HTML4 – WEB DESIGNING

HTML 4.0

❖ What is HTML?

- HTML is an acronym which stands for Hyper Text Markup Language which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.
- HyperText: HyperText simply means "Text within Text." A text has a link within it, is a hypertext. Whenever you click on a link which brings you to a new webpage, you have clicked on a hypertext. HyperText is a way to link two or more web pages (HTML documents) with each other.
- 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. Markup language makes text more interactive and dynamic. While several markup languages exist, the two most popular are HTML and XML. It can turn text into images, tables, links, etc.
- Web Page: A web page is a document which is commonly written in HTML and translated by a web browser. A web page can be identified by entering an URL and may contain text, graphics, and hyperlinks to other web pages and files. A Web page can be of the static or dynamic type. With the help of HTML only, we can create static web pages.
- The major points of HTML are given below:
 - o HTML stands for Hypertext Markup Language.
 - HTML is used to create web pages and web applications.
 - o HTML is widely used language on the web.
 - We can create a static website by HTML only.
 - Technically, HTML is a Markup language rather than a programming language.

♦ HTML text Editors

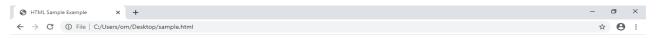
- An HTML file is a text file, so to create an HTML file we can use any text editors.
- Text editors are the programs which allow editing in a written text, hence to create a web page we need to write our code in some text editor.
- There are various types of text editors available which you can directly download, but for a beginner, the best text editor is Notepad (Windows) or TextEdit (Mac).
- After learning the basics, you can easily use other professional text editors which are, Notepad++, Sublime Text, Brackets and Dreamweaver etc.

♦ HTML Syntax

Example:

```
<!DOCTYPE html>
<html>
<head>
    <title>HTML Sample Example</title>
</head>
    <body>
        <h1>The building blocks</h1>
        This is a paragraph tag
        </body>
</html>
```

Output:



The building blocks

This is a paragraph tag

Example Explained

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

♦ HTML Tag

 HTML tags are like keywords which define that how web browser will format and display the content. With the help of tags, a web browser can distinguish between an HTML content and a

- simple content. HTML tags contain three main parts: opening tag, content and closing tag. But some HTML tags are unclosed tags.
- When a web browser reads an HTML document, browser reads it from top to bottom and left to right. HTML tags are used to create HTML documents and render their properties. Each HTML tags have different properties.
- An HTML file must have some essential tags so that web browser can differentiate between a simple text and HTML text. You can use as many tags you want as per your code requirement.
- The major points of HTML Tag are given below:
 - All HTML tags must enclosed within < > these brackets.
 - Every tag in HTML perform different tasks.
 - If you have used an open tag <tag>, then you must use a close tag </tag> (except some tags)

Syntax:

< tagname> content </ tagname>

- There are three types of tags :
 - **1. Pair Tag :** A tag is said to be a paired tag if the text is placed between a tag and its companion tag. In paired tags, the first tag is referred to as *Opening Tag* and the second tag is referred to as *Closing Tag*. For example, ..., <h1>...</h1>, etc.
 - **2. Single Tag :** A Single tag does not have a companion tag or closing tag. Unpaired tags are also known as *Singular* or *Stand-Alone* Tags. For example,

 + (hr), etc.

HTML Attribute

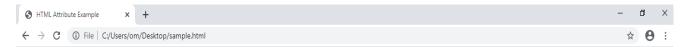
- HTML attributes are special words which provide additional information about the elements or attributes are the modifier of the HTML element.
- Each element or tag can have attributes, which defines the behaviour of that element.
- Attributes should always be applied with start tag.
- The Attribute should always be applied with its name and value pair.
- The Attributes name and values are case sensitive, and it is recommended by W3C that it should be written in Lowercase only.
- You can add multiple attributes in one HTML element, but need to give space between two attributes.

Syntax:

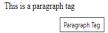
<tagname attribute_name= " attr_value"> content </ tagname>

```
<!DOCTYPE html>
<html>
<head>
    <title>HTML Attribute Example</title>
</head>
    <body>
        <h1 align="center">Example of HTML Attribute</h1>
        This is a paragraph tag
</body>
</html>
```

Output:

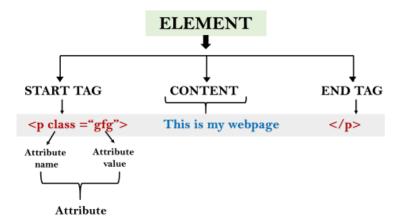


Example of HTML Attribute



HTML Elements

- An HTML element is an individual component of an HTML file. In an HTML file, everything written within tags are termed as HTML elements. These elements are responsible for creating web pages and define content in that webpage. Technically, an element is a collection of start tag, attributes, end tag, content between them.
- Note: Some elements does not have end tag and content, these elements are termed as empty elements.



```
<!DOCTYPE html>
<html>
<head>
<title>WebPage</title>
</head>
<body>
<h1>This is my first web page</h1>
<h2> How it looks?</h2>
It looks Nice!!!!!
</body>
</html>
```

Output:



HTML Heading

- A HTML heading or HTML h tag can be defined as a title or a subtitle which you want to display on the webpage. When you place the text within the heading tags <h1>.....</h1>, it is displayed on the browser in the bold format and size of the text depends on the number of heading.
- There are six different HTML headings which are defined with the <h1> to <h6> tags, from highest level h1 to the least level h6.
- h1 is the largest heading tag and h6 is the smallest one. So h1 is used for most important heading and h6 is used for least important.
- Headings in HTML helps the search engine to understand and index the structure of webpage.

Note : The main keyword of the whole content of a webpage should be display by h1 Heading tag. Heading elements (h1....h6) should be used for headings only. They shoul not be used just to make text bold or big

```
<h1>Heading no. 1</h1>
<h2>Heading no. 2</h2>
<h3>Heading no. 3</h3>
<h4>Heading no. 4</h4>
<h5>Heading no. 5</h5>
<h6>Heading no. 6</h6>
```

Output:



Heading no. 1

Heading no. 2 Heading no. 3

Heading no. 4

Heading no. 5

Heading no. 6

Attributes

The HTML <h1> to <h6> tag also supports the following additional attributes –

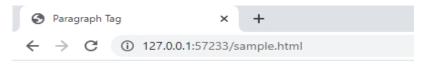
| Attribute | Value | Description |
|-----------|------------------------------------|--|
| align | left right center justify | Specifies text alignment within a paragraph. |
| title | user defined value | The title attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element. |

HTML Paragraph

HTML paragraph or HTML p tag is used to define a paragraph in a webpage. Browser itself add
an empty line before and after a paragraph. An HTML tag indicates starting of new
paragraph.

```
This is first paragraph.
This is second paragraph.
This is third paragraph.
```

Output:



This is first paragraph.

