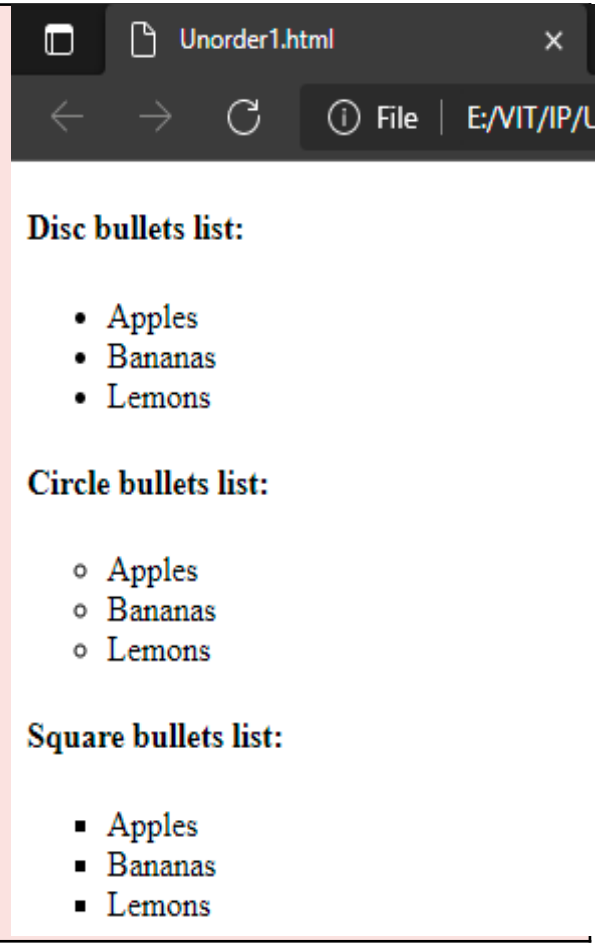
Basic HTML Tag: Unordered List

```
<h4>An Unordered List:</h4>
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```



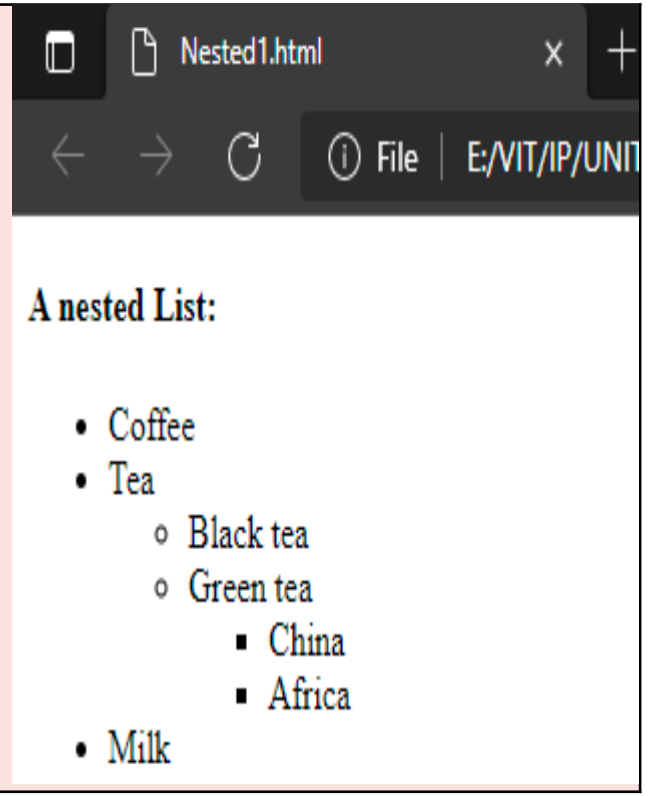
Basic HTML Tag: Unordered List

```
<h4>Disc bullets list:</h4>
<ul style="list-style-type:disc">
 <li>Apples</li>
 <li>Bananas</li>
 <li>Lemons</li>
 </ul>
<h4>Circle bullets list:</h4>
<ul style="list-style-type:circle">
 <li>Apples</li>
 <li>Bananas</li>
 <li>Lemons</li>
</ul>
<h4>Square bullets list:</h4>
<ul style="list-style-type:square">
 <li>Apples</li>
 <li>Bananas</li>
 <li>Lemons</li>
</ul>
```



Basic HTML Tag: Nested List

```
<h4>A nested List:</h4>
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
    <li>Black tea</li>
    <li>Green tea
      <ul>
      <li>China</li>
      <li>Africa</li>
      </ul>
    </li>
    </ul>
  </li>
  <li>Milk</li>
</ul>
```



Basic HTML Tag: Comment Tag

- **HTML comment tag** use to comment a source code

```
<!--
Comments
-->
```

- Comments **helps coders** to improve the **code readability and to understand** more about the code
- Comments **will not be** displayed not the screen
- Comment Tag **does not support** any **Standard Attributes**.

Basic HTML Tag: Comment Tag

