



# Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

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Experiment No. 1
HTML:Elements, Attributes, Head, Body, Hyperlink, Formatting, Images, Tables, List, Frames, Forms, Multimedia
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Aim - To study and implement the terms in HTML

Objective - To orient students to HTML for making webpages

Requirement -

1. An editor (Visual Studio Code)
2. Browser (Google Chrome)

Theory -

### INTRODUCTION TO HTML

HTML stands for Hyper Text Markup Language. It is the standard markup language for creating Web pages. It describes the structure of a Web page. It consists of a series of elements in the form of tags, attributes and its values. Elements of HTML tells the browser how to display the content.

// Sample HTML document

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

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

```
</head>
```

```
<body>
```

```
<h1>My First Heading</h1>
```

```
<p>My first paragraph.</p>
```

```
</body>
```

```
</html>
```

Explanation :

- The <!DOCTYPE html> declaration defines that this document is an HTML5 document
- The <html> element is the root element of an HTML page



- The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The <h1> element defines a large heading
- The <p> element defines a paragraph

### ELEMENTS :

The HTML element is everything from the start tag to the end tag:

<tagname> Content goes here...</tagname>

Examples of some HTML elements:

<h1>My First Heading</h1>

<p>My first paragraph.</p>

### ATTRIBUTES :

HTML attributes provide additional information about HTML elements. Attributes are always specified in the start tag.

Attributes usually come in name/value pairs like: name="value"

### HYPERLINK :

The href Attribute

The <a> tag defines a hyperlink. The href attribute specifies the URL of the page the link goes to:

<a href="https://vcet.edu.in/"> VCET </a>

### FORMATTING :

Formatting elements were designed to display special types of text:



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### 1. Bold - `<b>` `</b>`

The HTML `<b>` element defines bold text, without any extra importance.

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>This text is normal.</p>
```

```
<p><b>This text is bold.</b></p>
```

```
</body>
```

```
</html>
```

Output:

This text is normal.

**This text is bold.**

### 2. Italics - `<i>` `</i>`

The content inside is typically displayed in italic.

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>This text is normal.</p>
```

```
<p><i>This text is italic.</i></p>
```

```
</body>
```

```
</html>
```

Output :



This text is normal.

*This text is italic.*

### 3. Underline - `<u>` `</u>`

The context inside is been underlined.

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>This text is normal.</p>
```

```
<p><u>This text is underlined.</u></p>
```

```
</body>
```

```
</html>
```

Output :

This text is normal.

This text is underlined.

### 4. Subscript tag - `<sub>` `</sub>`

The HTML `<sub>` element defines subscript text. Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font. Subscript text can be used for chemical formulas, like H<sub>2</sub>O:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>H<sub>2</sub>O</p>
```

```
</body>
```



<html>

Output :

H<sub>2</sub>O

### 5. Superscript tag - <sup> </sup>

The HTML <sup> element defines superscript text. Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font. Superscript text can be used for footnotes, like WWW<sup>[1]</sup>.

<!DOCTYPE html>

<html>

<body>

<p>WWW <sup>[1]</sup></p>

</body>

</html>

Output:

WWW <sup>[1]</sup>

### IMAGES :

Images can improve the design and the appearance of a web page. The HTML <img> tag is used to embed an image in a web page. Images are not technically inserted into a web page; images are linked to web pages. The <img> tag creates a holding space for the referenced image.

The <img> tag is empty, it contains attributes only, and does not have a closing tag.

The <img> tag has two required attributes:

- src - Specifies the path to the image



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- alt - Specifies an alternate text for the image

Syntax : ``

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>Alternative text</h2>
```

`<p>`The alt attribute should reflect the image content, so users who cannot see the image get an understanding of what the image contains:`</p>`

```

```

```
</body>
```

```
</html>
```

Output :



TABLES :

HTML tables allow web developers to arrange data into rows and columns.

Table Cells



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td stands for table data. Each table cell is defined by a <td> and a </td> tag. Everything between <td> and </td> are the content of the table cell.

<table>

<tr>

<td>Anil</td>

<td>Sunil</td>

<td>Sahil</td>

</tr>

</table>

### Table Rows

tr stands for table row. Each table row starts with a <tr> and ends with a </tr> tag.

<table>

<tr>

<td>Anil</td>

<td>Sunil</td>

<td>Sahil</td>

</tr>

<tr>

<td>16</td>

<td>14</td>

<td>10</td>

</tr>

</table>

### Table Headers





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th stands for table header. Sometimes you want your cells to be table header cells. In those cases use the <th> tag instead of the <td> tag. By default, the text in <th> elements are bold and centered, but you can change that with CSS.

