

What is HTML?

HTML is the standard markup language for creating Web pages.

- HTML stands for **Hyper Text Markup Language**.
- HTML was invented by **Berners-Lee**.
- HTML describes the structure of **Web pages** using markup.
- HTML elements are the building blocks of HTML pages.
- HTML elements are represented by **Tags**.
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on...
- Browsers do not display the HTML tags, but use them to render the content of the page.

HTML Versions

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

HTML Editors

- ✓ Notepad
- ✓ Notepad++
- ✓ SubLime Text
- ✓ Dream Viewer
- ✓ NetBeans etc..

Browsers

- ✓ Google Chrome
- ✓ Mozilla Firefox
- ✓ Opera
- ✓ Internet Explorer
- ✓ Safari etc...

HTML Tags

- There are two types of tags..
 - **Container Tag / Pair Tag**
 - **Singular Tag / Unpair Tag**

Syntax :

<tagname>content goes here...**</tagname>**

- HTML tags normally come **in pairs** like **<p>** and **</p>**
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- The end tag is written like the start tag, but with a **forward slash** inserted before the tag name

HTML Structure

```
<!DOCTYPE html>
<html>
<head>
  <title>Page Title</title>
</head>
<body>

</body>
</html>
```

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

HTML Attributes

- All HTML elements can have **attributes**
- Attributes provide **additional information** about an element
- Attributes are always specified in **the start tag**
- Attributes usually come in name/value pairs like: **name="value"**

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
    <title>Page Title</title>
```

```
</head>
```

```
<body [bgcolor="color-name"] => Set Background color for body
```

```
    [text="color-name"] => Set Text / Font Color in body
```

```
    [link="color-name"] => Set Link color in body
```

```
    [alink="color-name"] => Set Active Link color in body
```

```
    [vlink="color-name"] => Set Visited Link color in body
```

```
    [background="url"] > => Set a Background Image in body
```

```
</body>
```

```
</html>
```

Heading Tag

- The `<h1>` element defines a large heading.

Syntax:

```
<hx [title="text"] => add tips for any Heading tags
```

```
    [align="center|left|right"] => align text left, right or center in a page >
```

```
</hx>
```

X = 1, 2, 3, 4, 5, 6

Example:

```

<!DOCTYPE html>
<html>
<head>
    <title>Page Title</title>
</head>
<body>

    <h1>Creative College Of Computer Application</h1>
    <h2>Creative College Of Computer Application</h2>
    <h3>Creative College Of Computer Application</h3>
    <h4>Creative College Of Computer Application</h4>
    <h5>Creative College Of Computer Application</h5>
    <h6>Creative College Of Computer Application</h6>

</body>
</html>

```

Font Size :

Tag	Font Size
Normal Text	16px (Times New Roman)
<h1>	32px
<h2>	24px
<h3>	18px
<h4>	16px
<h5>	13px
<h6>	10px

HTML Comment Text

- ✓ With comments you can place notifications and reminders in your HTML code.

Syntax :

```
<!-- Write your comments here -->
```

BR Tag :

**
 => Break Row**

- ✓ The
 tag inserts a single line break.
- ✓ The
 tag is useful for writing addresses or poems.
- ✓ The
 tag is an empty tag which means that it has no end tag.

Example:

```
<!DOCTYPE html>
<html>
<head>
  <title>Page Title</title>
</head>
<body>
```

Be not afraid of greatness.

Some are born great,

some achieve greatness,

and others have greatness thrust upon them.

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

HTML Formatting Elements

- ❖ In the previous chapter, you learned about the HTML **style attribute**.
- ❖ HTML also defines special **elements** for defining text with a special **meaning**.
- ❖ HTML uses elements like **** and **<i>** for formatting output, like **bold** or *italic* text.
- ❖ Formatting elements were designed to display special types of text:

❖ **<p> - Paragraph text**

- The <p> tag defines a paragraph.
- Example:
 - `<p>` This is some text in a paragraph. `</p>` .
- Output:
 - This is some text in a paragraph.

❖ ** - Bold text**

- To display text with BOLD effect we can use tag.
- Example:
 - This is normal text - ``and this is bold text``.
- Output:
 - This is normal text - **and this is bold text.**

❖ ** - Important text**

- The tag is used to define text with strong importance.
- Example:
 - This is normal text - `` and this is Important text`` .
- Output:
 - This is normal text - **and this is Important text.**

❖ **<i> - Italic text**

- The content inside is typically displayed in *italic*.
- Example:
 - This is normal text - `<i>` and this is Italic text`</i>` .
- Output:
 - This is normal text - *and this is Italic text.*

❖ `` - **Emphasized** text

- The `` tag is used to define emphasized text.
- Example:
 - This is normal text - `` and this is Emphasized text`` .
- Output:
 - This is normal text - *and this is Emphasized text.*

❖ `<address>`

- The `<address>` tag defines the contact information for the author/owner of a document or an article.
- The contact information can be an email address, URL, physical address, phone number, social media handle, etc.
- Example:
 - `<address>`
 Written by Creative.`
`
 Visit us at:`
`
 Example.com`
`
 Box 564, Disneyland`
`
 USA
`</address>`
- Output:
 - *Written by Creative .*
Visit us at:
Example.com
Box 564, Disneyland
USA

❖ `<strike>` / `` / `<s>`

- The `<strike>` tag was used in HTML 4 to define strikethrough text.
- The `` tag defines text that has been deleted from a document.
- The `<s>` tag specifies text that is no longer correct, accurate or relevant.

- Example:

- `<p>Price <strike>350$</strike> 300$</p>`
- `<p>Price 350$ 300$</p>`
- `<p>Price <s>350$</s> 300$</p>`

- Output:

- Price ~~350\$~~ 300\$

- ❖ `<sup>`

- The `<sup>` tag defines superscript text.
- Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font.

- Example:

- `<p>X ²</p>`

- Output:

- X^2

- ❖ `<sub>`

- The `<sub>` tag defines subscript text.
- Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font.

- Example:

- `<p>H ²O</p>`

- Output:

- H₂O

- ❖ `<big>`

- The `<big>` tag was used in HTML 4 to define bigger text.

- Example:

- `<p> This is a normal paragraph. </p>`
- `<big> This is a bigger paragraph. </big>`

- Output:
 - This is a normal paragraph.
 - This is a bigger paragraph.

❖ `<small>`

- The `<small>` tag was used in HTML 4 to define smaller text.
- Example:
 - `<p>` This is a normal paragraph. `</p>`
 - `<big>` This is a smaller paragraph. `</big>`
- Output:
 - This is a normal paragraph.
 - This is a smaller paragraph.

❖ `<pre>`

- The `<pre>` tag defines preformatted text.
- The text will be displayed exactly as written in the HTML source code.
- Example:
 - `<pre>` Text in a pre element
is displayed in a fixed-width
font, and it preserves
both spaces and
line breaks`</pre>`
- Output:

```
Text in a pre element
is displayed in a fixed-width
font, and it preserves
both spaces and
line breaks
```

❖ ``

- The `` tag was used in HTML 4 to specify the font face, font size, and color of text.
- Syntax:

- `...Content Here...`

- Example:

- `Hellooo...! Good Afternoon`

- Output:

- Hellooo...! Good Afternoon

❖ `<hr>`

- The `<hr>` element is most often displayed as a horizontal rule that is used to separate content (or define a change) in an HTML page.

- Syntax:

- `<hr [align="left | center | right"]`
`[size="Pixel"] => Height`
`[width="Pixel or Percent"]`
`[color="color-name"]>`

- Example:

```
<!DOCTYPE html>
<html>
<body>

<h1>The Main Languages of the Web</h1>

<p>HTML is the standard markup language for creating Web pages. HTML
describes the structure of a Web page, and consists of a series of
elements. HTML elements tell the browser how to display the content.</p>

<hr>

<p>CSS is a language that describes how HTML elements are to be displayed
on screen, paper, or in other media. CSS saves a lot of work, because it
can control the layout of multiple web pages all at once.</p>

<hr>

<p>JavaScript is the programming language of HTML and the Web. JavaScript
can change HTML content and attribute values. JavaScript can change CSS.
JavaScript can hide and show HTML elements, and more.</p>

</body>
</html>
```

- Output:

The Main Languages of the Web

HTML is the standard markup language for creating Web pages. HTML describes the structure of a Web page, and consists of a series of elements. HTML elements tell the browser how to display the content.

CSS is a language that describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work, because it can control the layout of multiple web pages all at once.

JavaScript is the programming language of HTML and the Web. JavaScript can change HTML content and attribute values. JavaScript can change CSS. JavaScript can hide and show HTML elements, and more.

❖ `<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 top to bottom.
- Syntax:

```
<marquee [behavior="Scroll | Slide | Alternate"]
        [direction="Left | Right | Up | Down"]
        [loop="1 | 2 | ...N"]
        [scrollamount="number"]
        [bgcolor="Color Name"]
        [height="pixels"]
        [width="pixels"] >.....</marquee>
```

- Example:

- `<marquee behavior="scroll" direction="up" scrollamount="1">Slow Scrolling</marquee>`
- `<marquee behavior="scroll" direction="right" scrollamount="12">Little Fast Scrolling</marquee>`
- `<marquee behavior="scroll" direction="left" scrollamount="20">Fast Scrolling</marquee>`
- `<marquee behavior="scroll" direction="right" scrollamount="50">Very Fast Scrolling</marquee>`

❖ **<a>**

- The <a> tag defines a hyperlink, which is used to link from one page to another.
- The most important attribute of the <a> element is the href attribute, which indicates the link's destination.
- Syntax:

```
<a [href="URL"]
    [target="_blank"] >...</a>
```

- Example:

- `Visit cdmi.in!`

- Output:

- [Visit cdmi.in](https://www.cdmi.in)

❖ ****

- The tag is used to embed an image in an HTML page.
- The tag has two required attributes:
 - **src** - Specifies the path to the image
 - **alt** - Specifies an alternate text for the image, if the image for some reason cannot be displayed
- Syntax:

```
<img [alt="AlternativeText"]
    [border="border-width"]
    [height="pixels"]
    [width="pixels"]
    [hspace="pixels"] => Horizontal Margin
    [vspace="pixels"] > => Vertical Margin
```

- Example:

```

```

List Creation Tags

❖ - Ordered List

- - List Item

❖ - Unrdered List

- - List Item

❖ <dl> - Description List

- <dt> - Defination Term
- <dd> - Defination Desription

❖ - Ordered List :

- The tag defines an ordered list. An ordered list can be numerical or alphabetical.
- The tag is used to define each list item.
- Syntax :

```
<ol [start="value"] [type="A | a | I | I | 1"] [reversed]>  
  <li>.....</li>  
</ol>
```

- Example :

```
<ol start="5" type="A">  
  <li>Coffee</li>  
  <li>Tea</li>  
  <li>Milk</li>  
</ol>
```

- Output :

E. Coffee

F. Tea

G. Milk

❖ ** - Unordered List :**

- The tag defines an unordered (bulleted) list.
- Use the tag together with the tag to create unordered lists.
- Syntax :

```
<ul [type="disc | circle | square"] >
    <li>.....</li>
</ul>
```

- Example :

```
<ul type="square">
    <li>Coffee</li>
    <li>Tea</li>
    <li>Milk</li>
</ul>
```

- Output :

- Coffee
- Tea
- Milk

❖ **<dl> - Description List :**

- The <dl> tag defines a description list.
- The <dl> tag is used in conjunction with <dt> (defines terms/names) and <dd> (describes each term/name)..
- Syntax :

```
<dl>
    <dt>.....</dt>
    <dd>.....</dd>
</dl>
```

- Example :

```
<dl>
    <dt>Coffee</dt>
    <dd>Black hot drink</dd>
    <dt>Milk</dt>
    <dd>White cold drink</dd>
</dl>
```

- Output :

```
Coffee
    Black hot drink
Milk
    White cold drink
```

Tables in HTML

- The `<table>` tag defines an HTML table.
- An HTML table consists of one `<table>` element and one or more `<tr>`, `<th>`, and `<td>` elements.
- The **`<caption>`** tag defines a **Table Caption**.
- The **`<tr>`** element defines a **Table Row**.
- The **`<th>`** element defines a **Table Header**.
- The **`<td>`** element defines a **Table Cell**.

❖ `<table>` :

- Syntax:

```
<table align="[left | center | right]"
      border="value"
      width="value/percent"
      height="value/percent"
      bordercolor="color"
      bgcolor="color"
      cellpadding="value"
      cellspacing="value">.....</table>
```

❖ `<caption>` :

- Syntax:

```
<caption align="[left | center | right]">.....</caption>
```

❖ `<tr>` :

- To add a new row in a table we must use TR tag
- Syntax:

```
<tr bgcolor="color">.....</tr>
```

❖ **<th>** :

- The text in <th> elements are bold and centered.
- Each table header is defined with a <th> tag.
- Syntax:

```
<th align="[left | center | right]"  
      valign="[bottom | middle | top]"  
      width="pixel"  
      height=" pixel"  
      bgcolor="color"  
      colspan="value"  
      rowsapn="value">.....</th>
```

❖ **<td>** :

- Each table data/cell is defined with a <td> tag.
- Syntax:

```
<td align="[left | center | right]"  
      valign="[bottom | middle | top]"  
      width="pixel"  
      height=" pixel"  
      bgcolor="color"  
      colspan="value"  
      rowsapn="value">.....</td>
```


❖ **Example :** Design a web page to display TABLE as given...

No.	Full Name	Position	Salary
1	Bill Gates	Founder of Microsoft	\$1000
2	Steve Jobs	Founder of Apple	\$1200
3	Larry Page	Founder Google	\$1100
4	Mark Zuckerberg	Founder of Facebook	\$1300


Time Table					
Hours	Mon	Tue	Wed	Thu	Fri
	Science	Maths	Science	Maths	Arts
	Social	History	English	Social	Sports
	Lunch				
	Science	Maths	Science	Maths	Project
	Social	History	English	Social	

A test table with merged cells			
	Average		Red eyes
	height	weight	
Males	1.9	0.003	40%
Females	1.7	0.002	43%

HTML Table Example

Student Name		Labs			Avg
First	Last	Lab1	Lab2	Lab3	
Sol	Rosenberg	100	100	100	100.0
Frank	Rizzo	50	60	90	66.6
Ali	Kam	90	80	60	76.6
Summary	Avg	80.0	80.0	83.3	81.1
	Min	50	60	60	66.6

Country	State	City	Street	Male	Female	Others
1	Kerala	Cochin	New Street	500	600	6
			Main Street	300	288	2
		Trivandrum	Guru Street	500	600	10
			TVK Street	500	600	2
	Maharastra	Mumbai	Krishha Street	700	850	1
			Main Street	500	600	2
		Surath	New Street	500	600	4
			Billa Street	500	600	2
2	Alaska	AKA Central	New Street	200	210	2
			Cross Street	1000	1050	10



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RESULT : BSC SEM5 [CBCS]

Certificate showing the number of marks obtained by Shri/Smt./Kumari							ID NO.			
of SIR P. T. SARVAJANIK COLLEGE OF SCIENCE, SURAT in each header of passing at the BACHELOR OF SCIENCE (FIFTH SEMESTER) held in APRIL-2016										
Subject Name	Passing Mark			Mark Obtained						
	External	Internal	Total	External	Internal	Total	GR.	GP.	Credit	
LANGUAGE THROUGH LITERATURE	50/18	20	70/25	19	(09)	28	E	5	2	
PAPER-VI										
PAPER-VII										
PAPER-VIII										
PAPER-IX										
PAPER-X										
PAPER-XI										
PHYSICS	300/108	120	420/151	(143)	(60)	(203)	E	5	12	
PHYSICS PRACTICAL	120/43	60	180/65	(91)	(44)	(135)	B	8	6	
ELECTRONICS	50/18	20	70/25	(26)	(10)	(36)	D	6	2	
NATIONAL SERVICE SCHEME									2	
Aggregate Total	520		740	279		402				
Result	PASS									

HTML Form Elements

- An HTML form is used to collect user input.
- The user input is most often sent to a server for processing.
- Syntax:

```
<form method="[ get | post ] " action="URL" name="form name">
    form elements
</form>
```

❖ The <form> element is a container for different types of input elements, such as: **text fields, checkboxes, radio buttons, submit buttons**, etc.

❖ **Form Methods :**

- **GET :**
 - Get method will DISPLAY all the information of page in to URL.
 - Note : Some of Browser will not display information on URL by GET...
- **POST :**
 - POST method will HIDE all the information of page in to URL.

<input> Elements

- ❖ The HTML <input> element is the most used form element.
- ❖ An <input> element can be displayed in many ways, depending on the type attribute.

Type	Description
HTML Form Elements	
<input type="text">	Displays a single-line text input field
<input type="password">	Displays text as a password
<input type="radio">	Displays a radio button (for selecting one of many choices)
<input type="checkbox">	Displays a checkbox (for selecting zero or more of many choices)
<input type="submit">	Displays a submit button (for submitting the form)

<code><input type="reset"></code>	Reset form controls
<code><input type="button"></code>	Displays a clickable button
HTML5 Form Elements	
<code><input type="color"></code>	Displays a color picker box.
<code><input type="date"></code>	Displays a date box.
<code><input type="time"></code>	Displays a time box.
<code><input type="datetime-local"></code>	Displays a date with time box.
<code><input type="month"></code>	Displays a month box.
<code><input type="week"></code>	Displays a week box.
<code><input type="number"></code>	Displays a number box.
<code><input type="range"></code>	Displays a range bar.
<code><input type="email"></code>	Displays a email box.
<code><input type="url"></code>	Displays a url box.
<code><input type="file"></code>	Displays a Choose File Button.

- Syntax:

`<input type="Control Type"`

`[Name="Name of Control"]`

`[Value="DefaultValue"]`

`[MaxLength="IntLen"]`

`[Size="InputBoxLen"]`

`[ReadOnly][Disabled]`

`[Align="Left | Right"]`

`[Checked="Checked"] >`

- ❖ `<textarea>` :

- The `<textarea>` tag defines a multi-line text input control.
- The `<textarea>` element is often used in a form, to collect user inputs like comments or reviews.

- The size of a text area is specified by the `<cols>` and `<rows>` attributes (or with CSS).
- Syntax :