```
<!DOCTYPE html>
<html>
<!--
HTML comment tag use to comment a source code. Comments helps coders to improve the code readability and to understand more about the code Comments will not be displayed on the screen Comment Tag does not support any Standard Attributes.
-->
<body>
<h1>Read the Comments given in your Code Page<h1>
</body>
</html>
```

HTML Favicon

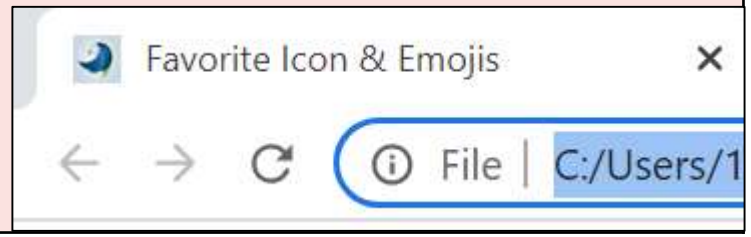
- A favicon is a small file containing one or more icons that are used to represent the website or a blog.
- It is also known as a tab icon, website icon, URL icon, or bookmark icon.
- It is a small image displayed next to the page title in the browser tab.
- It should be a simple image with high contrast.
- It is displayed to the left of the page title in the browser tab.

HTML Favicon

- **How To Add a Favicon in HTML?**
  - To add a favicon to your website, either save your favicon image to the root directory of your web server, or create a folder in the root directory called images, and save your favicon image in this folder.
  - A common name for a favicon image is "favicon.ico".
  - Next, add a <link> element to your "index.html" file, after the <title> element.

HTML Favicon

```
<!DOCTYPE html>

<html>
<head>
  <title>My Page Title</title>
  <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
</head>

<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```



HTML Favicon

- **Favicon File Format Support**
  - The file formats supported for a favicon image are:
    - .ico (favorite icon)
    - .png (Portable Network Graphics)
    - .gif (Graphics Interchange Format)
    - .jpeg (Joint Photographic Experts Group)
    - .svg (Scalable Vector Graphics)

HTML Emoji

- Emojis are small digital images or icons that are generally used in messaging and other places to express emotions or ideas.
- Emojis are characters from the UTF-8 character set
- To display an HTML page correctly, a web browser must know the character set used in the page.

- **Approach**
  - By setting the charset used to display webpages in the browser to UTF-8, emojis can be added to HTML documents.
  - Use the <meta> tag in the head section to specify this character encoding information.
  - Emojis can be added to HTML after the charset has been declared by utilising the p and span tags.

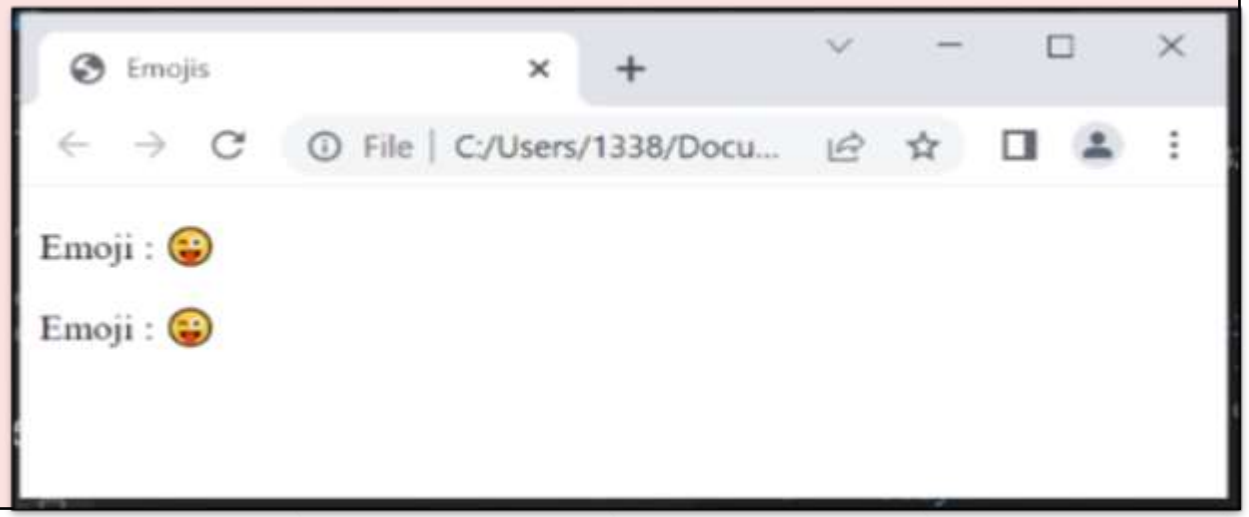
HTML Emoji

- While the emoji is inserted in the same line using the tag, it is inserted in a new line using the <p> tag.

- Two methods are used to add emoji in HTML documents:
  - Using hexadecimal code
  - Using decimal code
- The hexadecimal and decimal codes for emojis start with &#x and end with “;” to inform the browser, the character represented by the code needs to be displayed.

HTML Emoji

```
<!DOCTYPE html>
<html>
<head>
  <title>Emojis</title>
</head>
<body>

<!--Emojis-->
<p>Emoji  : &#128540;</p> →Decimal
<p>Emoji  : &#x1F61C;</p> →Hexadecimal

</body>
</html>
```



Basic HTML Tag: HTML Form

- **HTML Forms** are required when you want to **collect some data from the site visitor**.
- **For example** during user registration you would like to collect information such as name, email address, credit card, etc.
- A form will take **input from the site visitor** and then will post it to a **back-end application** such as CGI, ASP.Net or PHP script etc.
- The **back-end application** will perform required processing on the passed data based on defined **business logic inside the application**.