This is second paragraph.

This is third paragraph.

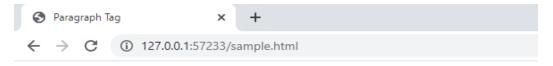
♣ Space inside HTML Paragraph:

• If you put a lot of spaces inside the HTML p tag, browser removes extra spaces and extra line while displaying the page. The browser counts number of spaces and lines as a single one.

Example:

```
Look, I put here a lot
of spaces but I know, Browser will ignore it.
```

Output:



Look, I put here a lot of spaces but I know, Browser will ignore it.

• If u want a space between characters or words, use (HTML Entity). This space is a non-breaking space, means a space that will not break into a new line.

Look, I put here a lot of spaces &nb

Output:



Look, I put here a lot of spaces but I know, Browser will accept it.

↓ How to Use
 and <hr > tag with paragraph?

• An HTML
tag is used for line break and generally it can be used with paragraph elements. Following is the example to show how to use
br> with element.

Example:

ITView - Software Training Institute

Solitaire Business Hub

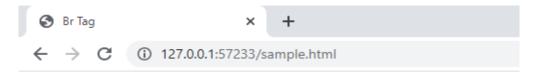
#216,2nd floor,kaspate wasti,

Vishnu Dev Nagar, Wakad,

Pimpri-Chinchwad,Pune-411057

Landmark - opp. Hotel Ambience Excellency

Output:



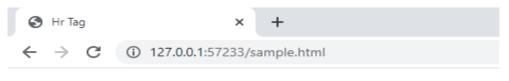
ITView - Software Training Institute Solitaire Business Hub #216,2nd floor,kaspate wasti, Vishnu Dev Nagar, Wakad, Pimpri-Chinchwad,Pune-411057 Landmark - opp. Hotel Ambience Excellency

• An HTML <hr> tag is used to apply a horizontal line between two statements or two paragraphs. Following is the example which is showing use of <hr> tag with paragraph.

Example:

```
Address :
<hr>
ITView - Software Training Institute<br>
Solitaire Business Hub<br>
#216,2nd floor,kaspate wasti,<br>
Vishnu Dev Nagar, Wakad,<br>
Pimpri-Chinchwad,Pune-411057<br>
Landmark - opp. Hotel Ambience Excellency<br>
```

Output:



Address:

ITView - Software Training Institute Solitaire Business Hub #216,2nd floor,kaspate wasti, Vishnu Dev Nagar, Wakad, Pimpri-Chinchwad,Pune-411057 Landmark - opp. Hotel Ambience Excellency

Attributes

The HTML tag also supports the following additional attributes:

| Attribute | Value | Description |
|-----------|------------------------------------|--|
| align | left right center justify | Specifies text alignment within a paragraph. |
| title | user defined value | The title attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element. |

HTML Formatting :

• **HTML Formatting** is a process of formatting text for better look and feel. HTML provides us ability to format text without using CSS. There are many formatting tags in HTML. These tags are used to make text bold, italicized, or underlined.

Bold Text :

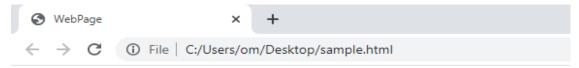
HTML and formatting elements

The HTML element defines **bold** text, without any extra importance. If you write anything within element, is shown in bold letters.

Example:

This is an example of Bold text.

Output:



This is an example of **Bold text**.

The HTML element defines strong text, with added semantic "strong" importance.

Example:

This is an example of Strong text.

Output:



This is an example of Strong text.

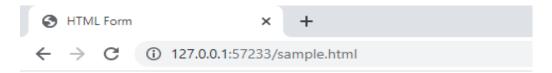
➤ Italic Text :

The HTML <i> element defines *italic* text, without any extra importance. If you write anything within <i>......</i> element, is shown in italic letters.

Example:

This is an example of <i> Italic text</i>.

Output:



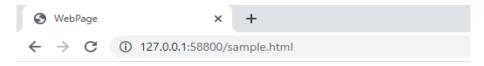
This is an example of Italic text.

o The HTML element defines *emphasized* text, with added semantic importance.

Example:

This is an example of emphasized text.

Output:



This is an example of emphasized text.

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

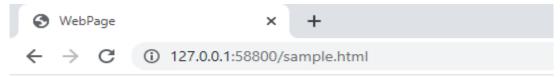
> HTML Marked:

 If you want to mark or highlight a text, you should write the content within <mark>.....</mark>.

Example:

This is an example of <mark> Marked text</mark>.

Output:



This is an example of Marked text.

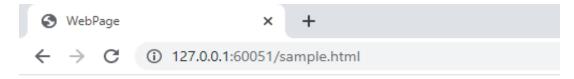
Underlined Text:

 $\circ\quad$ If you write anything within <u>.....</u> element, is shown in underlined text.

Example:

This is an example of <u> Underlined text </u>.

Output:



This is an example of <u>Underlined text</u>.

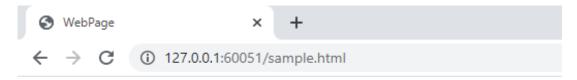
> Strike Text:

o If you write anything within element is displayed with strikethrough. It is a thin line which cross the statement.

Example:

This is an example of Deleted text .

Output:



This is an example of Deleted text.

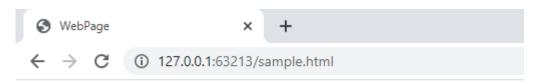
Superscript Text :

If you put the content within ^{.....} element, is shown in superscript;
 means it is displayed half a character's height above the other characters.

Example:

This is an example of ^{Supercript Text}.

