

CT2207	Lab: Web Technology
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Practical No 2.

Aim: STUDY AND IMPLEMENT BASIC HTML TAGS

Reference :- Virtual lab, w3school

1) Introduction to HTML

Theory:

1.1 Introduction

HTML stands for Hyper Text Mark-up Language, which is the most widely used language on web to develop web pages. HTML was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML specification which was published in 1995. HTML 4.01 was a major version of HTML and it was published in late 1999. Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published in 2012.

1.2 Write code

Web pages can be created and modified by using professional HTML editors. However, for learning HTML we recommend a simple text editor like Notepad or advance text editor like VS Code or Sublime.

Step 1: Open Sublime text editor in your PC.

Step 2: Write some HTML code.

Step 3: Save the HTML page with name 'index.html'.

You can use either .htm or .html as file extension. There is no difference, it is up to you.

Step 4: View the HTML page in your browser by opening the saved HTML file in your favourite browser (double click on the file, or right-click - and choose 'Open with').

1.3 Structure of an HTML Document

An HTML document is mainly divided into two parts:

- **HEAD:** This contains the information about the HTML document. For Example, Title of the page, Version of HTML, Meta Data etc.
- **BODY:** This contains everything you want to display on the Web Page.

`<!DOCTYPE html>`

`<html>`

`<head>`

`<title> Page Title</title>`

`</head>`

`<body>`

`<h2> Write heading here</h2>`

`<p> Write paragraph here</p>`

`</body>`

`</html>`

Every webpage must contain this code. Below is the complete explanation of each of the tag used in the above piece of HTML code:

- **<!DOCTYPE html>:** This tag is used to tell the HTML version. This currently tells that the version is HTML 5.
- **<html>:** This is called HTML root element and used to wrap all the code.
- **<head>:** Head tag contains metadata, title, page CSS etc.
- **<body>:** Body tag is used to enclose all the data which a web page has from texts to links. All the content that you see rendered in the browser is contained within this element.

1.4 Tags

An HTML code that defines every structure on an HTML page, including the placement of text, images and hypertext links. HTML tags begin with the less-than (<) character and end with greater-than (>). These symbols are also called angle brackets.

Most of the tags in HTML are used in pair like starting and closing tag but Empty tags are used individually which means only starting tag can be used for empty tags. No closing tag is required for using empty tags.

1.4.1 Heading Tags:

Any document starts with a heading. You can use different sizes for your headings. HTML also has six levels of headings, which use the elements h1, h2, h3, h4, h5, and h6. While displaying any heading, browser adds one line before and one line after that heading.

- The HTML <h1> tag defines the highest level or most important heading in the HTML document. This tag is also commonly referred to as the <h1> element.
- The HTML <h2> to <h6> tags define the different levels of headings in the HTML document.

Syntax of Heading Tags:

```
<h1>Heading 1 </h1>
<h2>Heading 2 </h2>
<h3>Heading 3 </h3>
<h4>Heading 4 </h4>
<h5>Heading 5 </h5>
<h6>Heading 6 </h6>
```

1.4.2 Other Tags:

- The HTML tag merely gives text a bold appearance but does not provide any semantic meaning to the text. This tag is also commonly referred to as the element.

syntax:

```
<b>Write your text here to make it Bold</b>
```

- The HTML <i> tag merely gives text an italicized appearance but does not provide any semantic meaning to the text. This tag is also commonly referred to as the <i> element.

syntax:

```
<i>Write your text here to make it Italic</i>
```

- The HTML <u> tag defines text that should be styled differently or have a non-textual annotation. Browsers traditionally render the text found within the <u> tag as underlined text. This tag is also commonly referred to as the <u> element.

syntax:

```
<u>Write your text here to make it underlined</u>
```

- The HTML <p> tag defines a paragraph in the HTML document. This tag is also commonly referred to as the <p> element.

syntax:

```
<p>Write your paragraph here</p>
```

- The HTML <big> tag makes text one font size bigger in the HTML document. This tag is also commonly referred to as the <big> element.

syntax:

```
<big>Write your text here</big>
```

- The HTML <small> tag makes text one font size smaller in the HTML document. This tag is also commonly referred to as the <small> element.

syntax:

```
<small>Write your text here</small>
```

2) Applying Attributes in HTML Tags

SYNTAX:

`<tagname attributename="value"> tag content </tagname>`

`<p align="center"> Hello World! </p>`

- 1.) The name is the property you want to set. For example, the paragraph `<p>` element in the example carries an attribute whose name is `align`, which you can use to indicate the alignment of paragraph on the page.
- 2.) The value is what you want the value of the property to be set and always put within single or double quotations. In above example we can use three possible values of `align` attribute: `left`, `center` and `right`.

