HTML CSS JAVASCRIPT

(Book: HTML 5 COVERS CSS3, JAVASCRIPT,XML,XHTML,AJAX by KOGENT LEARNING, DREAMTECH PRESS)

HTML

I INTRODUCTION

HTML

First of all, we have to know what HTML is. **HTML** stands for Hypertext Markup Language, which is the most widely learned language for web development. Sir Tim Berners-Lee developed it in 1991. It was officially revealed in 1995 and was named HTML 2.0 version. After that, in 1999, an advanced and major version of HTML was released that was named HTML 4.0. HTML was a fast-growing language. Many computer scientists worked on it, and soon after the 2nd version, its 3rd version was released by Dave Raggett with advance features and characteristics for developers to create elegant web pages (Raggett, 1996). After 4.0, its new version 4.0.1 was launched, which was the most successful version of HTML. Currently, HTML 5.0 version is the latest version, worldwide. It is the extended form of HTML 4.0.1.

The term Hypertext describes how HTML pages are connected on the web. This connection is known as hypertext. On the other hand, the term markup defines how tags are used to structure the text into a documented web page. It also tells the browser how to structure all text into the document and display it on the screen, such as headings, paragraphs, font styles, and colors. HTML subsists of different elements that are described by tags. All web pages in HTML are designed with the help of multiple tags. (Musciano, 1996)

HTML is a set of predefined tags that are used to create web pages. These tags are interpreted by different browsers like Safari, Mozilla Firefox, Google Chrome, Internet Explorer, Microsoft Edge, and other browsing applications. The HTML content is written on different editors like Notepad, Dreamweaver, Sublime, etc.

HTML

And are saved with an extension of **.htm** or **.html**.

Some features of HTML are as follows:

- HTML is easy to learn and code.
- HTML is a platform-independent language.
- We can use all types of data, such as text, audios, and videos on our web page.
- Links or hypertexts can also be used in HTML.
- It also supports other programming languages such as CSS, JavaScript, PHP, etc.

Why Should you Learn HTML?

Hypertext Markup Language is essential to learn for students and working developers to become a tremendous Software Developer, specifically when they are willing to work in Web Development. Here are some advantages of learning:

- **Web Creation**

  By learning, you can create a new one or can customize an existing website accordingly to your requirements. HTML is an essential component to learn before starting web development.
- **Start a career as a Web Developer**

  You can start your career as a web developer and can earn a lot of money to secure your future.

- **Ease of learning other languages**

HTML

When you learned the building blocks of HTML, then it will be much easier for you to learn other languages such as JavaScript, PHP, Nodejs, etc.

Applications of HTML are Website Development, Responsive User-Interface Design, Internet Navigation and Game Development.

Basic HTML Page Structure

Basic page structure of an HTML page in typical form is:

<! DOCTYPE html>	Page definition tag
<html>	Root tag of document
<head>	Header tag
<title> Title Goes Here </ title>	Title tag
</ head>	
<body>	Body tag includes content of the page
</ body>	
</ html>	

What is HTML Tag?

For writing HTML program, <> and </> two markings and some of them are keywords like HTML, head, title, body etc. <> Or </> symbol and a keyword written between it is called a tag together. Such as <html> and </html>. <body> is the body's start tag and </body> is the last tag of body.

HTML Tags	Description
<html> </html>	The HTML document indicates.
<head> </head>	The head portion of the program indicates.
<title> </title>	The document titles indicate.
<body> </body>	The main content portion of the program indicates.
<a> 	Anchor tag
<abbr> </abbr>	Abbreviation tags
	Bold indicates text.
	Italic refers to the text.
<big> </big>	Specifies the text larger than usual.
	Indicates text smaller than usual.
<blockquote> </blockquote>	Special quotes are used to express.
 	Create a line break
<code> </code>	The computer code reveals the text.
<table> </table>	The table is used to make.
<col> </col>	Used to create table columns.
<td> </td>	The table is used to make the cell.
<tr> </tr>	Table row is used to make.

<form> </form>	Form is used to create.
	Header tag is up to 1-6.
	Create parallel lines.
<img/>	Used to add pictures.
<input> </input>	Form input field is used to create.
	Used to create lists.
<meta> </meta>	Meta tag
	Order is used to create a catalog.
	Unorders are used to create lists.
	The paragraph indicates
<pre> </pre>	Used to create pre-formatted text.
<tt> </tt>	Teletype refers to the text.
	Strong text indicates.
	The subscripted text indicates.
	Superscripted text indicates.

HTML element

Any start and end tag in HTML and the middle part is called an element. Such as <h1> this is an example of element. </H1>. Header 1 starts at <h1> and </h1> here is an example of element. Written, <h1> This is an example of element. </H1> An element. Some tags contain no elements such as
, <img/> etc.

Thread tag	Element content	Last tag
<h1>	This is an element	**</h1>**
** **	This is the paragraph.	** **
** **		
<img/>		

HTML ATTRIBUTES

HTML attributes

The HTML attributes reveal elements of the element's element. Originally, attributes are used to enhance the functionality of tags in HTML. For example, the size = "5" is an attribute of the font tag, which represents the element, ie this is a paragraph. . How would the size of the text be? Also the face of the text "face =" Tahoma "reveals that the color of the text is highlighted by Tahoma and color =" red "and the color of the text will be red.

Some HTML Attributes

Tag	Attributes
<font>	size = "5" face = "Tahoma" color = "red"
<h1> .... <h6> <p>	align = "center" align = "left" align = "right" title = "Bangladesh"
<body>	bgcolor = "green" background = "../ images / ele.png"
	id = "book" class = "pen" align = "center"
<img> <table>	height = "100px" width = "50px" border = "5px"
<input />	type = "text" name = "TextField"

HTML ATTRIBUTES

Attribute Name	Associated Tag	Functionality
Align	<p>, <h>, <a>, <img>	Aligns the text according to the position specified.
Action	<form>	Defines the destination location to send a form of data when it is submitted.
Accept	<input>	Defines the types of files that are accepted by the server.
Alt	<img>, <area>, <input>	Defines the alternative textual message when a file or image can't be accessed or loaded.
Async	<script>	It is used for the external scripts to identify that the script is executed.
Autoplay	<video>, <audio>	It indicates that the video or audio will automatically be played when the page loads.
Autocomplete	<input>, <form>	It defines whether the autocomplete option on input or form is enabled or not.
Bgcolor	<html>, <body>,	If is used to add a background color at any part of the web page.
Cite	<q>, <ins>, <del>, <blockquote>	It is used to allocate a specific URL which further explain the quoted, deleted or inserted text.
Class	Universal Attribute	It is used to define the class name for an element on the web page.
Contenteditable	Universal Attribute	It describes whether the content of an element on the web page is editable or not.
Datetime	<ins>, <time>, <ins>	It is used to define the date and time in an element.
Download	<area>, <a>	It is used to download the target file when the user clicks on a link.
Draggable	Universal Attribute	It is used to define whether an element on a web page can be dragged or not.
Height	<embed>, <iframe>, <canvas>, <img>, <video>, <object>, <input>	It is used to define the height of an element on a web page.
Multiple	<select>, <input>	It is used to define that the user can input multiple values.
Name	<select>, <button>, <object>, <form>, < textarea>, <param>, <meta>, <fieldset>, <map>, <output>, <input>, <iframe>	It is used to define the name of an element used in the web page.
Onclick	All visual objects or elements	It executes a predefined script when the user clicks the specific element.
Onchange	All visual objects or elements	It executes a predefined script when the value of an element is changed.
Onerror	<img>, <object>, <audio>, <video>, <body>, <style>, <embed>, <script>	It executes a predefined script when an error is occurred on web page.
Translate	Universal Attribute	It is used to describe whether the content on the page has to be translated or not.
Wrap	<textarea>	It is used to wrap the text in text area.