Output:



This is an example of Supercript Text.

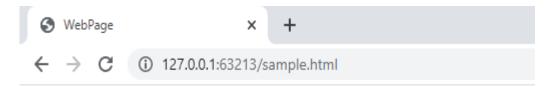
> Subscript Text:

If you put the content within _{.....} element, is shown in subscript;
 means it is displayed half a character's height below the other characters.

Example:

This is an example of _{Subscript Text}.

Output:



This is an example of Subscript Text .

Larger Text:

o If you want to put your font size larger than the rest of the text then put the content within
 within

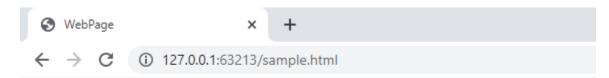
 within

 is >......
 increase one font size larger than the previous one.

Example:

This is an example of <big> Larger Font </big>.

Output:



This is an example of Larger Font.

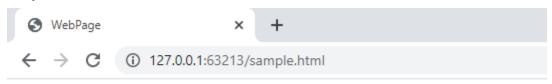
> Smaller Text:

o If you want to put your font size smaller than the rest of the text then put the content within <small>......</small>tag. It reduces one font size than the previous one.

Example:

This is an example of <small> Smaller Font </small>.

Output:



This is an example of Smaller Font.

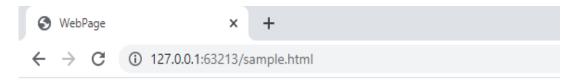
> HTML Quotes:

HTML q tag is used to put small quotation. To do so, write your text within
 <q>.....</q> tag.

Example:

HTML stands for <q>Hypertext Markup Language.</q>

Output:



HTML stands for "Hypertext Markup Language."

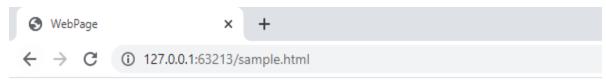
> HTML Pre Tag:

- The HTML tag
 is used to specify pre formatted texts. Texts within
 <mre> <mre> <mre> tag
 is displayed in a fixed-width font. Usually it is displayed in Courier
 font. It maintains both space and line break.
- It is widely used to display language examples e.g. Java, C#, C, C++ etc because it displays the code as it is typed.

Example:



Output:



This is a formatted text by using the HTML pre tag. It maintains both space and line break.

HTML <blockquote> Tag :

 HTML <blockquote> tag is used to define a block of text which is quoted from another source. The Browser usually displays the content within <blockquote> tag as indented text. If you want to insert a long quote then use <blockquote> and for short or inline quote use <q> tag.

Example:

Output:



HTML <abbr> Tag :

The HTML Abbreviation element (<abbr>) represents an abbreviation or acronym; the optional <u>title</u> attribute can provide an expansion or description for the abbreviation. If present, title must contain this full description and nothing else.

Example:

You can use <abbr title="Cascading Style Sheets">CSS</abbr> to style your <abbr title="HyperText Markup Language">HTML</abbr>.

Output:



You can use CSS to style your HTML.

Cascading Style Sheets

HTML Anchor

• The **HTML** anchor tag defines a hyperlink that links one page to another page. It can create hyperlink to other web page as well as files, location, or any URL. The "href" attribute is the most important attribute of the HTML a tag and which links to destination page or URL.

Href Atribute of HML Tag:

- The href attribute is used to define the address of the file to be linked. In other words, it points out the destination page.
- o There are two types of URL that you can give as a value of **href** attribute :

1. Relaive URL:

If you would like to go from one page to another page within the website so, it's called as Relative URL.

2. Absolute URL:

If you would like to go from one website to another website so, it's called as Absolute URL.

Syntax:

Link Text

Example:

```
<!-- Relative URL -->
<a href="second.html">Click for Second Page</a>
<!-- Absolute URL -->
<a href="https://www.itview.in/webdesigning-training"> Click for another website's page</a>
```

> Target attribute of HTML Tag:

 If we want to open that link to another page (new tab) then we can use target attribute of <a> tag. With the help of this, link will be open in next page (new tab).

Example:

Click for Second Page

Appearance of HTML anchor Tag :

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

Note: A Link does not have to be Text. A Link can be an image or any other HTML Element

↓ Link to an Email Address:

o HTML <a> tag provides you option to specify an email address to send an email. While using <a> tag as an email tag, you will use mailto: email address along with href attribute. Following is the syntax of using mailto instead of using http.

Example:

Send Email

Link to a Mobile Number:

 HTML <a> tag provides you option to specify a mobile number. To create a link to a telephone number, use tel: inside the href attribute:

Example:

with Country Code:

 Call

without Country Code:

 Call

4 Create Bookmarks:

- HTML links can be used to create bookmarks, so that readers can jump to specific parts of a web page.
- o Bookmarks can be useful if a web page is very long.
- o To create a bookmark first create the bookmark, then add a link to it.
- When the link is clicked, the page will scroll down or up to the location with the bookmark. In short we can say that when our web page is too long and we would like to jump from one section to another section instead of redirecting to another page (for one page websites), that time we can use Bookmark concept.

Example:

- Use the id attribute (id="value") to define bookmarks in a page
- Use the **href** attribute (href="#value") to link to the bookmark

sapiente, minima harum. Voluptates soluta, aspernatur?

```
<a href="#about">AboutUs</a>
<h2 id="about">AboutUs section</h2>
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Sunt vitae ducimus reprehenderit et nisi vero quasi reiciendis, hic labore consectetur maiores aut, expedita illo
```

❖ HTML Image Tag

• **HTML img tag** is used to display image on the web page. HTML img tag is an single tag that contains attributes only, closing tags are not used in HTML image element.

Example:

```
<h2> Example of HTML Image </h2>
<img src="koala.jpg" alt="Koala" >
```

src attribute of HTML Image tag :

- o It is a necessary attribute that describes the source or path of the image. It instructs the
- browser where to look for the image on the server.
- o The location of image may be on the same directory or another server.

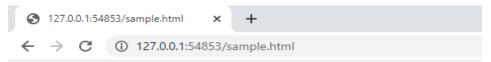
Alt attribute of HTML Image Tag :

The alt attribute defines an alternate text for the image, if it can't be displayed. The
value of the alt attribute describe the image in words. The alt attribute is
considered good for SEO prospective.