```
<table>
```

```
<tr>
```

```
<th>Person1</th>
```

```
<th>Person2</th>
```

```
<th>Person3</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Emil</td>
```

```
<td>Tobias</td>
```

```
<td>Linus</td>
```

```
</tr>
```

```
<tr>
```

```
<td>16</td>
```

```
<td>14</td>
```

```
<td>10</td>
```

```
</tr>
```

```
</table>
```

```
// Sample table
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<style>
```

```
table, th, td {
```



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```
border: 1px solid black;
```

```
}
```

```
</style>
```

```
<body>
```

```
<h2>A basic HTML table</h2>
```

```
<table style="width:100%">
```

```
<tr>
```

```
<th>Company</th>
```

```
<th>Contact</th>
```

```
<th>Country</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Parle</td>
```

```
<td>Anil Chintamani</td>
```

```
<td>India</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Centro GmBH</td>
```

```
<td>George Bush</td>
```

```
<td>Germany</td>
```

```
</tr>
```

```
</table>
```

```
<p>To understand the example better, we have added borders to the table.</p>
```

```
</body>
```

</html>

Output:

<b>A basic HTML table</b>		
<b>Company</b>	<b>Contact</b>	<b>Country</b>
Parle	Anil Chintamani	India
Centro GmBH	George Bush	Germany
To understand the example better, we have added borders to the table.		

LIST :

HTML lists allow web developers to group a set of related items in lists.

Unordered HTML List

An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

The list items will be marked with bullets (small black circles) by default:

<!DOCTYPE html>

<html>

<body>

<h2>An unordered HTML list</h2>

<ul>

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ul>

</body>

</html>



Output :

### **An unordered HTML list**

- Coffee
- Tea
- Milk

Ordered HTML List

An ordered list starts with the `<ol>` tag. Each list item starts with the `<li>` tag.

The list items will be marked with numbers by default:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>An ordered HTML list</h2>
```

```
<ol>
```

```
<li>Coffee</li>
```

```
<li>Tea</li>
```

```
<li>Milk</li>
```

```
</ol>
```

```
</body>
```

```
</html>
```

Output:



### An ordered HTML list

1. Coffee
2. Tea
3. Milk

### FRAMES :

An HTML iframe is used to display a web page within a web page. The HTML <iframe> tag specifies an inline frame. An inline frame is used to embed another document within the current HTML document.

Syntax : <iframe src="*url*" title="*description*"></iframe>

#### Iframe - Set Height and Width

Use the height and width attributes to specify the size of the iframe. The height and width are specified in pixels by default:

```
<iframe          src="demo_iframe.htm"          height="200"          width="300"
title="Iframe_Example"></iframe>
```

#### Iframe - Remove the Border

By default, an iframe has a border around it. To remove the border, add the style attribute and use the CSS border property:

```
<iframe src="demo_iframe.htm" style="border:none;" title="Iframe_Example"></iframe>
```

#### Iframe - Target for a Link

An iframe can be used as the target frame for a link. The target attribute of the link must refer to the name attribute of the iframe:

```
<iframe src="demo_iframe.htm" name="iframe_a" title="Iframe_Example"></iframe>
```