II BASIC TAGS

HEADING TAG

Heading Tags

Heading is the first thing in a document and every document starts with one. In HTML, you can set your heading in different sizes. There are six sizes of headings and they can be set using the elements **<h1>, <h2>, <h3>, <h4>, <h5>, and <h6>**. The browser will add a line before and after the heading while displaying. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Heading</title>
</head>
<body>
<h1>This will be heading 1</h1>
<h2>This will be heading 2</h2>
<h3>This will be heading 3</h3>
<h4>This will be heading 4</h4>
<h5>This will be heading 5</h5>
<h6>This will be heading 6</h6>
</body>
</html>
```

PARAGRAPH TAG

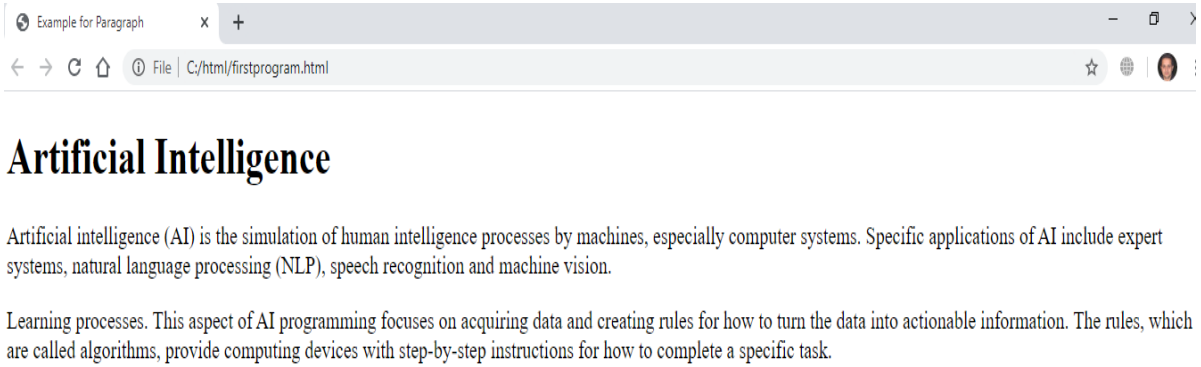
You can structure your content into paragraphs using the **<p>** tag. For making your text into a paragraph, you should place it in between the opening tag <**p**> and closing tag </**p**>. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body>
<p>This text will be the first paragraph.</p>
<p>This text will be the second paragraph.</p>
<p>This text will be the third paragraph.</p>
</body>
</html>
```

FIRST PROGRAM

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body>
<h1>Artificial Intelligence</h1>
<p>Artificial intelligence (AI) is the simulation of human intelligence
processes by machines, especially computer systems. Specific applications
of AI include expert systems, natural language processing (NLP), speech
recognition and machine vision.</p>
<p>Learning processes. This aspect of AI programming focuses on acquiring
data and creating rules for how to turn the data into actionable
information. The rules, which are called algorithms, provide computing
devices with step-by-step instructions for how to complete a specific
task.</p>
</body>
</html>
```

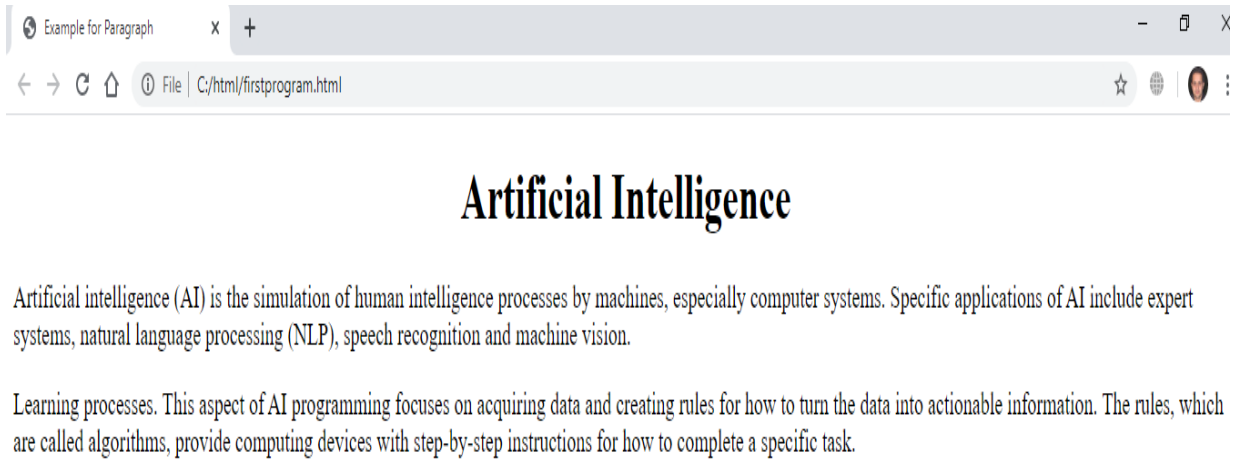


Heading in the center using attribute align

firstprogram - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body>
<h1 align="center">Artificial Intelligence</h1>
<p>Artificial intelligence (AI) is the simulation of human intelligence
processes by machines, especially computer systems. Specific applications
of AI include expert systems, natural language processing (NLP), speech
recognition and machine vision.</p>
<p>Learning processes. This aspect of AI programming focuses on acquiring
data and creating rules for how to turn the data into actionable
information. The rules, which are called algorithms, provide computing
devices with step-by-step instructions for how to complete a specific
task.</p>
</body>
</html>
```

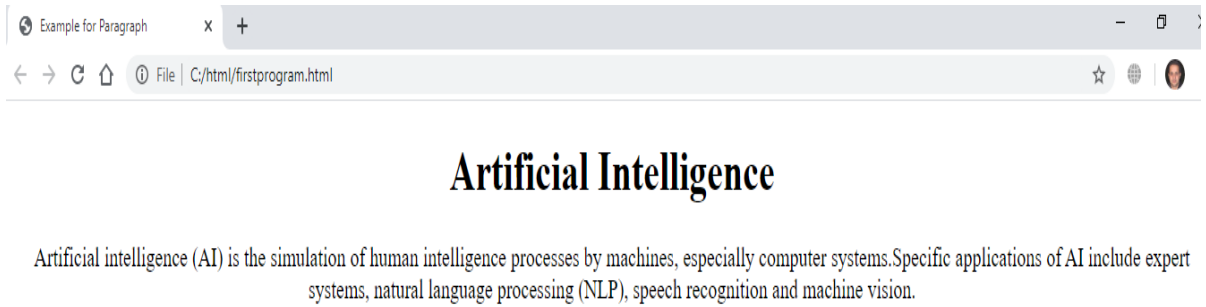


CENTER TAG

firstprogram - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body>
<h1 align="center">Artificial Intelligence</h1>
<center>
<p>Artificial intelligence (AI) is the simulation of human intelligence
processes by machines, especially computer systems. Specific applications
of AI include expert systems, natural language processing (NLP), speech
recognition and machine vision.</p>
</center>
</body>
</html>
```



BREAK TAG

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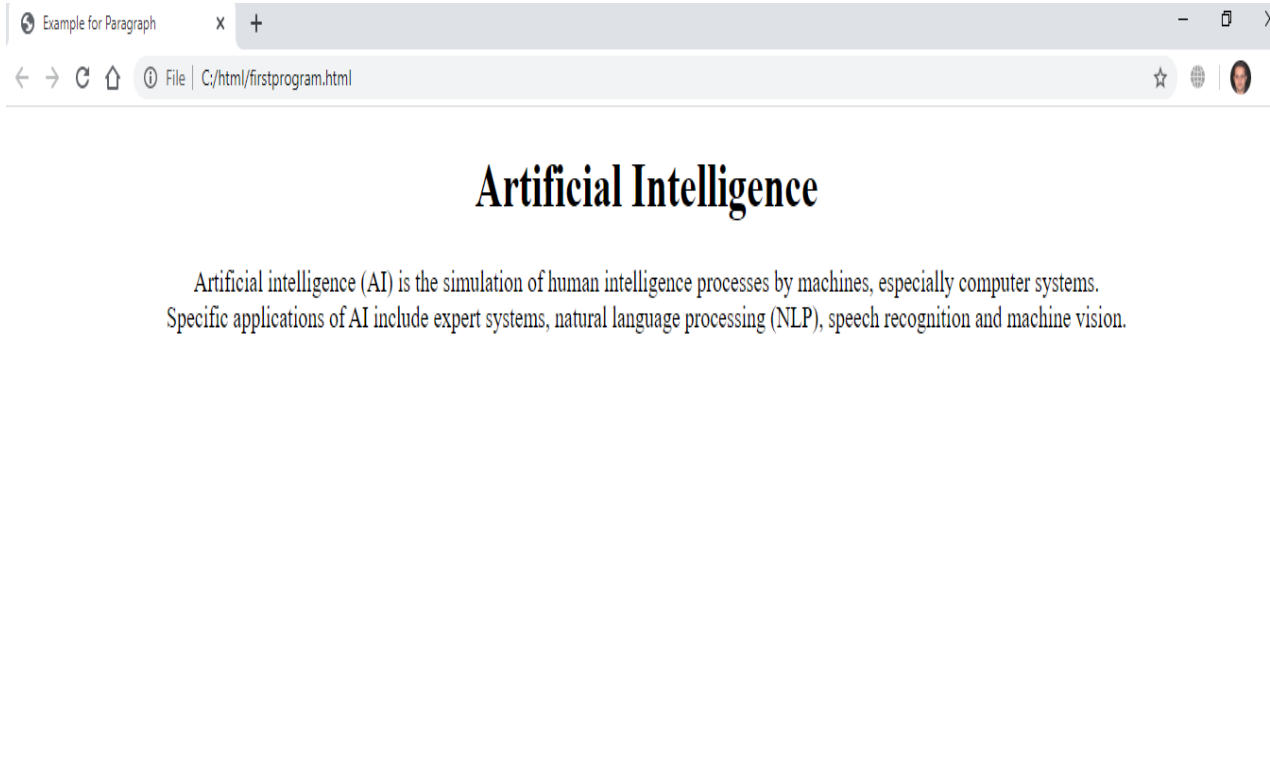
File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body>
<h1 align="center">Artificial Intelligence</h1>
<center>
<p>Artificial intelligence (AI) is the simulation of human intelligence
processes by machines, especially computer systems.<br/>Specific
applications of AI include expert systems, natural language processing
(NLP), speech recognition and machine vision.</p>
</center>
</body>
</html>
```

