



# 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



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- The <head> element contains meta information about the 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>
```



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</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 :

### Alternative text

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



### 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>



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Output:

## A basic HTML table

Company	Contact	Country
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>
```



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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 :



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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>



<body>

<audio controls>

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

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

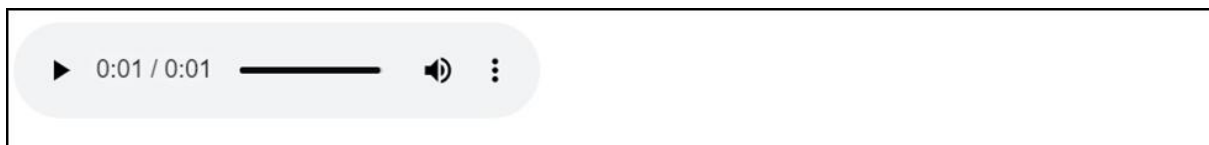
Your browser does not support the audio element.

</audio>

</body>

</html>

Output :



Program:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>HTML Experiment - Complete Demo</title>
```

```
<style>
```

```
body {
```

```
    font-family: Arial, sans-serif;
```

```
    margin: 20px;
```

```
    padding: 20px;
```

```
    background-color: #f5f5f5;
```

```
}
```

```
.section {
```

```
    background-color: white;
```

```
    padding: 20px;
```

```
    margin-bottom: 20px;
```





```
border-radius: 8px;
box-shadow: 0 2px 5px rgba(0,0,0,0.1);
}
h1 {
color: #2c3e50;
border-bottom: 3px solid #3498db;
padding-bottom: 10px;
}
h2 {
color: #34495e;
margin-top: 30px;
}
table, th, td {
border: 1px solid black;
border-collapse: collapse;
}
th, td {
padding: 10px;
text-align: left;
}
th {
background-color: #3498db;
color: white;
}
.form-container {
background-color: #ecf0f1;
padding: 20px;
border-radius: 5px;
}
input[type="text"], input[type="email"], input[type="password"], textarea, select
{ width: 100%;
padding: 8px;
margin: 5px 0 15px 0;
border: 1px solid #ccc;
border-radius: 4px;
```



```
}
input[type="submit"], input[type="reset"]
{ background-color: #3498db;
  color: white;
  padding: 10px 20px;
  border: none;
  border-radius: 4px;
  cursor: pointer;
  margin-right: 10px;
}
input[type="submit"]:hover, input[type="reset"]:hover
{ background-color: #2980b9;
}
iframe {
  border: 2px solid #3498db;
  border-radius: 5px;
}
</style>
</head>
<body>

<h1>HTML Experiment - Complete Demonstration</h1>

<!-- 1. ELEMENTS -->
<div class="section">
  <h2>1. HTML Elements</h2>
  <h1>This is H1 Heading</h1>
  <h2>This is H2 Heading</h2>
  <h3>This is H3 Heading</h3>
  <p>This is a paragraph element. HTML elements consist of start tags and end tags with
content in between.</p>
</div>

<!-- 2. ATTRIBUTES -->
<div class="section">
  <h2>2. HTML Attributes</h2>
  <p>This is a paragraph element. HTML elements consist of start tags and end tags with
content in between.</p>
</div>