```
<p><a href="https://vcet.edu.in/" target="iframe_a"> VCET </a></p>
```

### FORMS :



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

The `<form>` Element

The HTML `<form>` element is used to create an HTML form for user input:

`<form>`

.

*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.

The `<input>` Element

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
<code>&lt;input type="text"&gt;</code>	Displays a single-line text input field
<code>&lt;input type="radio"&gt;</code>	Displays a radio button (for selecting one of many choices)
<code>&lt;input type="checkbox"&gt;</code>	Displays a checkbox (for selecting zero or more of many choices)
<code>&lt;input type="submit"&gt;</code>	Displays a submit button (for submitting the form)
<code>&lt;input type="button"&gt;</code>	Displays a clickable button

MULTIMEDIA :

Multimedia comes in many different formats. It can be almost anything you can hear or see, like images, music, sound, videos, records, films, animations, and more.

Video

The HTML `<video>` element is used to show a video on a web page.

`<!DOCTYPE html>`



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<body>

<video width="400" controls>

<source src="mov\_bbb.mp4" type="video/mp4">

<source src="mov\_bbb.ogg" type="video/ogg">

Your browser does not support HTML video.

</video>

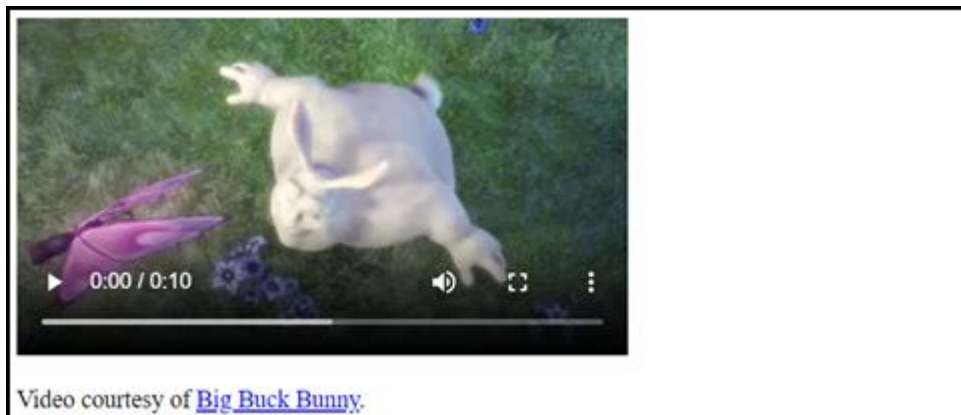
<p> Video courtesy of <a href="https://www.bigbuckbunny.org/" target="\_blank">Big Buck Bunny </a>.

</p>

</body>

</html>

Output :



Audio :

The HTML <audio> element is used to play an audio file on a web page.

To play an audio file in HTML, use the <audio> element:

<!DOCTYPE html>



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<body>

<audio controls>

<source src="horse.ogg" type="audio/ogg">

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

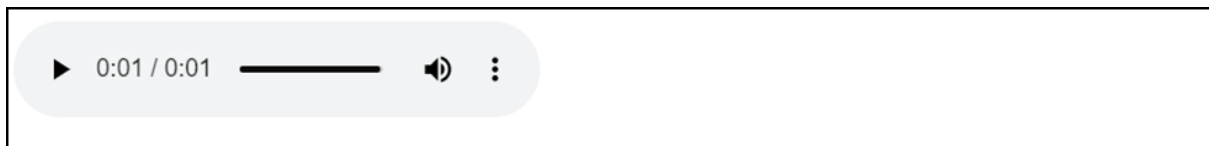
Your browser does not support the audio element.

</audio>

</body>

</html>

Output :



Code:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Login Page</title>
```

```
</head>
```

```
<body>
```

```
<table width="100%" height="100%" border="0">
```

```
<tr>
```

```
<td align="center" valign="middle">
```

```
<h2>Login</h2>
```

```
<form action="/login" method="post">
```

```
<label for="username">Username:</label><br>
```

```
<input type="text" id="username" name="username"
required><br><br>
```





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```
<label for="password">Password:</label><br>
<input type="password" id="password" name="password"
required><br><br>

<input type="submit" value="Login">
</form>
</td>
</tr>
</table>
</body>
</html>
```

Output:

Conclusion:

Hypertext Markup Language (HTML) is highly popular among developers, particularly those involved in web design and front-end development. Its widespread use can be attributed to its simplicity, flexibility, and ease of learning. One of the key advantages of HTML is that it is not case-sensitive, meaning that tags like `<BODY>` and `<body>` are treated the same way by



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browsers. This feature makes HTML more forgiving and developer-friendly, as it reduces the likelihood of syntax errors caused by capitalization inconsistencies. Moreover, HTML serves as the foundation of all web pages, providing the structure upon which styles (CSS) and behaviors (JavaScript) are added. Its universal support across browsers and platforms ensures that web content can be displayed consistently and efficiently, making HTML an indispensable skill for anyone working in the digital and web development fields.