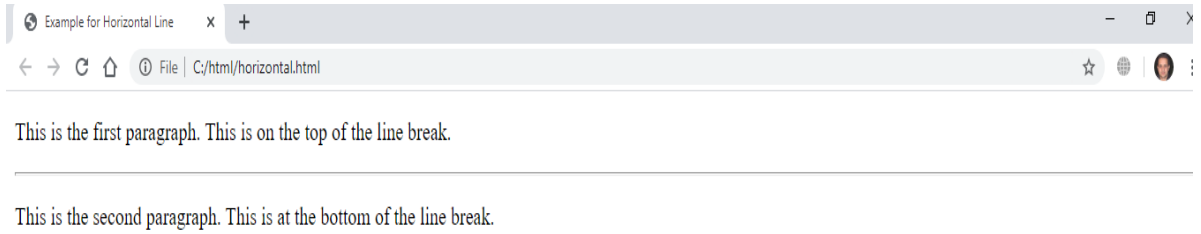


HORIZONTAL LINES

horizontal - Notepad

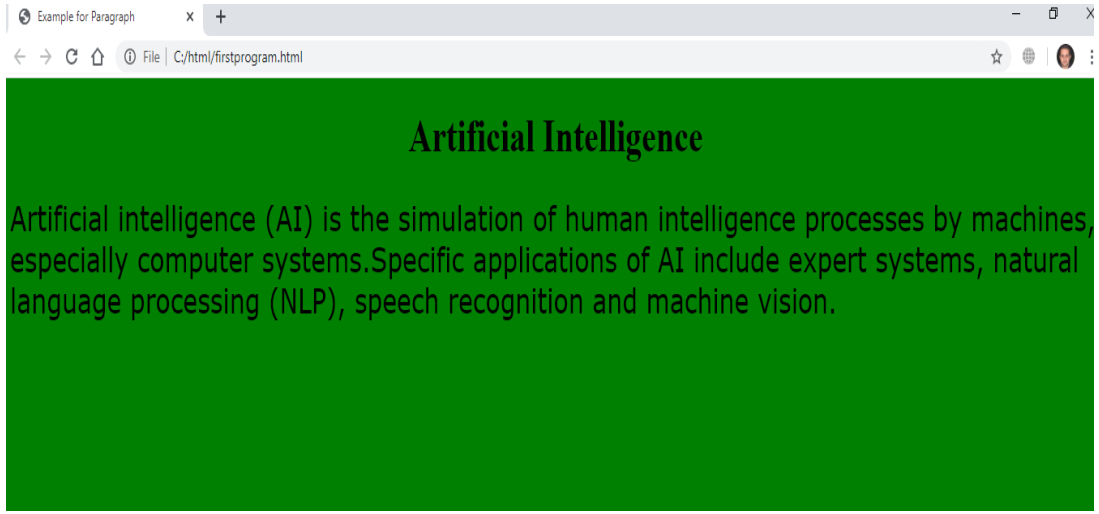
File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Horizontal Line</title>
</head>
<body>
<p>This is the first paragraph. This is on the top of the line break.</p>
<hr/>
<p>This is the second paragraph. This is at the bottom of the line break.
</p>
</body>
</html>
```



Background Color and Font Tag

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body bgcolor = "green">
<h1 align="center">Artificial Intelligence</h1>
<font size = "5" face = "verdana" color = "black">
<p>Artificial intelligence (AI) is the simulation of human intelligence
processes by machines, especially computer systems.Specific applications
of AI include expert systems, natural language processing (NLP), speech
recognition and machine vision.</p>
</font>
</center>
</body>
</html>
```

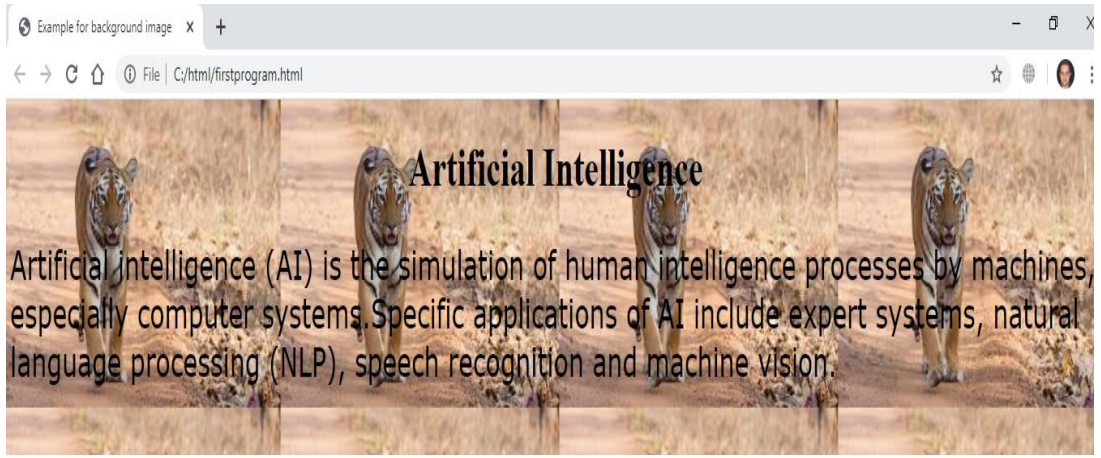


Background Image

firstprogram - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Paragraph</title>
</head>
<body background=  \html\images\download.jpg>
<h1 align="center">Artificial Intelligence</h1>
<font size = "5" face = "verdana" color = "black">
<p>Artificial intelligence (AI) is the simulation of human intelligence
processes by machines, especially computer systems.Specific applications
of AI include expert systems, natural language processing (NLP), speech
recognition and machine vision.</p>
</font>
</center>
</body>
</html>
```

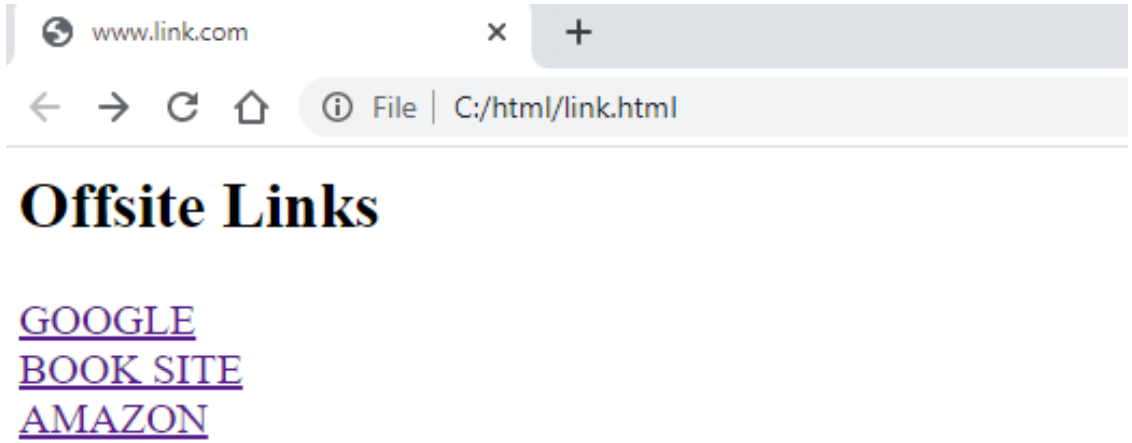


NAVIGATION TAG

link - Notepad

File Edit Format View Help