Example of alt attribute:

<h2> Example of HTML Image </h2>

Output:



Example of HTML Image



width attribute of HTML Image Tag :

It is an optional attribute which is used to specify the width to display the image. It
is not recommended now. You should apply CSS in place of width attribute.

height attribute of HTML Image Tag:

It is an optional attribute which is used to specify the hight to display the image. It
is not recommended now. You should apply CSS in place of height attribute.

Example:

```
<h2> Example of HTML Image </h2>
<img src="koala.jpg" alt="Koala" height="200" width="300">
```

Output:



Example of HTML Image



Use image tag as a link :

We can also link an image with other page or we can use an image as a link. To do this,
 put tag inside the <a> tag.

Example:

```
<h2> Example of HTML Image as a Link </h2>
<a href="https://en.wikipedia.org/wiki/Koala"><img src="koala.jpg" alt="Koala" height="200" width="300"></a>
```

HTML List

- HTML Lists are used to specify lists of information. All lists may contain one or more list elements.
 There are three different types of HTML lists:
 - 1. Ordered List or Numbered List (ol)
 - 2. Unordered List or Bulleted List (ul)
 - 3. Description List or Definition List (dl)
- We can create a list inside another list, which will be termed as a Nested List.

Ordered List or Numbered List (ol) :

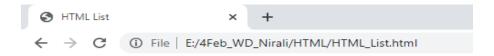
- In the ordered HTML lists, all the list items are marked with numbers by default. It is known as numbered list also. The ordered list starts with tag and the list items start with tag.
- o The type attribute of the tag, defines the type of the list item marker :

| Туре | Description |
|----------|--|
| type="1" | The list items will be numbered with numbers (default) |
| type="A" | The list items will be numbered with uppercase letters |
| type="a" | The list items will be numbered with lowercase letters |
| type="I" | The list items will be numbered with uppercase roman numbers |
| type="i" | The list items will be numbered with lowercase roman numbers |

```
<h2>Ordered List</h2>

Web DesigningPHPPython
```

Output:



Ordered List

- 1. Web Designing
- 2. PHP
- 3. Python

♣ Unordered List or Bulleted List (ul) :

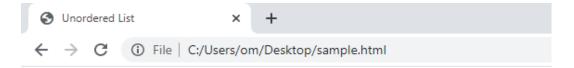
- o HTML Unordered List or Bulleted List displays elements in bulleted format . We can use unordered list where we do not need to display items in any particular order. The HTML ul tag is used for the unordered list. The unordered list starts with tag and the list items start with tag.
- o The type attribute of the tag, defines the type of the list item marker :

| Value | Description |
|--------|---|
| disc | Sets the list item marker to a bullet (default) |
| circle | Sets the list item marker to a circle |
| square | Sets the list item marker to a square |
| none | The list items will not be marked |

```
<h2>Unordered List</h2>

Veli>Web Designing
Veli>PHP
Python
```

Output:



Unordered List

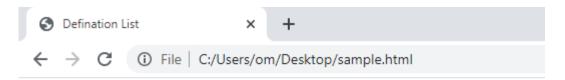
- Web Designing
- PHP
- Python

↓ Description List or Definition List (dl) :

- HTML Description List or Definition List displays elements in definition form like in dictionary. The <dl>, <dt> and <dd> tags are used to define description list.
- o The 3 HTML description list tags are given below:
 - <dl> tag defines the description list.
 - <dt> tag defines data term.
 - <dd> tag defines data definition (description).

```
<h2>Defination List</h2>
<dl>
<dl>
<dt>HTML</dt>
<dd>HTMLis a markup language</dd>
</dl>
```

Output:



Defination List

HTML

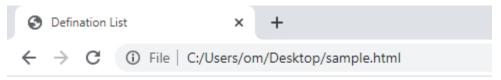
HTMLis a markup language

Nested List :

o List can be nested (lists inside lists).

Example:

Output:



Nested List

- 1. Web designing
 - HTML
 - CSS
 - Javascript
 - BootStrap
- 2. PHP

HTML Table

- **HTML table tag** is used to display data in tabular form (row * column). There can be many columns in a row.
- We can create a table to display data in tabular form, using element, with the help of

 , , and elements.
- In Each table, table row is defined by
 tag, table header is defined by , and table data is defined by tags.
- HTML tables are used to manage the layout of the page e.g. header section, navigation bar, body
 content, footer section etc. But it is recommended to use div tag over table to manage the layout
 of the page.

HTML Table Tags:

| Tag | Description |
|-----------------------|---|
| | It defines a table. |
| | It defines a row in a table. |
| | It defines a header cell in a table. |
| > | It defines a cell in a table. |
| <caption></caption> | It defines the table caption. |
| <colgroup></colgroup> | It specifies a group of one or more columns in a table for formatting. |
| <col/> | It is used with <colgroup> element to specify column properties for each column.</colgroup> |
| | It is used to group the body content in a table. |
| <thead></thead> | It is used to group the header content in a table. |
| <tfooter></tfooter> | It is used to group the footer content in a table. |

border attribute of HTML Table Tag:

 You can use border attribute of table tag in HTML to specify border. But it is not recommended now. We will use css border property to apply border.

> cell padding attribute of HTML Table Tag:

You can use cellpadding attribute of table tag to give a space inside of cell (
 between cell content and cell border). The cellpadding attribute of HTML table tag
 is obsolete now. It is recommended to use CSS padding property.

> Cell spacing attribute of HTML Table Tag:

 You can use cellspacing attribute of table tag to give a space between two cellsbetween cell content and cell border).

```
<caption>User Information</caption>
  <thead>
  RollNo.
   UserName
   FirstName
   Marks
  </thead>
  1
   Nirali Vaghela
   Nancy
   40
  2
   Krishna Sharma 
   Krishna
   40
```

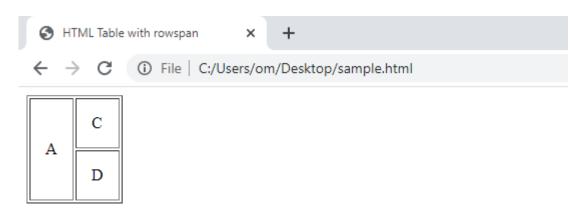
Output:



♣ HTML Table with Rowspan :

- o If you want to make a cell span more than one row, you can use the rowspan attribute.
- It will divide a cell into multiple rows. The number of divided rows will depend on rowspan values.