HTML Form: <form> Element

- The **<form>** element defines an HTML form:

```
<form>
.
form elements
.
</form>
```

- HTML forms contain form elements.
- Form elements are **different types** of input elements, **checkboxes, radio buttons, submit buttons**, and more.

HTML Form Attributes

- The **action attribute** defines the **action to be performed** when the form is submitted.
- The common way to **submit a form** to a server, is by using a **submit button.** Normally, the form is submitted to a web page on a **web server.**

  <form action="action_page.jsp">

- The method attribute specifies the **HTTP method** (**GET or POST**) to be used when submitting the forms:

  <form action="action_page.jsp" method="GET">

  (OR)

  <form action="action_page.jsp" method="POST">

HTML Form Attributes: Get and Post Method

Get Method

- We can use GET (the default method) If the form **submission is passive** (like a search engine query), and **without sensitive information**.
- When you use GET, the form **data will be visible** in the page address:

  action_page.jsp?firstname=Arul&lastname=Kumar
- GET is best suited to **short amounts of data**.

Post Method

- We can use **POST method** If the form is updating data, or includes sensitive information (password).
- POST offers **better security** because the submitted data is not visible in the page address.

HTML Form Elements

The HTML <form> element can contain one or more of the following **form elements**:

- <input>
- <label>
- <select>
- <textarea>
- <button>
- <fieldset>
- <legend>
- <datalist>
- <output>
- <option>
- <optgroup>

HTML Form: <Input> Element

- The **<input> element** is the most important form element.
- The <input> element has many variations, depending on the **type attribute.**

Example:

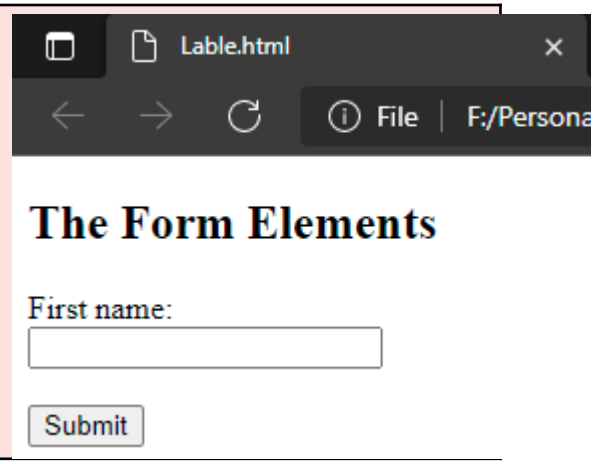
- text Defines normal text input **<input type="text">**
- radio Defines radio button input (for selecting one of many choices) **<input type="radio">**
- submit Defines a submit button (for submitting the form) **<input type="submit">**
- Etc.,
- **More Input Types**: https://www.w3schools.com/html/html_form_input_types.asp

HTML Form: <label> Element

The <label> element **used to create** a label. one label statement is used for one element

- The <label> element is useful for screen-reader users, because the screen-reader will read out loud the
- label when the user **focus on the input element.**

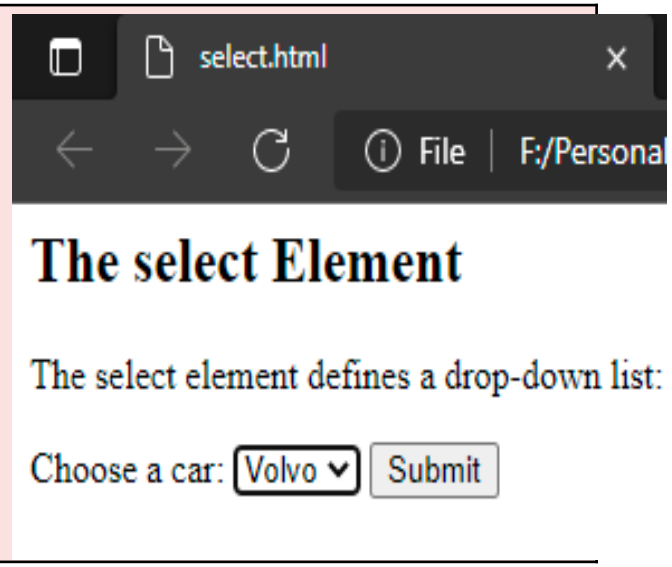
```
<h2>The Form Elements</h2>

<form action="">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"><br><br>
  <input type="submit" value="Submit">
</form>
```



HTML Form: <select> Element

- The **<select>** element defines a drop-down list.
- The **<option>** elements defines an option that can be selected.
- By default, the **first item** in the drop-down list is selected.
- To define a pre-selected option, add the **selected attribute** to the option