```
<html>
<head>
<title> www.link.com</title>
</head>
<body>
<nav>
<h2>Links</h2>
<a href="http://www.google.com">GOOGLE</a><br>
<a href="http://www.flipkart.com">BOOK SITE</a><br>
<a href="http://www.amazon.com">AMAZON</a><br>
</nav>
</body>
</html>
```



III FORMATTING IN HTML

BOLD TEXT

Any content that is placed in between **...** element will be displayed as bold text. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Bold Text</title>
</head>
<body>
<p>The following word will be in a <b>bold</b> typeface.</p>
</body>
</html>
```

ITALIC TEXT

Italic Text

Any content that is placed in between **...** element will be displayed as italicized text. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Italic Text</title>
</head>
<body>
<p>The following word will be in a <i>italicized</i> typeface.</p>
</body>
</html>
```

UNDERLINED TEXT

Any content that is placed in between **<u>...</u>** element will be displayed as underlined text. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Underlined Text</title>
</head>
<body>
<p>The following word will be in an <u>underlined</u> typeface.</p>
</body>
</html>
```

STRIKE TEXT

Any content that is placed in between **<strike>...</strike>** element will be displayed as struck text, is a thin line through the text. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Strike Text Example</title>
</head>
<body>
<p>The following word uses a <strike>strikethrough</strike> typeface.</p>
</body>
</html>
```

MONOSPACED FONT

Any content placed in between the **<tt>...</tt>** element will be displayed as monospaced font. Most of the available fonts are variable width fonts. This is because different letters have different widths. For instance the letter **w** is wider than **i.** With a monospaced font, every letter will have the same width. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Monospaced Font</title>
</head>
<body>
<p>The following word uses a <tt>monospaced</tt> typeface.</p>
</body>
</html>
```

SUPERSCRIPT TEXT

You can use the **^{...}** element for adding a superscript on your web page. A superscript is nothing but the text with the same font with the same font size as the text surrounding it, but it will be displayed half a character's height above the surrounding text. Here is an example.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Superscript Text</title>
</head>
<body>
<p>The following word uses a <sup>superscript</sup> typeface.</p>
</body>
</html>
```

The above code will produce the following output:

SUBSCRIPT TEXT

You can use the **_{...}** element for adding a subscript on your web page. A subscript is nothing but the text with the same font with the same font size as the text surrounding it, but it will be displayed half a character's height below the surrounding text. Here is an example.

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Subscript Text</title>
</head>
<body>
<p>The following word uses a <sub>subscript</sub> typeface.</p>
</body>
</html>
```

LARGER TEXT

Any content placed inside the element **<big>...</big>** will be displayed as a one size larger font than the rest of the content surrounding it. Here is an example explaining larger text.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Larger Text</title>
</head>
<body>
<p>You can add<big>larger</big> text in middle of a sentence using this.</p>
</body>
</html>
```

SMALLER TEXT

Any content placed inside the element **<small>...</small>** will be displayed as a one size smaller font than the rest of the content surrounding it. Here is an example explaining smaller text.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Smaller Text</title>
</head>
<body>
<p> You can add <small>smaller</small> text in middle of a sentence using this.</p>
</body>
</html>
```

MARKED TEXT

```
Any content that is placed in between the <mark>...</mark> element will be
shown as marked text, with a yellow link. Here is an example.

<!DOCTYPE html>
<html>
<head>
<title>Marked Text Example</title>
</head>
<body>
<p>The following word has been <mark>marked</mark> with yellow</p>
</body>
</html>
```

QUOTATIONS

You can add double quotes inside a sentence by using the <q>...</q> element. Here is an example.

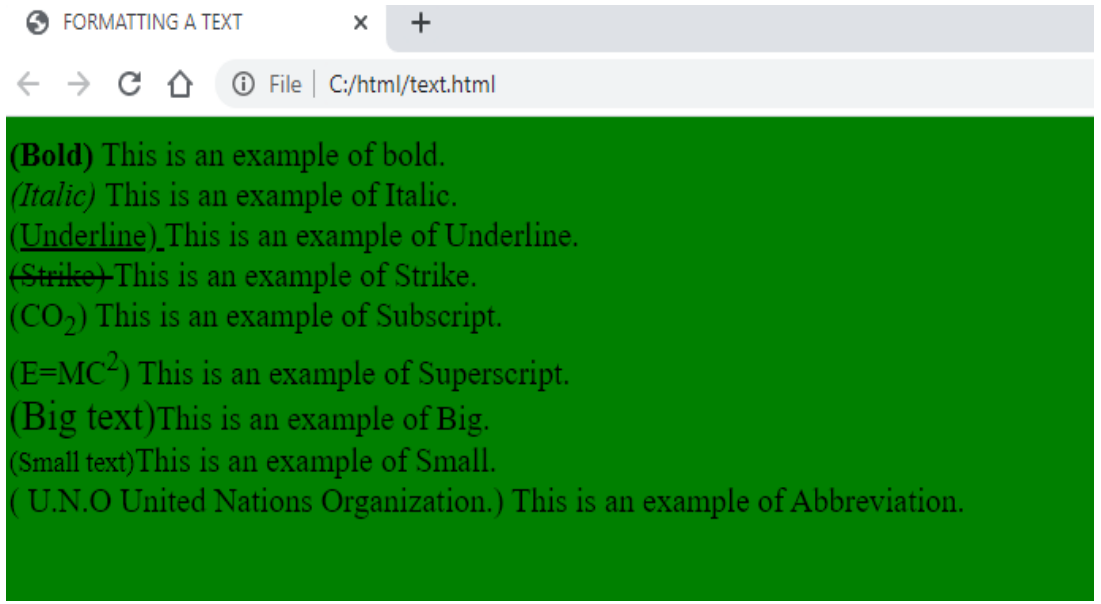
```
<!DOCTYPE html>
<html>
<head>
<title>Example for Double Quote</title>
</head>
<body>
<p>Paul is in Spain, <q>I think I am right</q>.</p>
</body>
</html>
```

DIFFERENT FORMATTING TAGS

text - Notepad

File Edit Format View Help

```
<html>
<head>
<title>FORMATTING A TEXT</title>
</head>
<body bgcolor="green">
<p>
<b> (Bold)</b> This is an example of bold. <br/>
<i>(Italic)</i> This is an example of Italic. <br/>
<u> (Underline) </u> This is an example of Underline. <br/>
<strike>(Strike) </strike> This is an example of Strike. <br/> (CO<sub>2</sub>)
This is an example of Subscript. <br/>
(E=MC<sup>2</sup>) This is an example of Superscript. <br/>
<big>(Big text)</big>This is an example of Big. <br/>
<small>(Small text)</small>This is an example of Small. <br/>
(<abbr> U.N.O</abbr> United Nations Organization.) This is an example of
Abbreviation. <br/>
</p>
</body>
</html>
```