PROCEDURE:

These steps will be followed on the simulator

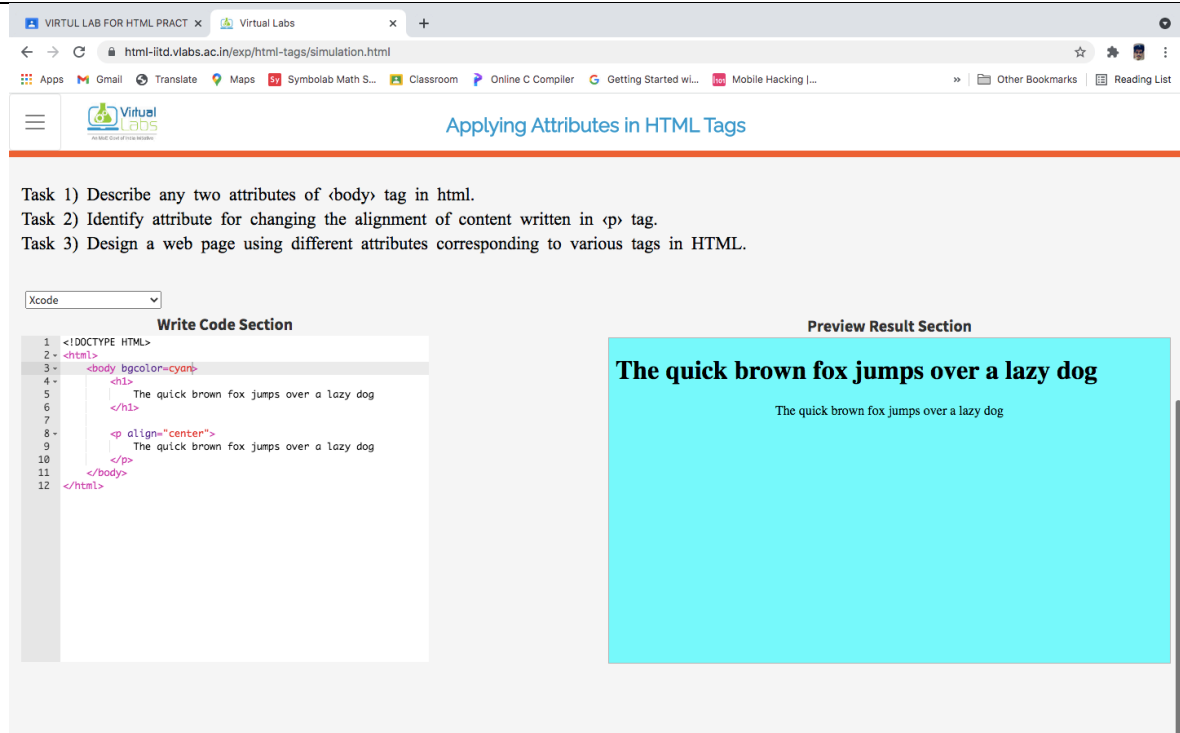
1. The experiment begins with previewing the output of different attributes and their values associated with various text in Preview Section given at the top of the Simulator by hovering the cursor in the Select Tag -> Attribute -> Value Section given below.
2. After previewing the output click on any of the Attribute -> Value through given navigation, to see the syntax of that particular attribute in adjacent the Syntax Section.
3. After Understanding the Syntax of any specific HTML attribute, write code for that particular attribute in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION:

Task 1) Describe any two attributes of `<body>` tag in html.

Task 2) Identify attribute for changing the alignment of content written in `<p>` tag.

Task 3) Design a web page using different attributes corresponding to various tags in HTML.