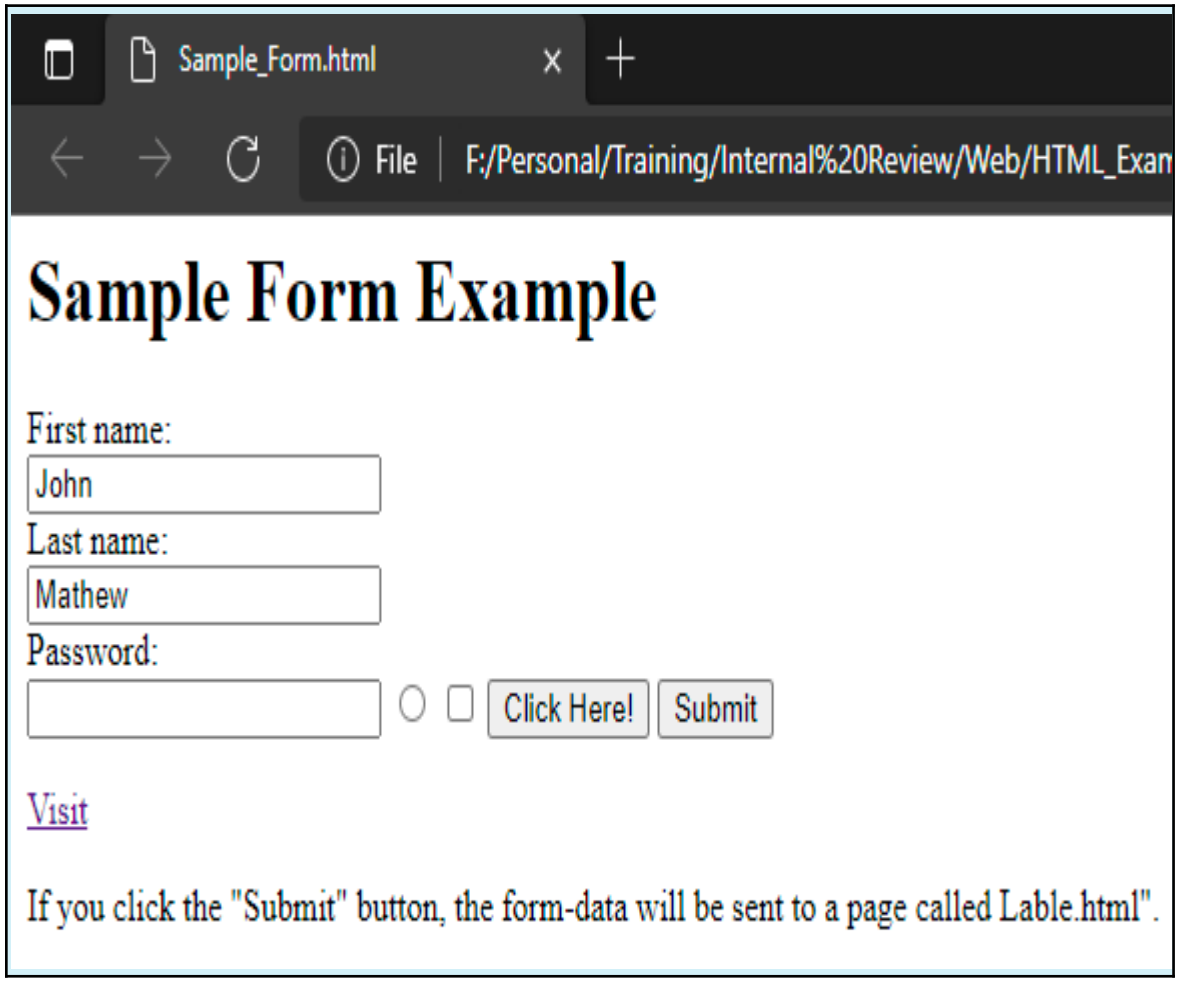
```
<h2>The select Element</h2>

<p>The select element defines a drop-down list:</p>

<form action="/action_page.php">
  <label for="cars">Choose a car:</label>
  <select id="cars" name="cars">
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
</select>
  <input type="submit">
</form>
```



HTML Form Elements

```
<h1> Sample Form Example </h1>
<form action="Lable.html">
  First name:<br>
  <input type="text" name="firstname" value="John">  <br>  Last name:<br>
  <input type="text" name="lastname" value="Mathew">  <br>Password:<br>
  <input type="password" id="pwd" name="pwd">
  <input type="radio" id="radio" name="HTML" value="HTML">
  <input type="checkbox" id="Cars" name="Cars" value="Cars">
  <input type="button" onclick="alert('Hai HTML!')" value="Click Here!">
  <input type="submit" value="Submit">
</form>
<a href="information_about_the_smiley.txt">Visit</a>
<p>If you click the "Submit" button, the form-data will be sent to a page called Lable.html".</p>
```