CSL501: Web Computing and Network Lab
```



`<p title="This is a tooltip" style="color: blue;">Hover over this paragraph to see the title attribute (tooltip).</p>`

`<p id="demo" class="highlight">This paragraph has id and class attributes.</p>`  
`</div>`

`<!-- 3. HYPERLINKS -->`

`<div class="section">`

`<h2>3. Hyperlinks</h2>`

`<p>Click the links below:</p>`

`<a href="https://vcet.edu.in/" target="_blank">VCET Website</a><br><br>`

`<a href="https://www.google.com" target="_blank">Google</a><br><br>`

`<a href="#forms">Jump to Forms Section (Internal Link)</a>`

`</div>`

`<!-- 4. FORMATTING -->`

`<div class="section">`

`<h2>4. Text Formatting</h2>`

`<h3>Bold Text:</h3>`

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

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

`<h3>Italic Text:</h3>`

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

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

`<h3>Underline Text:</h3>`

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

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

`<h3>Subscript Text:</h3>`

`<p>Chemical Formula: H<sub>2</sub>O (Water)</p>`

`<p>Chemical Formula: CO<sub>2</sub> (Carbon Dioxide)</p>`

`<h3>Superscript Text:</h3>`

`<p>Mathematical Expression: E = MC<sup>2</sup></p>`



<p>Footnote Example: WWW<sup>[1]</sup></p>

<h3>Combined Formatting:</h3>

<p><b><i><u>Bold, Italic and Underlined text</u></i></b></p>

</div>

<!-- 5. IMAGES -->

<div class="section">

<h2>5. Images</h2>

<h3>Alternative Text Example:</h3>

<p>The alt attribute provides alternative text when image cannot be displayed:</p>



<br><br>



</div>

<!-- 6. TABLES -->

<div class="section">

<h2>6. HTML Tables</h2>

<h3>A basic HTML table:</h3>

<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>
<tr>
<td>Britannia</td>
<td>John Smith</td>
<td>India</td>
</tr>
</table>
<p>The table above has borders added using CSS.</p>
```

<h3>Another Table Example:</h3>

```
<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>
</div>
```



<!-- 7. LISTS -->

<div class="section">

<h2>7. HTML Lists</h2>

<h3>An unordered HTML list:</h3>

<ul>

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ul>

<h3>An ordered HTML list:</h3>

<ol>

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ol>

<h3>Nested Lists:</h3>

<ul>

<li>Coffee

<ul>

<li>Black Coffee</li>

<li>Cappuccino</li>

</ul>

</li>

<li>Tea

<ul>

<li>Green Tea</li>

<li>Black Tea</li>

</ul>

</li>

</ul>

</div>



<!-- 8. FRAMES (iFrame) -->

<div class="section">

<h2>8. iFrame (Inline Frames)</h2>

<h3>Basic iFrame:</h3>

<iframe src="https://www.wikipedia.org"

width="100%"

height="300"

title="Wikipedia iFrame">

</iframe>

<h3>iFrame with Link Target:</h3>

<iframe src="https://www.google.com"

name="iframe\_a"

height="300"

width="100%"

title="Google iFrame">

</iframe>

<p><a href="https://vcet.edu.in/" target="iframe\_a">Click to open VCET in iframe  
above</a></p>

</div>

<!-- 9. FORMS -->

<div class="section" id="forms">

<h2>9. HTML Forms</h2>

<div class="form-container">

<h3>Student Registration Form</h3>

<form action="#" method="post">

<label for="fname">First Name:</label>

<input type="text" id="fname" name="firstname" placeholder="Enter your first name"  
required>

<label for="lname">Last Name:</label>



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`<input type="text" id="lname" name="lastname" placeholder="Enter your last name" required>`

`<label for="email">Email:</label>`

`<input type="email" id="email" name="email" placeholder="Enter your email" required>`

`<label for="password">Password:</label>`

`<input type="password" id="password" name="password" placeholder="Enter password" required>`