3) Inserting images through img tags

SYNTAX:

```


```

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with previewing the output of img tag in Preview Section given at the top of the Simulator by giving the values for different attributes like src, alt, width, etc. in Simulator.
2. After previewing the output we can see the syntax of img tag in adjacent the Syntax Section.
3. After Understanding the Syntax, write HTML code for inserting an image in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION:

- Task 1) Explain the working of tag in html.
- Task 2) Make use of tag to insert the Logo of Virtual Labs in an HTML web page.
- Task 3) Design a web page using various images of Chandrayan2 using tag of HTML.

Note: In Write Code Section use this path for image <http://www.vlab.co.in/images/logo.jpg>

VIRTUAL LAB FOR HTML PRACTICE x Virtual Labs x ycce logo link - Google Search x +

Not Secure | html-iiitd.vlabs.ac.in/exp/img-tags-in-html/simulation.html

Apps Gmail Translate Maps Symbolab Math S... Classroom Online C Compiler Getting Started wi... Mobile Hacking |... Other Bookmarks Reading List

Inserting Images through img Tag

Task 1) Explain the working of tag in html.
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Note: In Write Code Section use this path for image <http://www.vlab.co.in/images/logo.jpg>

Xcode

Write Code Section

```

1 <!DOCTYPE HTML>
2 <html>
3 <body>
4 
6 </html>

```

Preview Result Section



4) Using Anchor Tags for Hyperlinks

SYNTAX:

```

<a href="pagepath/pagename">hyperlink</a>
<a href="http://vlab.co.in/index.html"> Visit Lab </a>

```

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with previewing the output of <a> tag in Preview Section given at the top of the Simulator by giving the values for different attributes like href, target, rel, etc. in Simulator.
2. After previewing the output we can see the syntax of <a> tag in adjacent the Syntax Section.
3. After Understanding the Syntax, write HTML code for inserting an anchor in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION:

- Task 1) Explain the working of <a> tag in html.
 Task 2) Make use of <a> tag to insert the hyperlink of Virtual Labs Website in an HTML web page.
 Task 3) Design a web page using various hyperlinks of different participating institutes of virtual labs using <a> tag of HTML.

Task 1) Explain the working of `<a>` tag in html.

Task 2) Make use of `<a>` tag to insert the hyperlink of Virtual Labs Website in an HTML web page.

Task 3) Design a web page using various hyperlinks of different participating institutes of virtual labs using `<a>` tag of HTML.

Write Code Section

```

1 <!DOCTYPE html>
2 <html>
3 <body align="center">
4   <a href="https://www.ycce.edu/">YCCCE | home</a>
5 </body>
6 </html>

```

Preview Result Section

[YCCCE | home](https://www.ycce.edu/)

5) How marquee Tags work in HTML

SYNTAX:

`<marquee attribute="value">content</marquee>`

`<marquee direction="left" behavior="scroll" bgcolor="red" scrolldelay="100milisec">Visit Lab</marquee>`

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with previewing the output of `<marquee>` tag in Preview Section given at the top of the Simulator by selecting the values for different attributes like direction, behaviour, loop, bgcolor, etc. in Simulator.
2. After previewing the output we can see the syntax of `<marquee>` tag in the adjacent Syntax Section.
3. After understanding the Syntax, write HTML code for inserting a marquee in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION :

Task 1) Explain the working of `<marquee>` tag in html.

Task 2) Make use of `<marquee>` tag to insert the marquee for scrolling notifications and news to left and right directions respectively.

Task 3) Design a web page using various marquees for showing the upcoming events moving upwards direction using `<marquee>` tag of HTML.

Virtual Labs

https://html-iitd.vlabs.ac.in/exp/marquee-tags-in-html/simulation.html

How <marquee> Tag works in HTML

Task 1) Explain the working of <marquee> tag in html.

Task 2) Make use of <marquee> tag to insert the marquee for scrolling notifications and news to left and right directions respectively.

Task 3) Design a web page using various marquees for showing the upcoming events moving upwards direction using <marquee> tag of HTML.