HTML Form Elements



HTML Form Elements

More HTML Form elements

https://www.w3schools.com/html/html_form_elements.asp

HTML Form element Attributes

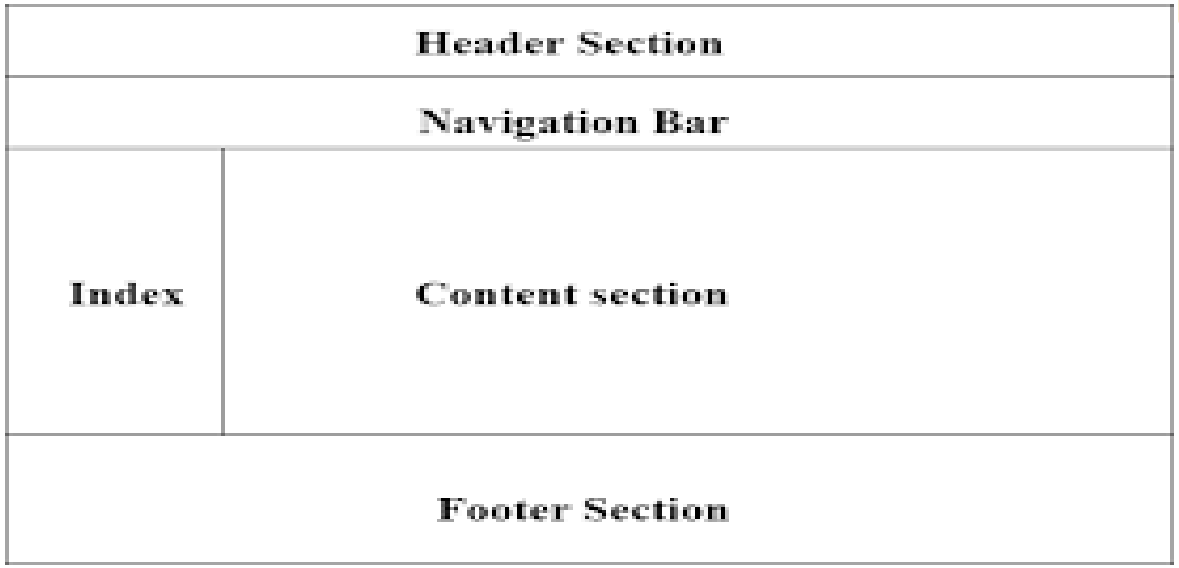
https://www.w3schools.com/html/html_form_attributes.asp

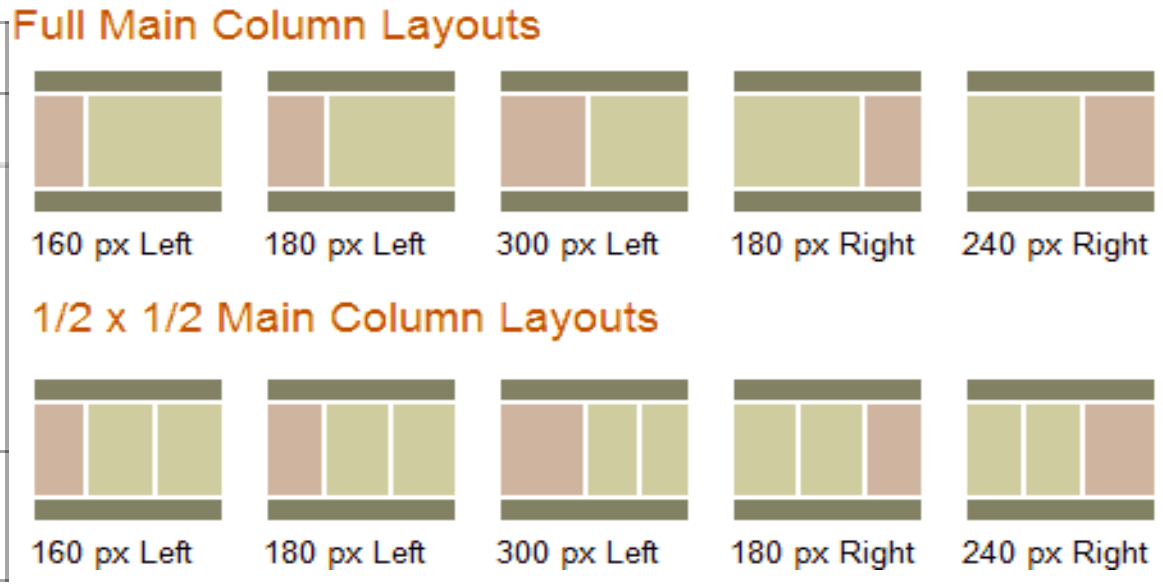
HTML Layout

- Page layout is the part of graphic design that deals with the **arrangement of visual elements on a page.**

  Page layout is used to make the **web pages look better**.

- It establishes the **overall appearance**, relative importance, and relationships between the graphic elements to achieve a smooth flow of information and eye movement for **maximum effectiveness** or





HTML Layout

HTML5 offers **new semantic elements** that define different parts of a web page:

- **Header**: Defines a header for a document or a section
- **Nav**: Defines a container for navigation links
- **Section**: Defines a section in a document
- **Article**: Defines an independent self-contained article
- **Aside**: Defines content aside from the content (like a sidebar)
- **Footer**: Defines a footer for a document or a section
- **Details**: Defines additional details
- **Summary**: Defines a heading for the details element

HTML Layout

- The ** element** is often used as a **layout tool**, because it can **easily** be **positioned** with CSS.