Output:

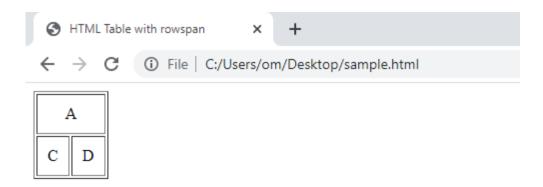


HTML Table with Colspan:

- o If you want to make a cell span more than one row, you can use the rowspan attribute.
- It will divide a cell into multiple rows. The number of divided rows will depend on rowspan values.

Example:

Output:



*** HTML Form**

- An **HTML form** is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.
- An HTML form facilitates the user to enter data that is to be sent to the server for processing such as name, email address, password, phone number, etc. .

♣ Why use HTML form ?

- o HTML forms are required if you want to collect some data from of the site visitor.
- For example: If a user want to register, he/she must fill the form such as username, emaild, password, mobile number. so that user can be registered to the website.

Syntax:

```
<form action="server url" method="get|post">
  //input controls e.g. textfield, textarea, radiobutton, button
</form>
```

4 Form Attributes:

Apart from common attributes, following is a list of the most frequently used form attributes -

| Sr.No | Attribute & Description |
|-------|-------------------------|
| 1 | Action |

| | Backend script ready to process your passed data. |
|---|---|
| 2 | method |
| | Method to be used to upload (send) data. The most frequently used are GET and POST methods. |
| 4 | enctype |
| | You can use the enctype attribute to specify how the browser encodes the data before it sends it to the server. Possible values are $-$ |
| | application/x-www-form-urlencoded – This is the standard method most forms use in simple scenarios. |
| | mutlipart/form-data — This is used when you want to upload binary data in the form of files like image, word file etc. |

♣ Difference between GET and POST Method:

| GET | POST |
|---|---|
| In GET method, values are visible in the URL. So GET method is not secured. | In POST method, values are not visible in the URL. So POST method is secured. |
| GET has a limitation on the length of the values, generally 255 characters. | POST has no limitation on the length of the values since they are submitted via the body of HTTP. |
| GET requests should never be used when dealing with sensitive data | POST requests should be used when dealing with sensitive data |
| GET request is more sufficient and used more than POST | POST request is less sufficient and used less than GET |
| GET results can be bookmarked. | POST results cannot be bookmarked. |
| GET request is often cacheable. | The POST request is hardly cacheable. |
| GET Parameters remain in web browser history. | Parameters are not saved in web browser history. |

HTML Form Tags:

Note: The Form element does not itself create a form but it is container to contain all required form elements, such as <input>, <label>, etc.

| Tag | Description |
|---|---|
| <form></form> | It defines an HTML form to enter inputs by the used side. |
| <input/> | It defines an input control. |
| <textarea></td><td>It defines a multi-line input control.</td></tr><tr><td><label></td><td>It defines a label for an input element.</td></tr><tr><td><fieldset></td><td>It groups the related element in a form.</td></tr><tr><td><legend></td><td>It defines a caption for a <fieldset> element.</td></tr><tr><td><select></td><td>It defines a drop-down list.</td></tr><tr><td><optgroup></td><td>It defines a group of related options in a drop-down list.</td></tr><tr><td><option></td><td>It defines an option in a drop-down list.</td></tr><tr><td><button></td><td>It defines a clickable button.</td></tr></tbody></table></textarea> | |

> HTML <form> element :

The HTML <form> element provide a document section to take input from user. It
provides various interactive controls for submitting information to web server such as
text field, text area, password field, etc.

> HTML <input> element :

 The HTML <input> element is fundamental form element. It is used to create form fields, to take input from user. We can apply different input filed to gather different information form user. Following is the example to show the simple text input.

HTML Input Element Types

There are different types of form controls that you can use to collect data using HTML form -

- 1. Text Input Controls
- 2. Checkboxes Controls
- 3. Radio Box Controls
- **4.** File Select boxes
- 5. Hidden Controls
- 6. Button controls
 - Clickable Buttons (customized Button)
 - o Submit and Reset Button (Predefined Button)

1. Text Input Controls

There are two types of text input used on forms -

 Single-line text input controls – This control is used for items that require only single line of user input, such as search boxes or names. They are created using HTML <input> tag. • **Password input controls** — This is also a single-line text input but it masks the character as soon as a user enters it. This control will display dot instead o character. They are also created using HTML <input> tag.

Single-line text input controls

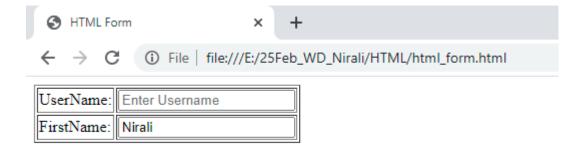
This control is used for items that require only one line of user input, such as search boxes or names. They are created using HTML <input> tag.

Example

Here is a basic example of a single-line text input used to take first name and last name -

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>HTML Form</title>
</head>
<body>
 <form method="post">
 UserName:
    <input type="text" name="uname">
  FirstName:
    <input type="text" name="fname">
  </form>
</body>
</html>
```

Output:



Attributes

Following is the list of attributes for <input> tag for creating text field.

| Sr.No | Attribute & Description |
|-------|---|
| 1 | type Indicates the type of input control and for text input control it will be set to text . |
| 2 | name Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | value This can be used to provide an initial value inside the control. |
| 4 | size Allows to specify the width of the text-input control in terms of characters. |
| 5 | maxlength Allows to specify the maximum number of characters a user can enter into the text box. |
| 6 | placeholder The placeholder attribute specifies a short hint that describes the expected value of an input field/text area. The short hint is displayed in the field before the user enters a value. |

Password input controls

This is also a single-line text input but it masks the character as soon as a user enters it. They are also created using HTML <input>tag but type attribute is set to **password**.

Here is a basic example of a single-line password input used to take user password -

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8"><title>HTML Form</title>
</head>
<body>
<form method="post">

>Password:<input type="password" placeholder="Enter Password"
name="pass">

</form></body></html>
```