```
< textarea [Name="Control Name"]
    [Cols="IntColumns"]
    [Rows="IntRows"]
    [Disabled] [ReadOnly]
    [Wrap="Off | Physical"] >
    Default Text...
</ textarea >
```

```
A-2, 301, Hari Om Soc.,
Mota Varachha,
Surat-395006.
```

Example :

```
< textarea cols="22" rows="4" placeholder="Address"></ textarea >
```

❖ `<select>` :

- The `<select>` element is used to create a drop-down list.
- The `<select>` element is most often used in a form, to collect user input.
- Syntax:

```
< select [Name="Control Name"]
    [Disabled] [Multiple]
    [Size="Input Num of Character"] >
    <option>....</option>
</select>
```

❖ `<option>` :

- The `<select>` element is used to create a drop-down list.
- The `<select>` element is most often used in a form, to collect user input.
- Syntax:

```
<option [Name="Control Name"]
```

[Value="Initial Value"]

[Selected]>.....</option>

Example :

```

< select >
    <option>--Select City--</option>
    <option>Surat</option>
    <option>Vapi</option>
    <option>Baroda</option>
    <option>Valsad</option>
    <option>Navsari</option>
</ select >

```

Design a Student Data Entry Form using form and input elements.

Student Detail Form

Roll No. :	<input type="text" value="Roll no."/>
Name :	<input type="text" value="Enter Name"/>
Address :	<div style="border: 1px solid black; height: 40px; padding: 5px;">Address</div>
Date of Birth :	<input type="text" value="Day"/> <input type="text" value="Month"/> <input type="text" value="Year"/>
Gender :	<input checked="" type="radio"/> Male <input type="radio"/> Female
Hobby :	<input type="checkbox"/> Cricket <input type="checkbox"/> Reading <input type="checkbox"/> Travelling <input type="checkbox"/> Dancing <input type="checkbox"/> Singing
Username :	<input type="text" value="Enter Username"/>
Password :	<input type="text" value="Enter Password"/>
<input type="button" value="Button"/> <input type="button" value="Submit"/> <input type="button" value="Reset"/>	

HTML5 – Overview

- HTML5 is the next major revision of the HTML standard. HTML5 is a standard for structuring and presenting content on the World Wide Web.
- HTML5 is a cooperation between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG).
- Syntax:

```
<!DOCTYPE html>
<html>
<head>
  <title></title>
</head>
<body>
  <header>
    Your Content Here...
  </header>
  <nav>
    Your Content Here...
  </nav>
  <section>
    <article>
      Your Content Here...
    </article>
    <article>
      Your Content Here...
    </article>
    <aside>
      Your Content Here...
    </aside>
  </section>
  <footer>
    Your Content Here...
  </footer>
</body>
</html>
```

Frames in HTML

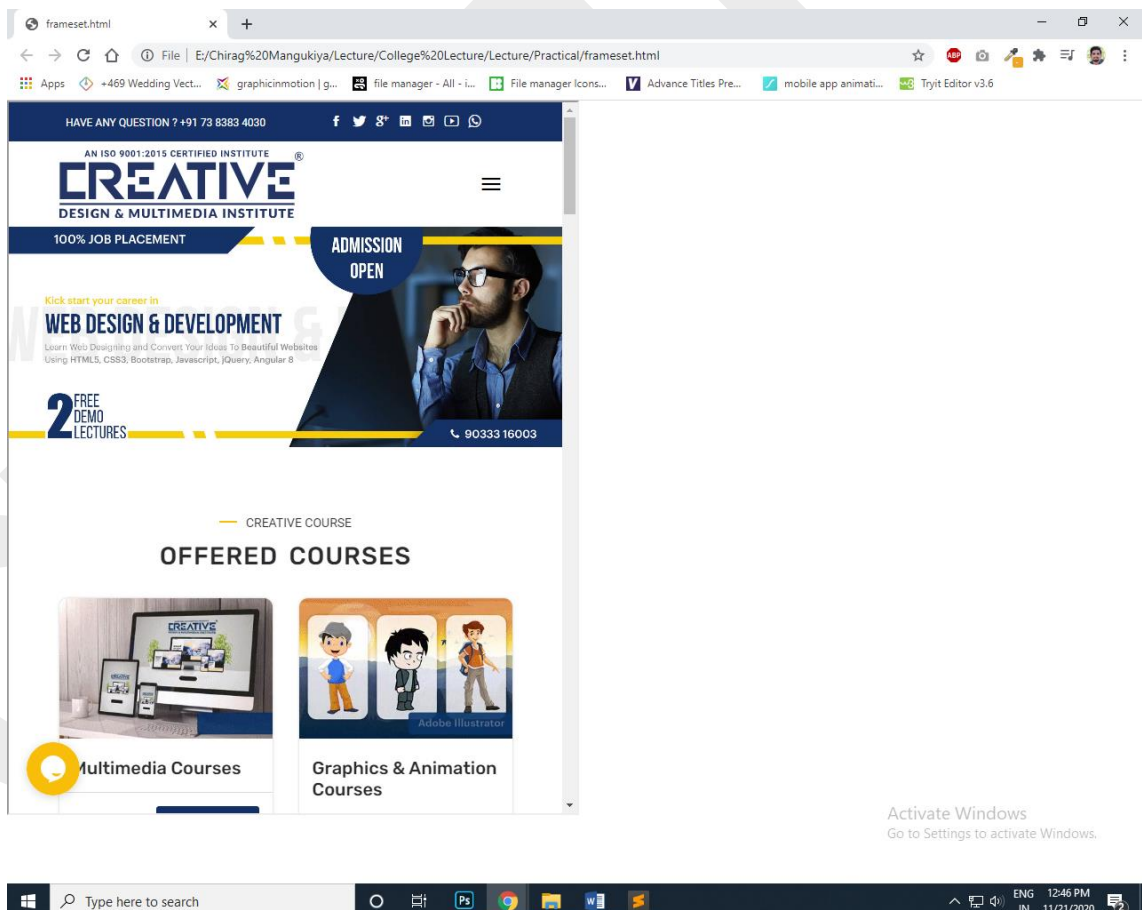
- **<iframe>:**

- The <iframe> tag specifies an inline frame.
- An inline frame is used to embed another document within the current HTML document.
- Syntax:

```
<iframe src="URL" width="pixel/percent" height="pixel">
</iframe>
```

- Example:

```
<iframe src="https://www.cdmi.in/" width="50%" height="700">
</iframe>
```



○ Audio:

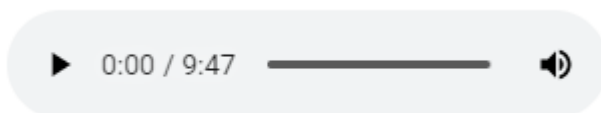
- The <audio> tag is used to embed sound content in a document, such as music or other audio streams.
- There are three supported audio formats in HTML: MP3, WAV, and OGG.
- To play an audio file in HTML, use the <audio> element:
- Syntax :

```
<audio controls>
    <source src="Your path here"
        type="[audio/mpeg | audio/ogg | audio/wav] ">
</audio>
```

- Example :

```
<audio controls>
    <source src="horse.ogg" type="audio/ogg">
    <source src="horse.mp3" type="audio/mpeg">
</audio>
```

- Output :



○ Video:

- The <video> tag is used to embed video content in a document, such as a movie clip or other video streams.
- The <video> tag contains one or more <source> tags with different video sources. The browser will choose the first source it supports.
- Syntax :

```
<video controls autoplay loop muted width height>
    <source src="Your path here"
```

```
type="[video/mp4 | video/ogg | video/webM] ">
```

```
</video>
```

- Example :

```
<video width="320" height="240" controls>
```

```
<source src="movie.mp4" type="video/mp4">
```

```
<source src="movie.mp4" type="video/ogg">
```

```
</video>
```

- Output :