HTML Layout Techniques

- There are **four different ways** to create multicolumn layouts.
- CSS float property
- CSS flexbox
- CSS framework
- CSS grid

Will discuss later

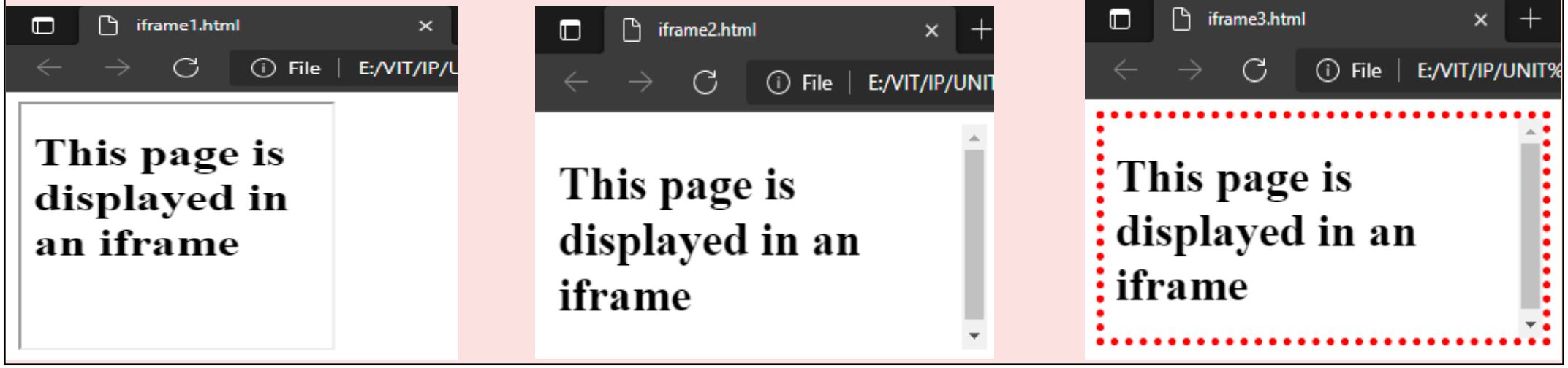
Basic HTML Tag: <iframe>

- An **iframe or inline** frame is used to display **external objects** including other **web pages** within a web page.

  <iframe src="URL"></iframe>

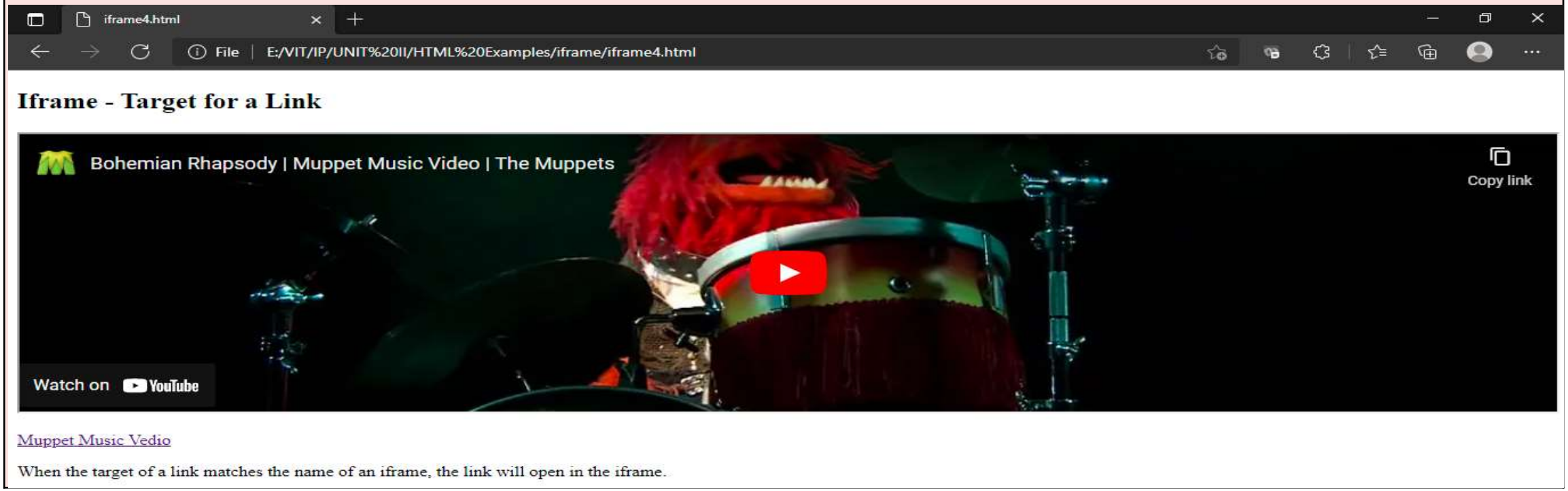
- The src attribute specifies the URL (web address) or any web page of the iframe page.

```
<iframe src="demo_iframe.htm" width="200" height="200"></iframe>
<iframe src="demo_iframe.htm" style="border:none"></iframe>
<iframe src="demo_iframe.htm" style="border:5px dotted red"></iframe>
```



Basic HTML Tag: <iframe>

```
<iframe height="300px" width="100%" src="demo_iframe.htm" name="iframe_a"></iframe>

<p><a href="https://www.youtube.com/embed/tgbNymZ7vqY" target="iframe_a">Muppet Music Vedio</a></p>

<p>When the target of a link matches the name of an iframe, the link will open in the iframe.</p>
```



Basic HTML Tag: <meta>

- Metadata is **data (information) about data**.
- The <meta> tag provides metadata about the HTML document. Metadata will **not be displayed** on the page, but will be **machine parsable**.
- Meta elements are typically used to specify page **description, keywords, author of the document, last modified, and other metadata**.
- The metadata can be used by browsers (how to display content or reload page), search engines (keywords), or other web services.
- <meta> tags always goes inside the **<head> element.**
- Metadata is always passed as **name/value pairs**.