Output:



Attributes

Following is the list of attributes for <input> tag for creating password field.

| Sr.No | Attribute & Description |
|-------|--|
| 1 | type Indicates the type of input control and for password input control it will be set to password . |
| 2 | name Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | value This can be used to provide an initial value inside the control. |
| 4 | size |

| | Allows to specify the width of the text-input control in terms of characters. |
|---|---|
| 5 | maxlength Allows to specify the maximum number of characters a user can enter into the text box. |
| 6 | placeholder The placeholder attribute specifies a short hint that describes the expected value of an input field/text area. The short hint is displayed in the field before the user enters a value. |

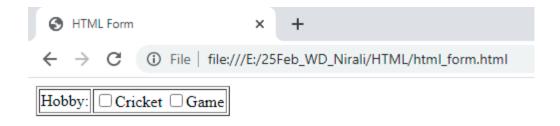
2. Checkbox Control

Checkboxes are used when more than one option is required to be selected. They are
also created using HTML <input> tag but type attribute is set to checkbox.

Example

Here is an example HTML code for a form with two checkboxes -

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>HTML Form</title>
</head>
<body>
 <form method="post">
 Hobby:
     <input type="checkbox" name="hby" value="cricket">Cricket
      <input type="checkbox" name="hby" value="game">Game
     </form>
</body>
</html>
```



Attributes

Following is the list of attributes for <checkbox> tag.

| Sr.No | Attribute & Description |
|-------|---|
| 1 | type Indicates the type of input control and for checkbox input control it will be set to checkbox. . |
| 2 | name Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | value The value that will be used if the checkbox is selected. |
| 4 | checked Set to checked if you want to select it by default. |

3. Radio Button Control

- Radio buttons are used when out of many options, just one option is required to be selected. They are also created using HTML <input> tag but type attribute is set to radio.
- This is for single selection.

Example

Here is example HTML code for a form with two radio buttons -

```
<body>
<form method="post">

Gender:

Gender:

< (td>
<input type="radio" name="gen" value="male">Male
<input type="radio" name="gen" value="female">Female

</form>
</body>
```



Attributes

Following is the list of attributes for radio button.

| Sr.No | Attribute & Description |
|-------|---|
| 1 | type Indicates the type of input control and for checkbox input control it will be set to radio. |
| 2 | name Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | Value The value that will be used if the radio box is selected. |

4 checked

Set to checked if you want to select it by default.

4. File Upload Box

• If you want to allow a user to upload a file to your web site, you will need to use a file upload box, also known as a file select box. This is also created using the <input> element but type attribute is set to **file**.

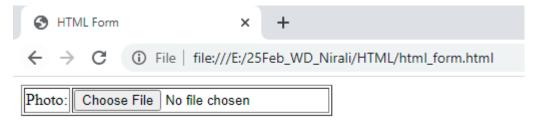
Example

Here is example HTML code for a form with one file upload box -

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>HTML Form</title>
</head>
<body>
 <form method="post">
 Photo:
    <input type="file" name="photo">

 </form>
</body>
</html>
```

Output:



Attributes

Following is the list of important attributes of file upload box -

| Sr.No | Attribute & Description |
|-------|---|
| 1 | name Used to give a name to the control which is sent to the server to be recognized and get the value. |

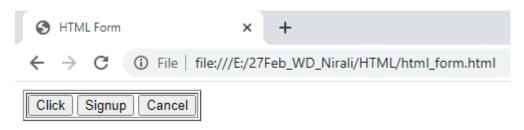
5. Button Controls

- There are various ways in HTML to create clickable buttons. You can also create a
 clickable button using <input>tag by setting its type attribute to **button**. The type
 attribute can take the following values
 - o **submit:** This creates a button that automatically submits a form.
 - reset: This creates a button that automatically resets form controls to their initial values.
 - o **button:** This creates a button that is used to trigger a client-side script when the user clicks that button. We always call javascript function with it.

Example

Here is example HTML code for a form with three types of buttons -

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <title>HTML Form</title>
</head>
<body>
 <form method="post">
 <input type="button" value="Click">
      <input type="submit" value="Signup">
      <input type="reset" value="Cancel">
    </form>
</body>
</html>
```



Attributes

Following is the list of important attributes of button control -

| Sr.No | Attributes & Description |
|-------|--|
| 1 | name |
| | The name attribute specifies the name for a <button> element. The name attribute is used to reference form-data after the form has been submitted, or to reference the element in a JavaScript.</button> |
| 2 | value |
| | The value attribute specifies the initial value for a <button> in an HTML form.</button> |
| 3 | The disabled attribute is a boolean attribute. When present, it specifies that the button should be disabled. A disabled button is unusable and un-clickable. The disabled attribute can be set to keep a user from clicking on the button until some other condition has been met (like selecting a checkbox, etc.). Then, a JavaScript could remove the disabled value, and make the button clickable again. |

> HTML <textarea> element :

 This is used when the user is required to give details that may be longer than a single sentence. Multi-line input controls are created using HTML <textarea> tag.

Example

Here is a basic example of a multi-line text input used to take item description -



Attributes

Following is the list of attributes for <textarea> tag.

| Sr.No | Attribute & Description |
|-------|--|
| 1 | name |
| | Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 2 | rows Indicates the number of rows of text area box. |
| 3 | cols Indicates the number of columns of text area box |

HTML <select> element :

 A select box, also called drop down box which provides option to list down various options in the form of drop down list, from where a user can select one or more options

Example

Here is example HTML code for a form with one drop down box -

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8"> <title>HTML Form</title>
</head> <body>
 <form method="post">
  Country :
    <select name="cntry">
        <option>Select Country
        <option >India
        <option>USA</option>
        <option>Germany
      </select>

    Courses :
      <select multiple size="3" name="course">
        <option>Select Courses
        <option>HTML</option>
        <option>CSS</option>
        <option>JS</option>
        <option>PHP</option>
        <option>Python</option>
      </select>
      </form> </body> </html>
```

Output:



Attributes

Following is the list of important attributes of <select> tag -

| Sr.No | Attribute & Description |
|-------|--|
| 1 | name |
| | Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 2 | size This can be used to present a scrolling list box. |
| 3 | multiple If set to "multiple" then allows a user to select multiple items from the menu. |