`<label for="gender">Gender:</label><br>`

`<input type="radio" id="male" name="gender" value="male">`

`<label for="male">Male</label>`

`<input type="radio" id="female" name="gender" value="female">`

`<label for="female">Female</label>`

`<input type="radio" id="other" name="gender" value="other">`

`<label for="other">Other</label><br><br>`

`<label for="course">Select Course:</label>`

`<select id="course" name="course">`

`<option value="">--Select--</option>`

`<option value="cse">Computer Science</option>`

`<option value="it">Information Technology</option>`

`<option value="ece">Electronics</option>`

`<option value="mech">Mechanical</option>`

`</select>`

`<label>Hobbies:</label><br>`

`<input type="checkbox" id="reading" name="hobby1" value="reading">`

`<label for="reading">Reading</label>`

`<input type="checkbox" id="sports" name="hobby2" value="sports">`

`<label for="sports">Sports</label>`

`<input type="checkbox" id="music" name="hobby3" value="music">`

`<label for="music">Music</label><br><br>`





```
<label for="comments">Comments:</label>
<textarea id="comments" name="comments" rows="4" placeholder="Enter your
comments here..."></textarea>
```

```
<input type="submit" value="Submit">
<input type="reset" value="Reset">
</form>
</div>
</div>
```

```
<!-- 10. MULTIMEDIA -->
```

```
<div class="section">
```

```
<h2>10. Multimedia (Audio & Video)</h2>
```

```
<h3>Video Example:</h3>
```

```
<video width="400" controls>
```

```
<source src="https://www.w3schools.com/html/mov_bbb.mp4" type="video/mp4">
```

```
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>
```

```
<h3>Audio Example:</h3>
```

```
<audio controls>
```

```
<source src="https://www.w3schools.com/html/horse.mp3" type="audio/mpeg">
```

```
Your browser does not support the audio element.
```

```
</audio>
```

```
<p>Audio controls allow users to play, pause, and control volume.</p>
```

```
</div>
```

```
<!-- Summary -->
```

```
<div class="section">
```

```
<h2>Summary</h2>
```

```
<p>This HTML document demonstrates:</p>
```

```
<ol>
```

```
<li>HTML Elements (headings, paragraphs)</li>
```



```
<li>HTML Attributes (id, class, title, style)</li>
<li>Hyperlinks (internal and external links)</li>
<li>Text Formatting (bold, italic, underline, subscript, superscript)</li>
<li>Images with alt text and dimensions</li>
<li>Tables with headers and data cells</li>
<li>Lists (ordered and unordered)</li>
<li>iFrames for embedding web pages</li>
<li>Forms with various input types</li>
<li>Multimedia (audio and video elements)</li>
</ol>
</div>

<footer style="text-align: center; margin-top: 30px; padding: 20px; background-color:
#2c3e50; color: white; border-radius: 8px;">
  <p>HTML Experiment 1 - Web Computing and Network Lab</p>
  <p>CSL501 - Complete Demonstration</p>
</footer>

</body>
</html>
```

Output:



← → ↻ File C:/Users/Pranita%20Kumbhar/Downloads/html\_exp\_1.html ☆ □ ⬇ P

### HTML Experiment - Complete Demonstration

---

#### 1. HTML Elements

## This is H1 Heading

---

### This is H2 Heading

#### This is H3 Heading

This is a paragraph element. HTML elements consist of start tags and end tags with content in between.

---

#### 2. HTML Attributes

Hover over this paragraph to see the title attribute (tooltip).

This paragraph has id and class attributes.

---

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#### 3. Hyperlinks

Click the links below:

[VCET Website](#)

[Google](#)

[Jump to Forms Section \(Internal Link\)](#)

---

#### 4. Text Formatting

**Bold Text:**

This text is normal.

**This text is bold.**

**Italic Text:**

This text is normal.

*This text is italic.*

**Underline Text:**

This text is normal.

This text is underlined.

**Subscript Text:**

Chemical Formula: H<sub>2</sub>O (Water)

27°C Search ENG




# Vidyavardhini's College of Engineering and Technology

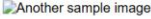
Department of Artificial Intelligence & Data Science

5. Images

**Alternative Text Example:**

The alt attribute provides alternative text when image cannot be displayed:

 Sample placeholder image

 Another sample image

6. HTML Tables

**A basic HTML table:**

Company	Contact	Country
Parle	Anil Chintamani	India
Centro GmbH	George Bush	Germany
Britannia	John Smith	India

The table above has borders added using CSS.

**Another Table Example:**


Person1	Person2	Person3
Emil	Tobias	Linus
16	14	10

Nested Lists:

- Coffee
  - Black Coffee
  - Cappuccino
- Tea
  - Green Tea
  - Black Tea

8. iFrame (Inline Frames)

**Basic iFrame:**



iFrame with Link Target:



9. HTML Forms

**Student Registration Form**

First Name:

Last Name:

Email:

Password:

Gender:  
☐ Male ☐ Female ☐ Other

Select Course:

Hobbies:  
☐ Reading ☐ Sports ☐ Music

Comments:

### Conclusion:

HyperText Markup Language (HTML) is popular among developers, especially who work in the web design world. It is not a case-sensitive language because of which it is developer-friendly.