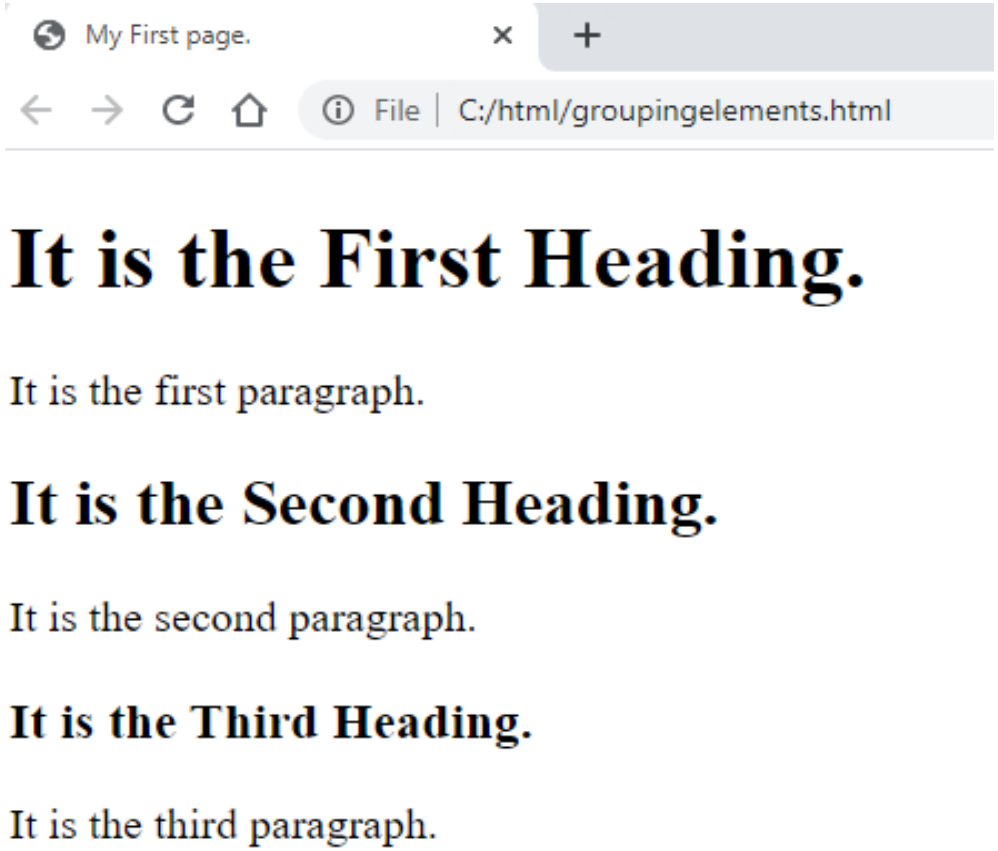
GROUPED TEXT TAG(div)

It is used to group different elements to created divisions or sections of a web page.
It is written as: < div > Place content here.....! </ div >

groupingelements - Notepad

File Edit Format View Help

```
<head>
<title> My First page. </title>
</head>
<body>
<div id =” first” align =” left”>
<h1> It is the First Heading. </h1>
<p> It is the first paragraph. </p>
</div >
<div id =” second” align =” right”>
<h2> It is the Second Heading. </h2>
<p> It is the second paragraph. </p>
</div>
<div id =” third” align =” right”>
<h3> It is the Third Heading. </h3>
<p> It is the third paragraph. </p>
</div>
</body>
</html>
```

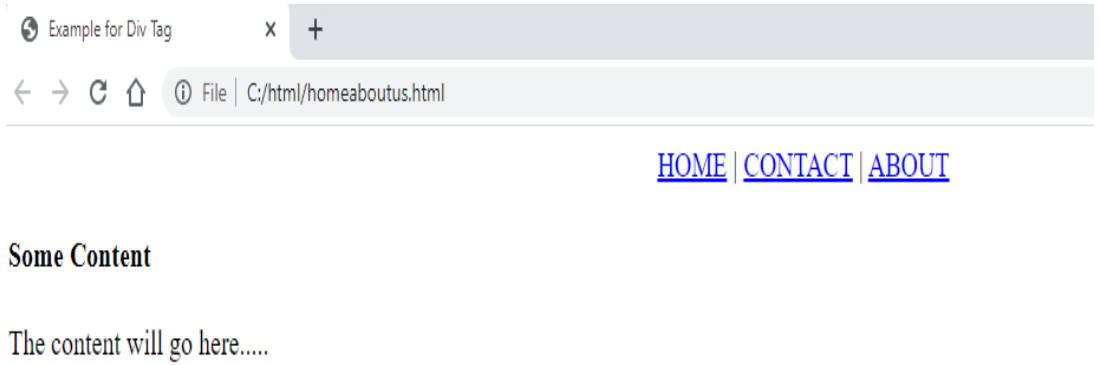


Grouping Home About US Contact US

homeaboutus - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>Example for Div Tag</title>
</head>
<body>
<div id="menu" align="middle" >
<a href="/index.htm">HOME</a> |
<a href="/about/contact_us.htm">CONTACT</a> |
<a href="/about/index.htm">ABOUT</a>
</div>
<div id="content" align="left" bgcolor="white">
<h4>Some Content</h4>
<p>The content will go here.....</p>
</div>
</body>
</html>
```



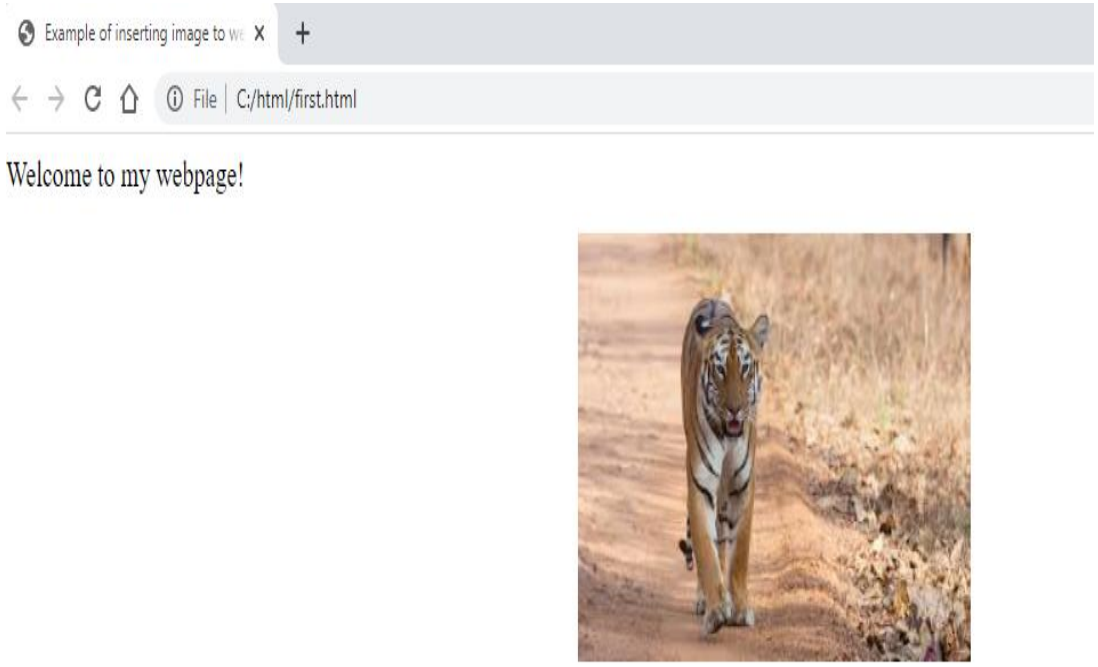
IV HTML IMAGE TAG AND ATTRIBUTES

Inserting an image on Webpage

first - Notepad

File Edit Format View Help

```
<! DOCTYPE html >
<html>
<head>
<title> Example of inserting image to web page</title>
</head>
<body>
<p> Welcome to my webpage! </p>
<center>
<img src = \html\images\download.jpg alt = “Example Image.”/>
</center>
</body>
</html>
```



Set an image with width/height attribute

first - Notepad

File Edit Format View Help

```
<! DOCTYPE html >
<html>
<head>
<title> Example of inserting image to web page</title>
</head>
<body>
<p> Welcome to my webpage! </p>
<center>
<img src = \html\images\download.jpg alt = “Example Image.” width= 500
height=500/>
</center>
</body>
</html>
```

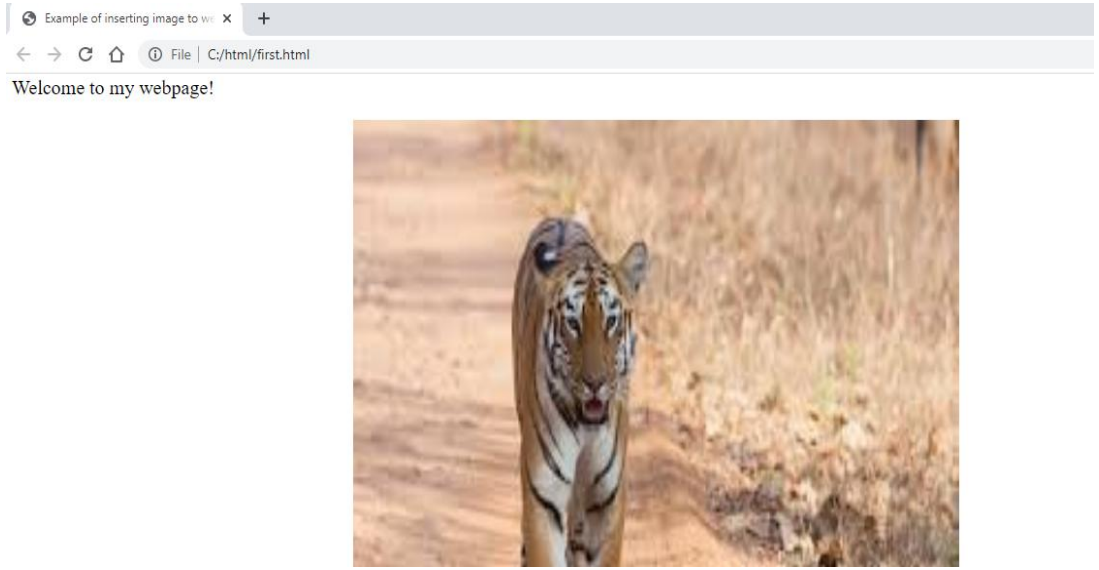


Image Border

first - Notepad

File Edit Format View Help