Attributes

Following is the list of important attributes of <option> tag -

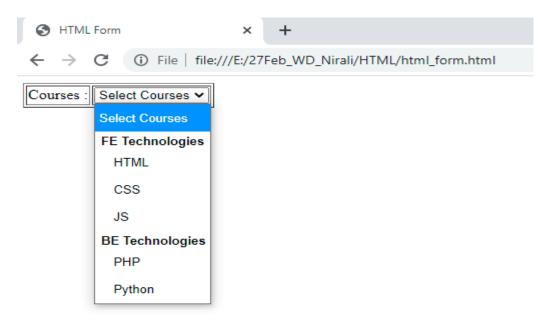
| Sr.No | Attribute & Description |
|-------|---|
| 1 | value The value that will be used if an option in the select box box is selected. |
| 2 | selected Specifies that this option should be the initially selected value when the page loads. |

- > HTML <optgroup> element :
- The <optgroup> tag is used to group related options in a <select> element (dropdown list).
- If you have a long list of options, groups of related options are easier to handle for a user.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8"> <title>HTML Form</title>
</head> <body>
 <form method="post">
 Courses :
     <select name="course">
        <option>Select Courses
        <optgroup label="FE Technologies">
          <option>HTML</option>
          <option>CSS</option>
          <option>JS</option>
        </optgroup>
        <optgroup label="BE Technologies">
          <option>PHP</option>
          <option>Python
        </optgroup>
      </select>
      </form> </body> </html>
```

Output:



Attributes

| Sr.No | Attribute & Description |
|-------|---|
| 1 | disabled specifies that an option-group should be disabled. |
| 2 | label Specifies a label for an option-group |

> HTML <label> element :

- It is considered better to have label in form. As it makes the code parser/browser/user friendly.
- If you click on the label tag, it will focus on the text control. To do so, you need to have for attribute in label tag that must be same as id attribute of input tag.

Note: IT is good to use <label> tag with form, although it is optional but if you will use it, then it will provide a focus when you tap or click on label tag. It is more worthy with touchscreens.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8"> <title>HTML Form</title>
</head>
<body>
 <form method="post">
 <label for="username">Username :</label>
    <input type="text" placeholder="Enter Username" name="uname"
id="username">

 </form>
</body>
</html>
```

Output:



Attributes

| Sr.No | Attribute & Description |
|-------|---|
| 1 | for |
| | specifies the id of the form element the label should be bound to |

HTML <fieldset> element :

- o The HTML <fieldset> tag is used for grouping related form elements.
- o The <fieldset> tag draws a box around the related elements.
- By using the fieldset tag and the legend tag, you can make your forms much easier to understand for your users

> HTML <legend> element :

• The HTML <legend> tag s used to define a caption for <fieldset> tag.

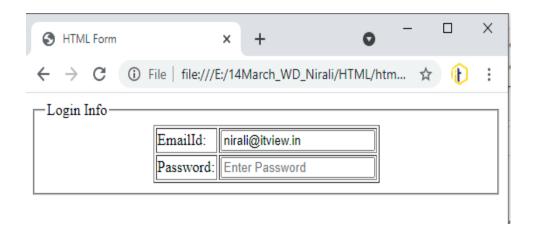
Attributes

The HTML <fieldset> tag also supports the following additional attributes -

| Attribute | Value | Description |
|------------|----------|---|
| disabled 5 | disabled | Specifies that a group of related form elements should be disabled. |
| form 5 | form_id | Specifies forms which belongs to fieldset. |
| name 😇 | text | Specifies a name for fieldset. |

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8"> <title>HTML Form</title>
</head>
<body>
 <form method="post">
 <fieldset>
  <legend>Login Info</legend>
    EmailId:
        <input type="text" value="nirali@itview.in" readonly
name="email">
      Password:
        <input type="password" placeholder="Enter Password"
name="pass">
      </fieldset>
</form>
</body>
</html>
```



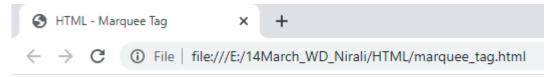
*** HTML Marquee**

- The <marquee> tag is a container tag of HTML is implemented for creating scrollable text or images within a web page from either left to right or vice versa, or top to bottom or vice versa.
- In simple words, you can say that it scrolls the image or text up, down, left or right automatically.
- But this tag has been deprecated in the new version of HTML, i.e., HTML 5.

Syntax:

<marquee>This is an example of Marquee Tag</marquee>

Example



This is an Example of Marquee tag.

Attributes

The HTML <marquee> tag also supports the following additional attributes -

| Attribute | Value | Description |
|--------------|------------------------------|--|
| behavior | scroll slide alternate | Defines the type of scrolling. |
| direction | up down left right | Defines the direction of scrolling the content. |
| height | pixels or % | Defines the height of marquee. |
| hspace | pixels | Specifies horizontal space around the marquee. |
| loop | number | Specifies how many times to loop. The default value is INFINITE, which means that the marquee loops endlessly. |
| scrolldelay | seconds | Defines how long to delay between each jump. |
| scrollamount | number | Defines how how far to jump. |
| width | pixels or % | Defines the width of marquee. |
| vspace | pixels | Specifies vertical space around the marquee. |

♦ HTML Iframe

- You can define an inline frame with HTML tag **<iframe>**. The **<iframe>** tag defines a rectangular region within the document in which the browser can display a separate document, including scrollbars and borders.
- An inline frame is used to embed another document within the current HTML document.

- The **src** attribute is used to specify the URL of the document that occupies the inline frame.
- The webpage content and iframe contents can interact with each other using JavaScript.

Syntax:

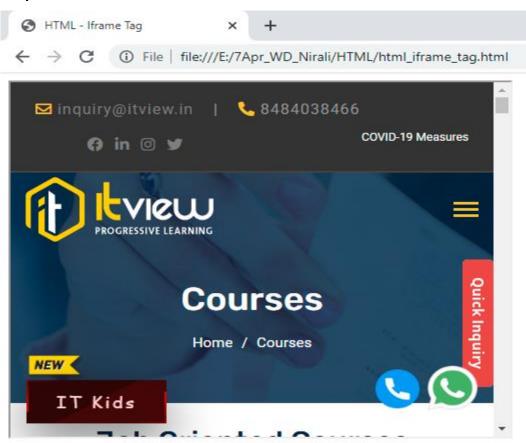
```
<iframe src=""> </iframe>
```

Example:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>HTML - Iframe Tag</title>
</head>
<body>
    <iframe width="400px" height="300px"

src="http://www.itview.in/courses"></iframe>
</body>
</html>
```