Basic HTML Tag: <meta>

- **Define keywords for search engines:**

  <meta name="keywords" content="HTML, CSS, XML, XHTML, JavaScript">

- **Define a description of your web page:**

  <meta name="description" content="Free Web tutorials on HTML and CSS">

- **Define the author of a page:**

  <meta name="author" content="John Doe">

- **Refresh document every 30 seconds:**

  <meta http-equiv="refresh" content="30">

- **Setting the viewport to make your website look good on all devices:**

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

- Etc.,

Basic HTML Tag: <meta>

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<meta name="description" content="Free Web tutorials">
<meta name="keywords" content="HTML,CSS,XML,JavaScript">
<meta name="author" content="Hege Refsnes">
<meta http-equiv="refresh" content="30">
</head>
<body>
<p>All meta information goes in the head section...</p>
</body>
</html>
```

HTML Media

- Multimedia on the **web is sound, music, videos, movies, and animations**.
- Multimedia comes in many **different formats**.
- It can be almost anything you can hear or see.
- **Examples:** Images, music, sound, videos, records, films, animations, and more.
- HTML5 multimedia promises an **easier future for multimedia**.

HTML Media: Playing Videos

- Before HTML5, videos could only be played with a **plug-in (like flash).**
- The HTML5 **<video>** element specifies a standard way to embed a video in a web page.
- Currently, there are **3 supported video formats** for the <video> element: **MP4, WebM, and Ogg.**

```
<video width="320" height="240" controls>
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

HTML Media: Playing Videos

- The **controls attribute** adds **video controls**, like play, pause, and volume.

  It is a good idea to always include width and height attributes.

- If height and width are not set, the browser does not know the size of the video. The effect will be that the page will **change (or flicker)** while the video loads.
- Text between the <video> and </video> tags will only **display in browsers** that do not support the <video> element.
- Multiple **<source> elements** can link to different video files. The browser will use the first recognized format.

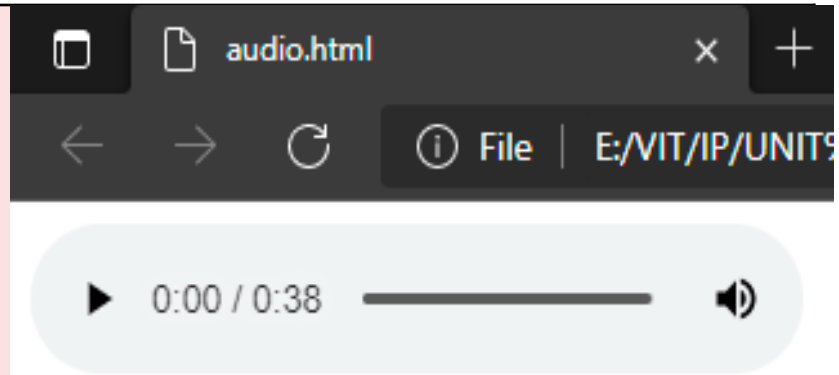
HTML Media: Playing Audios

- To play an audio file in HTML, use the **<audio>** element.
- The **controls attribute** adds audio controls, like play, pause, and volume.
- Multiple **<source>** elements can link to different audio files. The browser will use the first recognized format.
- Currently, there are **3 supported file formats** for the <audio> element: **MP3, Wav, and Ogg.**

```
<audio controls>
  <source src="Sample.mpeg" type="audio/mpeg">
  <source src="horse.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</audio>
```

HTML Media: Playing Audios

```
<audio controls>
  <source src="Sample.mpeg" type="audio/mpeg">
  <source src="horse.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</audio>
```




```
<audio controls autoplay>
  <source src="Sample.mpeg" type="audio/mpeg">
  <source src="horse.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</audio>
```

HTML Media: Embed Map

Steps:

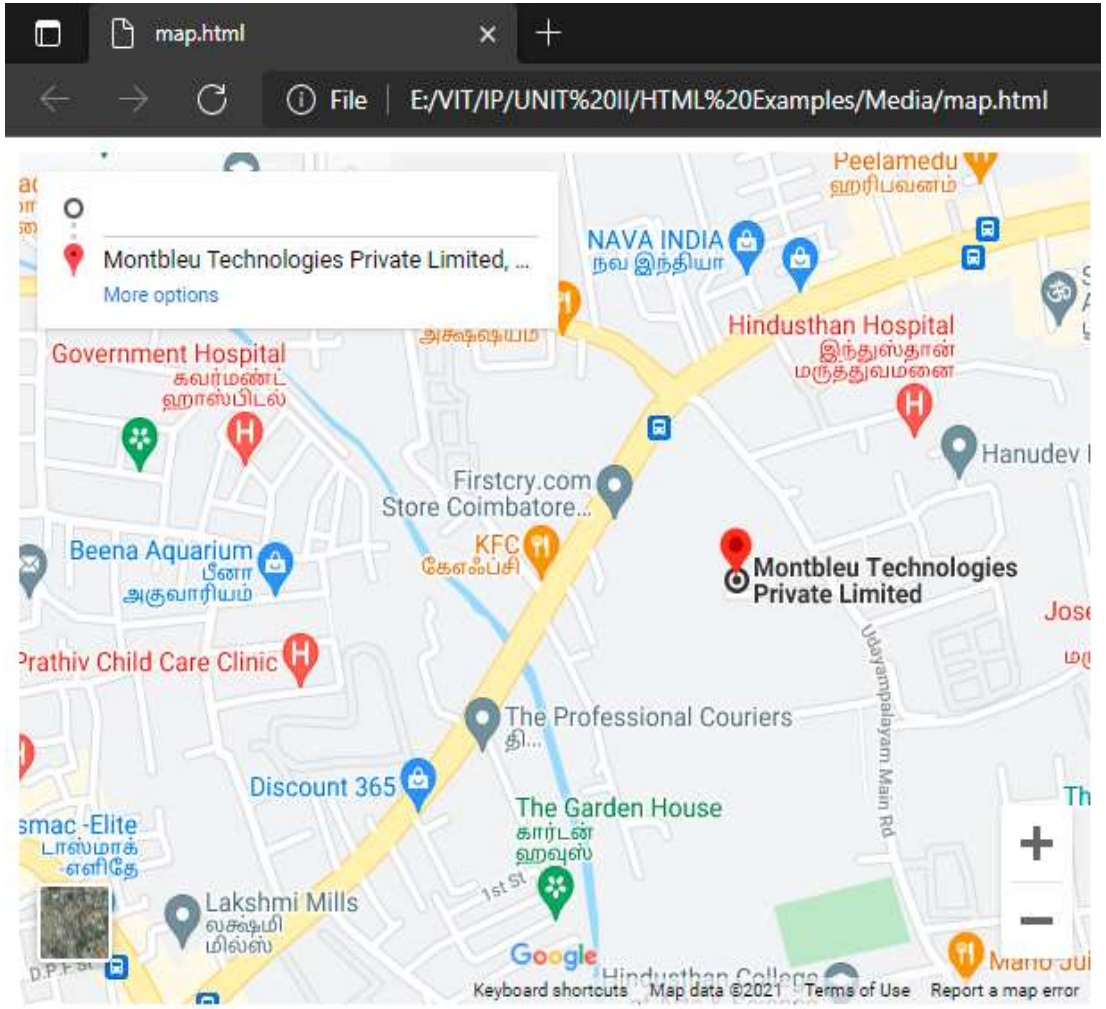
- Open Google Maps.
- Go to the directions, map, or Street View image you'd like to embed.

In the top left, click Menu .

- Click Share or embed map.
- Click Embed map.
- To the left of the text box, pick the size you want by clicking the Down arrow .
- Copy the text in the box. Paste it into the HTML of your website or blog.

HTML Media: Embed Map

```
<iframe
src="https://www.google.com/maps/embed?pb=!1m23!1m12!1m3!1d3916.2735766474107!2d76.9907259140108!3d11.0180888921578!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!4m8!3e6!4m0!4m5!1s0x3ba8583380afcb77%3A0x5e59090b4d743910!2sMontbleu%20Technologies%20Private%20Limited%2C%20RR%20Landmark%2C%20Udayampalayam%20Road%2C%20Nava%20India%20Rd%2C%20Coimbatore%2C%20641028!3m2!1d11.0180648!2d76.992916!5e0!3m2!1sen!2sin!4v1628096015446!5m2!1sen!2sin" width="600" height="450" style="border:0;"
allowfullscreen="" loading="lazy"></iframe>
```



Quiz

1.Which tag allows you to add a row in a table?

a) <td> </td>

b) <cr> </cr>

c) <tr> </tr>

d)<th> </TR>

Ans: (c)<tr> </tr>

Quiz

2. How can apply the background color for the HTML Page?

a) <body color="Red"></body>

b) <body background>Red</body>

c) <body background="Red"></body>

d) <body bgcolor="Red"></body>

Ans: d) <body bgcolor="Red"></body>

Quiz

3. Which tag will help you to create a Checkbox component in a HTML form?

a) <checkbox>

b) <input type="checkbox">

c) <input=checkbox>

d) <input checkbox>

Ans: b) <input type="checkbox">

Quiz

4. What are the different type of list supported by HTML

a) HTML support only Ordered List

b) HTML support only Unordered List

c) HTML Support both type of List

d) HTML does not support any List

Ans: c) HTML Support both type of List

Quiz

5. Which of the following HTML code is valid?

a) <font color="red">

b) <font background-color="red">

c) <font bgcolor="red">

d) <font background="red">

Ans: a) <font color="red">


THANK YOU
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Career Mobility Solutions