```
<! DOCTYPE html >
<html>
<head>
<title> Example of inserting image to web page</title>
</head>
<body>
<p> Welcome to my webpage! </p>
<center>
<img src = \html\images\download.jpg alt = “Example Image.” border="3"/>
</center>
</body>
</html>
```

Example of inserting image to we

File | C:/html/first.html

Welcome to my webpage!

Image Alignment(right,left,center)
For center alignment use center tag

first - Notepad

File Edit Format View Help

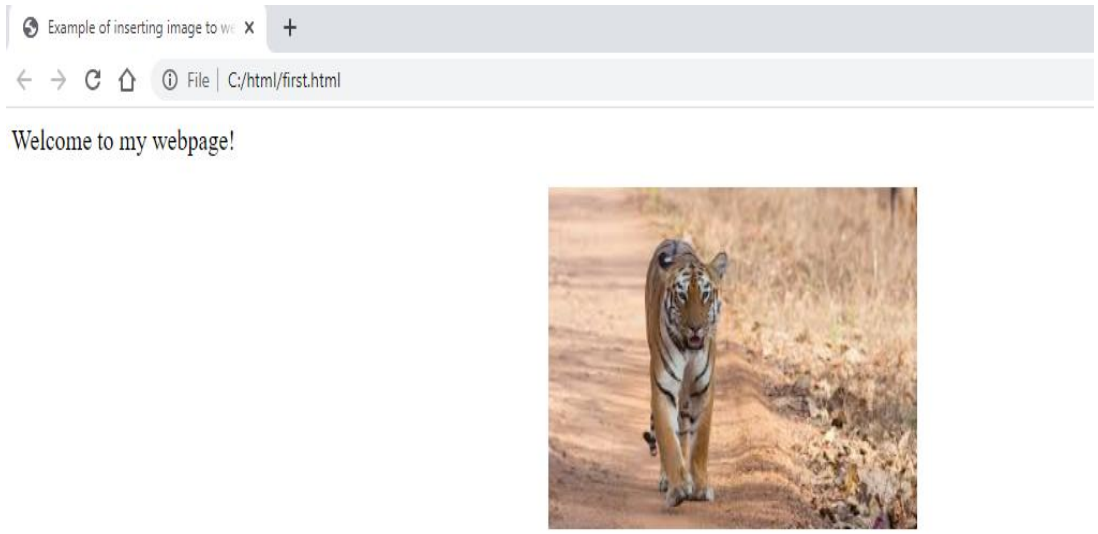
```
<! DOCTYPE html >
<html>
<head>
<title> Example of inserting image to web page</title>
</head>
<body>
<p> Welcome to my webpage! </p>
<img src = \html\images\download.jpg alt = “Example Image.”
align="right"/>
</body>
</html>
```

Image Alignment(center)

first - Notepad

File Edit Format View Help

```
<! DOCTYPE html >
<html>
<head>
<title> Example of inserting image to web page</title>
</head>
<body>
<p> Welcome to my webpage! </p>
<center>
<img src = \html\images\download.jpg alt = “Example Image.”/>
</center>
</body>
</html>
```



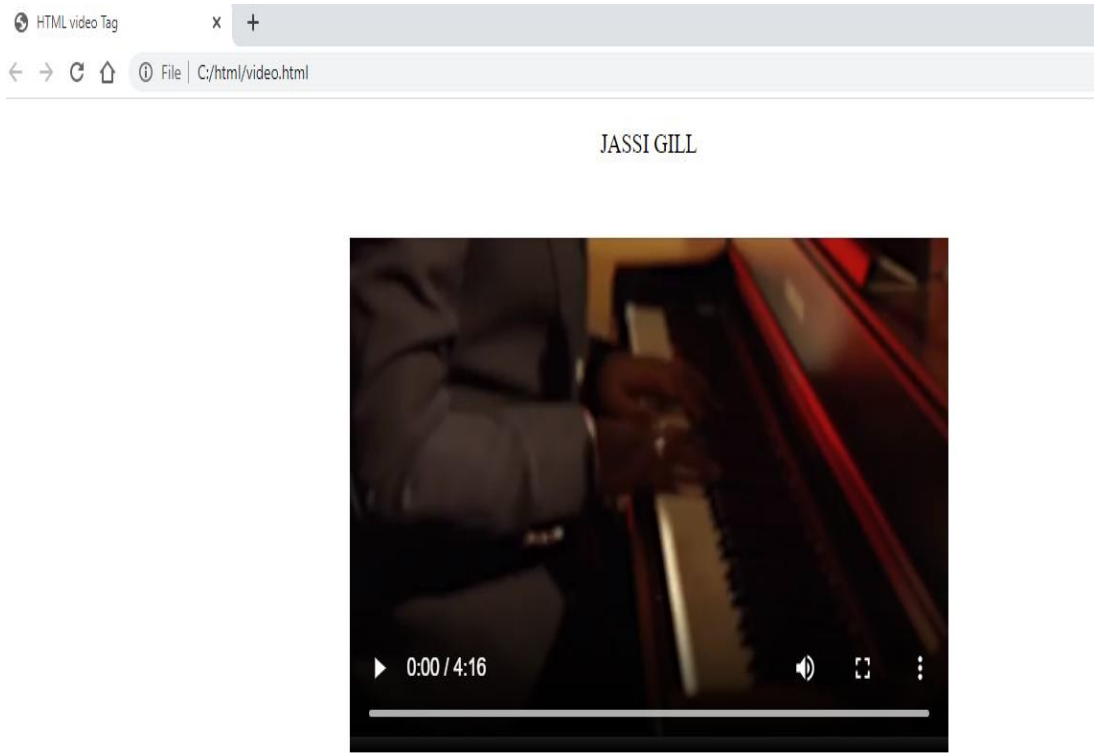
V VIDEO TAG

VIDEO FROM LOCAL STORAGE(LAPTOP/PC)

video - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title>HTML video Tag</title>
</head>
<body>
<center>
<p>JASSI GILL</p>
<br />
<video width = "500" height = "300" controls>
<source src = "/html/video/JASSI.mp4" type = "video/mp4">
</video>
</center>
</body>
</html>
```