Output:



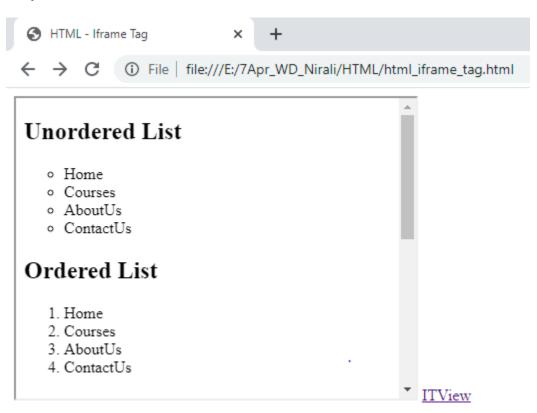
↓ Iframe Target for a Link

• You can set a target frame for a link by using iframe. Your specified target attribute of the link must refer to the name attribute of the iframe.

Example:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>HTML - Iframe Tag</title>
</head>
<body>
<iframe width="400px" height="300px" src="HTML_List.html"
name="myiframe"></iframe>
<a href="https://www.itview.in/courses" target="myiframe">ITView</a>
</body>
</html>
```

Output:



Attributes

The frameborder, marginwidth, longdesc, scrolling, marginheight attributes deprecated in HTML5. Do not use these attributes.

| Sr.No | Attribute & Description |
|-------|--|
| 1 | src |
| | This attribute is used to give the file name that should be loaded in the frame. Its value can be any URL. For example, src = "/html/top_frame.htm" |
| 2 | name |
| | This attribute allows you to give a name to a frame. It is used to indicate which frame a document should be loaded into. This is especially important when you want to create links in one frame that load pages into an another frame, in which case the second frame needs a name to identify itself as the target of the link. |
| 3 | height This attribute specifies the height of <iframe>.</iframe> |
| 4 | width |
| | This attribute specifies the width of <iframe>.</iframe> |

Embed a map to your website using iframe:

 HTML Google Map is used to display maps on your webpage. You can simply add a map on your basic HTML page using the <iframe> tag.

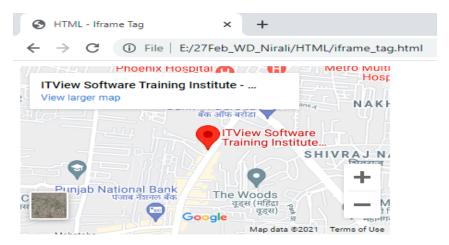
Following are some steps to add Google Map on your webpage:

- Open Google Maps.
- Search address you'd like to embed.
- o In the top left, click Menu.
- Click Share or embed map.
- o Click **Embed map**.
- o To the left of the text box, pick the size you want by clicking the Down arrow.
- Copy the text in the box.
- Paste the code in your HTML file
- o Change height, width, and other properties (as per requirement).

<iframe

src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3781.40618161530 44!2d73.77307751420528!3d18.60079167157216!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f 13.1!3m3!1m2!1s0x3bc2b9e3d076c9cd%3A0x7d18968acfaf889e!2slTView%20Software% 20Training%20Institute%20-

%20Python%2C%20AWS%2C%20Selenium%2C%20Tableau%20and%20many%20more.%2 0Newly%20started%20coding%20for%20kids!5e0!3m2!1sen!2sin!4v1615621166211!5m2! 1sen!2sin" width="600" height="450" style="border:0;" allowfullscreen="" ></iframe>



Embed a YouTube video to your website using iframe:

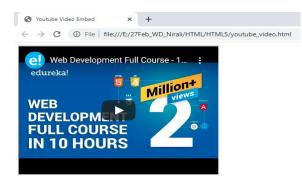
 If we want to embed the Youtube video in Html document, we have to follow the steps which are given below. Using these steps, we can easily show a Youtube video on the web page.

Following are some steps to add Google Map on your webpage:

- Upload the video to YouTube
- Take a note of the video id
- o Define an **<iframe>** element in your web page
- Let the src attribute point to the video URL
- o Use the width and height attributes to specify the dimension of the player
- Add any other parameters to the URL (see below)

Example

<iframe width="400px" height="300px"
src="https://www.youtube.com/embed/Q33KBiDriJY"></iframe>



YouTube Video Autoplay

You can let your video start playing automatically when a user visits the page, by adding autoplay=1 to the YouTube URL. However, automatically starting a video is annoying for your visitors!

Note: Chromium browsers do not allow autoplay in most cases. However, muted autoplay is always allowed.

Example

<iframe width="400px" height="300px"
src="https://www.youtube.com/embed/Q33KBiDriJY?autoplay=1&mute=1">
</iframe>

YouTube Playlist

list of videos to play

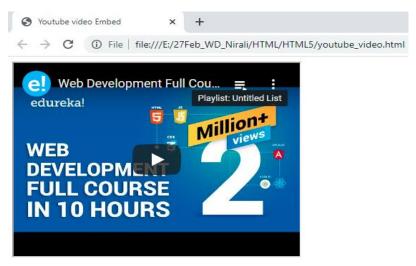
YouTube loop

- Add loop=1 to let your video loop forever.
- o Value 0 (default): The video will play only once.
- o Value 1: The video will loop (forever).

Example

<iframe width="400px" height="300px" src="https://www.youtube.com/embed/Q33KBiDriJY?playlist=Q33KBiDriJY&loop=1" ></iframe>

Output



YouTube Controls

- o Add controls=0 to not display controls in the video player.
- o Value 0: Player controls does not display.
- o Value 1 (default): Player controls display.

Example

<iframe width="400px" height="300px"
src="https://www.youtube.com/embed/Q33KBiDriJY?controls=0"></iframe>

Output