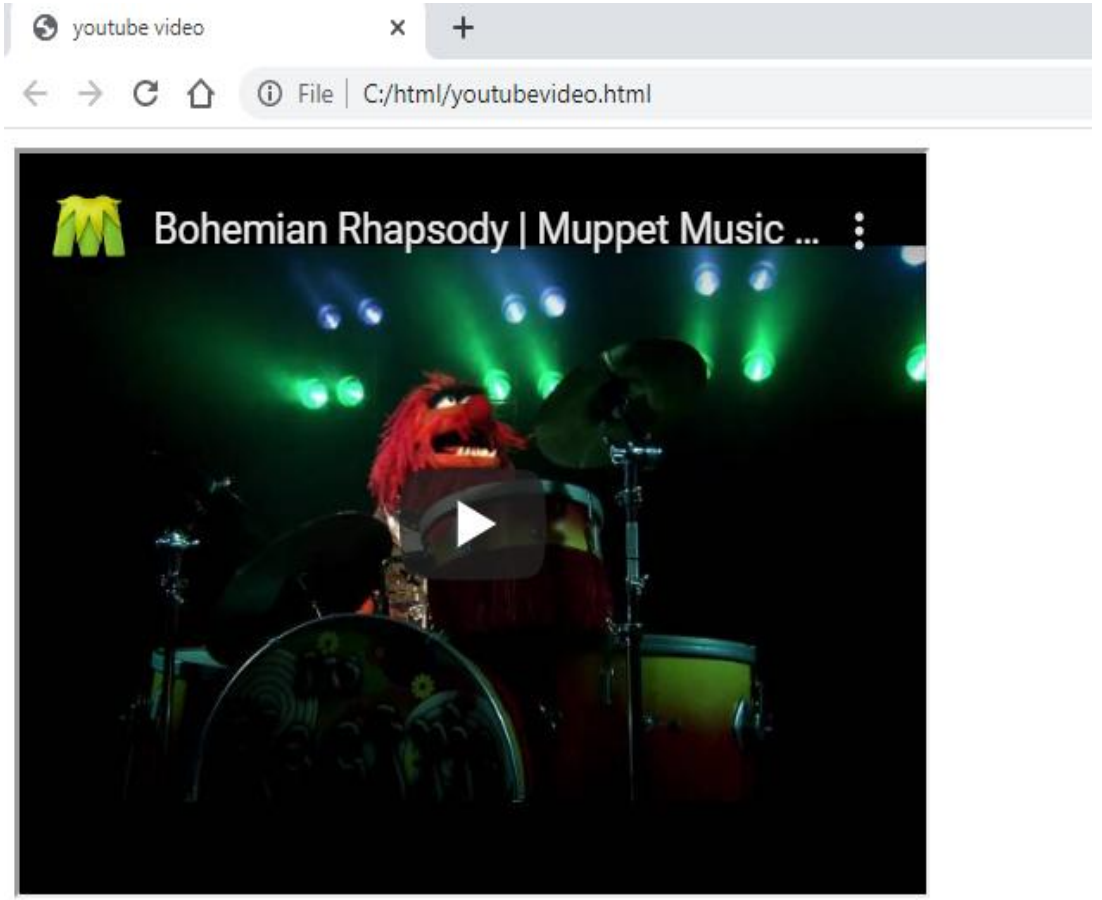


VIDEO FROM YOUTUBE

youtubevideo - Notepad

File Edit Format View Help

```
<html>
<head>
<title>youtube video</title>
</head>
<body>
<iframe width="420" height="315"
src="https://www.youtube.com/embed/tgbNymZ7vqY">
</iframe>
</body>
</html>
```



VI AUDIO TAG

AUDIO TAG

audio - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<title> Audio</title>
</head>
<body>
<audio controls="controls">
<source src= /html/audio/shayad.mp3  type="audio/mpeg" />
</audio>
</body>
</html>
```

VII LISTS

LISTS

- In HTML, information can be specified using three types of lists.
- A list must contain at least one list element.
- Lists contain:
- - This is an unordered list. The list items will be listed using plain bullets.
- - This is an ordered list. The list items in this list will be listed with different schemes of numbers.
- <dl> - This is a definition list. The items in the definition list will be arranged in the same way as they are in a dictionary.

UNORDERED LIST

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Unordered List</title>
</head>
<body>
<ul>
<li>Apple</li>
<li>Mango</li>
<li>Banana</li>
<li>Pear</li>
</ul>
</body>
</html>
```

type Attribute

- The type Attribute You can actually specify the type of bullet to be used by using the type attribute of the <ul> tag.
- The default a bullet time is a disc.
- The other possible options are:
  <ul type="disc">

  <ul type="square">

  <ul type="circle">

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Unordered List</title>
</head>
<body>
<ul type="square">
<li>Apple</li>
<li>Mango</li>
<li>Banana</li>
<li>Pear</li>
</ul>
</body>
</html>
```

ORDERED LIST

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Ordered List</title>
</head>
<body>
<ol>
<li>Apple</li>
<li>Mango</li>
<li>Banana</li>
<li>Pear</li>
</ol>
</body>
</html>
```

The type Attribute

- You can specify the numbering type you like by using the type attribute of the <ol> tag. The number will be the default numbering type.
- The other possible options are the following:
- <ol type="A"> - Upper-Case Letters.
- <ol type="a"> - Lower-Case Letters.
- <ol type="I"> - Upper-Case Numerals.
- <ol type="i"> - Lowercase Numerals.
- <ol type="1"> - Default-Case Numerals.

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Ordered List</title>
</head>
<body>
<ol type="I">
<li>Apple</li>
<li>Mango</li>
<li>Banana</li>
<li>Pear</li>
</ol>
</body>
</html>
```

DEFINITION LIST

- XHTML an HDMI support a list style called the definition list. Here are the entities will be listed like as they are in a encyclopedia or dictionary.
- Using the definition list is ideal for representing a list of items, glossary, or other value/name lists.
- The given tags will be used by the definition list.
- <dl> - Defines the start of the list
- <dt> - A term
- <dd> - Term definition
- </dl> - Defines the end of the list

DEFINITION LIST

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Definition List</title>
</head>
<body>
<dl>
<dt><b>HTML</b></dt>
<dd>This stands for Hyper Text Markup Language</dd>
<dt><b>HTTP</b></dt>
<dd>This stands for Hyper Text Transfer Protocol</dd>
</dl>
</body>
</html>
```

VIII TABLES

TABLE

- HTML tables are created with the <table> tag.
- The <tr> tag is used to define table rows while the <td> is used to define data cells within the row.

```
<!DOCTYPE html>
<html>
<head>
<title>Company Officials</title>
</head>
<body>
<caption>Corporate Heads</caption>
<table border="1" bordercolor="blue"
    <tr bgcolor="silver">
        <th></th>
    </tr>
    <tr>
       <th align="center" width="200px">Name</th>
       <th align="center" width="200px">Position</th>
       <th align="center" width="200px">Department</th>
    </tr>
    <tr>
       <td align="center"> Jack Mccalister</td>
       <td align="center">CEO</td>
       <td align="center">Executive</td>
    </tr>
     <tr>
         <td align="center"> Jane March</td>
        <td align="center">President</td>
        <td align="center">Executive</td>
     </tr>
     <tr>
          <td align="center"> Shane Dans</td>
        <td align="center">IT Manager</td>
        <td align="center">Data Processing</td>
      </td>
</table>
</body>
</html>
```

TABLE ATTRIBUTES

Attribute	Meaning	Values
align	Indicates the table's horizontal alignment	left, center, right
background	Indicates the table's background image	filename with path
bgcolor	Indicates the table's background color	color's name or hex value
border	Indicates the border's thickness in pixels	number of pixels
bordercolor	Indicates the border's color	color name or hex value
width	Indicates the table's width in pixels or	number of pixels or

TABLE ATTRIBUTES

	percentage of the width displayed by the web browser	percentage of the width displayed
cellpadding	Indicates the distance between cell content and the borders around it in pixels	number of pixels
cellspacing	Indicates the distance between the cells in pixel	number of pixels

Cell padding and Cell spacing

table - Notepad

File Edit Format View Help

```
<html>
<head>
<title>Company Officials</title> </head>
<body>
<table align="center" border="3" bordercolor="green" width="600"
cellpadding="5"  cellspacing="7">
<caption><h3>Corporate Heads</h3></caption>
<tr>
<td><b>Name</b></td>
<td><b>Position</b></td>
<td><b>Department</b></td>
</tr>
<tr>
<td>Jack Mccalister</td>
<td>CEO</td>
<td>Executive</td>
</tr>
<tr>
<td>Jane March</td>
<td>President</td>
<td>Executive</td>
</tr>
<tr>
<td> Shane Dans</td>
<td>IT Manager</td>
<td>Data Processing</td>
</tr>
</table>
</body>
</html>
```

Modifying Table Rows

table - Notepad

File Edit Format View Help

```
<title>Company Officials</title> </head>
<body>
<table align="center" border="3" bordercolor="green" width="600"
cellpadding="5"  cellspacing="7">
<caption><h3>Corporate Heads</h3></caption>

<tr height=35" bgcolor="lime", align="center">
<td><b>Name</b></td>
<td><b>Position</b></td>
<td><b>Department</b></td>
</tr>

<tr>
<td>Jack Mccalister</td>
<td>CEO</td>
<td>Executive</td>
</tr>
<tr>
<td>Jane March</td>
<td>President</td>
<td>Executive</td>
</tr>
<tr>
<td> Shane Dans</td>
<td>IT Manager</td>
<td>Data Processing</td>
</tr>
</table>
</body>
</html>
```

Modifying Table Data

table - Notepad

File Edit Format View Help

```
<html>
<head>
<title>Company Officials</title> </head>
<body>
<table align="center" border="3" bordercolor="green" width="600"
cellpadding="5"  cellspacing="7">
<caption><h3>Corporate Heads</h3></caption>

<tr height=35" bgcolor="lime", align="center">
<td><b>Name</b></td>
<td><b>Position</b></td>
<td><b>Department</b></td>
</tr>

<tr>
<td align="center" bgcolor="yellow">Jane March</td>
<td>President</td>
<td>Executive</td>
</tr>

<tr>
<td align="center"  bgcolor="yellow">Shane Dans</td>
<td>IT Manager</td>
<td>Data Processing</td>
</tr>
</table>
</body>
</html>
```

Merging Cells Horizontally(colspan)

```
<!DOCTYPE html>
<html>
<head>
<title>Simple Table</title>
</head>
<body>
<table align= "center" border="3" width="600">
<tr>
<td colspan="3">Science</td>
</tr>
<tr>
<td>Botany</td>
<td>Zoology</td>
<td>Bacteriology</td>
</tr>
<tr>
<td>Entomology</td>
<td>Ornitology</td>
<td>Ecology</td>
</tr>
</table>
</body>
</html>
```

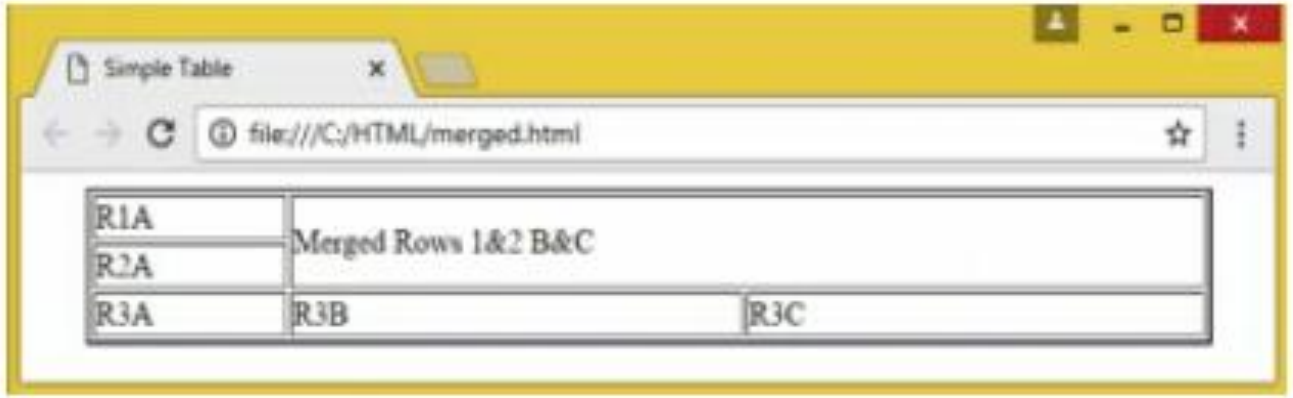
Merging Cells Vertically(rowspan)

```
<!DOCTYPE html>
<html>
<head>
<title>Simple Table</title>
</head>
<body>
<table align= "center" border="3" width="600">
<tr>
<td rowspan="3">Science</td>
<td>Biology</td>
<td>Maths</td>
<td>English</td>
</tr>
<tr>
<td>Botany</td>
<td>Zoology</td>
<td>Bacteriology</td>
</tr>
<tr>
<td>Entomology</td>
<td>Ornitology</td>
<td>Ecology</td>
</tr>
</table>
</body>
</html>
```

Merging Cells Vertically and Horizontally

```
<!DOCTYPE html>
<html>
<head>
<title>Simple Table</title>
</head>
<body>
<table align= "center" border="3" width="600">
<tr>
<td rowspan="3">Science</td>
<td colspan=“3”>Biology</td>
</tr>
<tr>
<td>Botany</td>
<td>Zoology</td>
<td>Bacteriology</td>
</tr>
<tr>
<td>Entomology</td>
<td>Ornitology</td>
<td>Ecology</td>
</tr>
</table>
</body>
</html>
```

Practice Question1



CSS

I INTRODUCTION

CSS

- CSS means Cascading Style Sheets. CSS was created to simplify the process of designing and presenting web pages. It is an easy-to-learn design language that offers powerful control over the presentation of HTML documents.
- CSS lets you save time. You can write one style sheet and define a style for each element and apply it to several HTML pages.
- Faster loading time. If you’re using CSS, you need not create HTML tag attributes all the time. You just have to write a CSS style for a tag and apply it to each occurrence of that tag. This means less code which translates to faster loading time.

CSS

- CSS3 is the latest version of Cascading Style Sheets. It introduced many new properties that are currently being implemented in most browsers. The following are CSS3's most important modules:

✓Selectors

✓Text effects

✓Backgrounds and borders

✓Box model

✓2D/3D transformations

✓Animations

✓Multiple column layout

✓User interface

CSS PARTS

- A CSS style rule consists of two major parts:
- Selector: A selector is the HTML tag or element that will be styled. It could be any tag like <table>, <p>, or <h1>. You can specify several selectors over which the style may be applied.

- Declaration block: A declaration block consists of a property: value pair and each pair are separated by a colon. A CSS property points to an HTML attribute and can include color, border, etc. A value is assigned to each property declared. A declaration block is enclosed by curly braces and may contain one or more declarations which are separated by semicolons.
- Here's an example of a rule set:

  h1 {color:red; font-size:10px}

CSS SELECTORS

- Selectors are used to specify HTML elements based on their id, name, attribute, class, etc. There are different ways to define CSS selectors and you can choose whichever you need or whatever feels more convenient.

➢ **The Element Selector**: The element selector uses the element's name as the basis for implementing a style.

- For example:

```
p {
    text-align: left;
    color: blue;
}
```

- The above style rule will result in all <p> elements to be left-aligned with a blue text color.

CSS SELECTORS

- **ID Selector**: ID selectors name an element's id attribute as the basis for implementing a style set. An element with that ID will be formatted according to its style rule. To use the ID selector, you will write a hash (#) character before the element's ID.
- For example, the following style rule will apply to an element with the id of "parax":

```
#parax {
        text-align: left;
        color: blue;
      }
```

CSS SELECTORS

- **Class Selector**: Class selectors are used to format elements with a particular class attribute. The style rule you define will apply to all elements that match the specified class. To use the class selector, you will write a period (.) before the class name.
- For example, in the following code, all HTML elements with class="black" will be blue and left-aligned:

```
.black {
        text-align: left;
        color: blue;
      }
```

INSERTING A STYLE SHEET

- There are three ways to insert a style sheet:
- External style sheet
- Internal style sheet
- Inline style

➢ **External Style Sheets :** An external style sheet allows you to change the look of multiple pages and the layout of your entire website by simply changing a single file. Any modification made to the external style sheet instantly updates all web pages. The external style sheet is implemented by making a reference to the file inside the link element placed within the <head> section of the HTML page.

EXTERNAL STYLE SHEETS

external - Notepad

File Edit Format View Help

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css"
</head>
<body>
<h1>Artificial intelligence</h1>
<p>Robotics</p>
</body>
</html>
```

*mystyle - Notepad

File Edit Format View Help

```
body {
      background-color: lightblue;
      }
h1    { color: navy;
        margin-left: 35px;
      }
```

INTERNAL STYLE SHEETS

- An internal style sheet is commonly used when you want to present a page in a different style.
- It is defined inside the <style> element placed within the <head> and </head> tags of the HTML page.
- For example, the following code uses an internal style sheet to create a pink background for the entire page and a heading in green font:

INTERNAL STYLE SHEETS

*internal - Notepad

File Edit Format View Help

```
<html>
<head>
<title>Dog Breeds</title>
<style>
body {    background-color: pink;
      }
h3    { color: green; margin-left:40px;
      }
</style>
</head>
<body>
<font size="5">
<h3 align="center">Top Dog Breeds</h3>
<p align="justify"> A Siberian Husky is a working dog with various coat
markings and colors.</p>
</font>
</body>
</html>
```

INLINE STYLE SHEETS

- An inline style is commonly used to apply a unique style or isolated changes to a single element such as a headline, paragraph, or other element.
- The use of inline style will override both external and internal style sheets.
- To use it, you have to add the style attribute to the specific element.

INLINE STYLESHEET

```
<!DOCTYPE html>
<html>
<body>
<h1 style="color:yellow;margin-left:25px;">This space is reserved for a heading. </h1>
<p>This is a space for a paragraph.</p>
</body>
</html>
```