Xcode

Write Code Section

```

1 <!DOCTYPE HTML>
2 <html>
3 <body>
4 <br/><br/><br/><br/><br/><br/>
5 <marquee direction="left" loop="infinite" scrolldelay="100">
6 <marquee direction="right" loop="infinite" scrolldelay="100">
7 <marquee direction="right" loop="infinite" scrolldelay="100">
8 </body>
9 </html>

```

Preview Result Section

This Experiment 5
INDIA
This Experiment 5

6) Creating Tables in HTML

SYNTAX:

```

<table attribute="value">Inside Tags</table>
<table align="left" bgcolor="red" border="1px solid black">
<th>
  Visit Lab
</th>
<tr>
<td>
  content
</td>
</tr>
</table>

```

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with previewing the output of <table> tag in Preview Section given at the top of the Simulator by giving the values for Rows, Columns, Align, Bgcolor, Border, Width and Height in Simulator.
2. After previewing the output we can see the syntax of <table> tag in adjacent the Syntax Section.
3. After Understanding the Syntax, write HTML code for inserting a Table in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION:

- Task 1) Explain the working of <table> tag in html.
- Task 2) Make use of <table> tag to insert table having Five rows and Three columns.
- Task 3) Design a web page containing a table for showing name and hours of virtual lab used of the top 5 students using <table> tag of HTML.

Virtual Labs x HTML: Design table with thin s x +

https://html-iitd.vlabs.ac.in/exp/tables-in-html/simulation.html

How <table> Tag works in HTML

Task 1) Explain the working of <table> tag in html.
 Task 2) Make use of <table> tag to insert table having Five rows and Three columns.
 Task 3) Design a web page containing a table for showing name and hours of virtual lab used of the top 5 students using <table> tag of HTML.

Xcode

Write Code Section

```

1 <!DOCTYPE HTML>
2 <html>
3
4 <body>
5 <table border="2px solid black" width="400px" height="200px">
6 <tbody>
7 <tr>
8 <td style="text-align:center">first</td>
9 <td style="text-align:center">second</td>
10 </tr>
11 <tr>
12 <td style="text-align:center">third</td>
13 <td style="text-align:center">fourth</td>
14 </tr>
15 </tbody>
16 </table>
17 </body>
18
19 </html>

```

Preview Result Section

first	second
third	fourth

7) Types of Lists in HTML

SYNTAX:

```

<ul attribute='value'>
<li>content1</li>
<li>content2</li>
<li>content3</li>
</ul>

```

```

<ol attribute='value'>
<li>content1</li>
<li>content2</li>
<li>content3</li>
</ol>

```

```

<ul type='square'>
<li>Gold</li>
<li>Silver</li>
<li>Bronze</li>
</ul>

```

```

<ol type='1'>
<li>Gold</li>
<li>Silver</li>
<li>Bronze</li>
</ol>

```

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with previewing the output of List (/) tag in Preview Section given at the top of the Simulator by giving the values for different attributes and List Items in Simulator.
2. After previewing the output we can see the syntax of / tag in adjacent the Syntax Section.

3. After understanding the syntax, write HTML code for inserting a List in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION:

Task 1) Explain the types of Lists (Unordered and Ordered Lists) in html.

Task 2) Make use of and tags for creating lists giving names of experiment given in HTML Lab.

Task 3) Design a web page containing an unordered list for showing name of participating institutes of virtual labs.

The screenshot shows a web browser window with the URL <https://html-iitd.vlabs.ac.in/exp/lists-in-html/simulation.html>. The page title is "Types of Lists in HTML". Below the title, three tasks are listed: Task 1) Explain the types of Lists (Unordered and Ordered Lists) in html. Task 2) Make use of and tags for creating lists giving names of experiment given in HTML Lab. Task 3) Design a web page containing an unordered list for showing name of participating institutes of virtual labs.

The "Write Code Section" contains the following HTML code:

```

1 <!DOCTYPE HTML>
2 <html>
3 <body>
4 <h2>Unordered List</h2>
5 <ul type="disk">
6 <li>Tata</li>
7 <li>Mahindra</li>
8 <li>Maruti</li>
9 <li>Suzuki</li>
10 </ul>
11 </body>
12 </html>

```

The "Preview Result Section" displays the rendered output, titled "Unordered List", showing a bulleted list with the following items:

- Tata
- Mahindra
- Maruti
- Suzuki

At the bottom right, it says "Lab contributed by IIT Delhi".

8) Working of div Tag in HTML

SYNTAX:

```
<div attribute="property1:values;property2:values;">Content</div>
```

```
<div style="background-color:lightblue;width:100px;height:100px;">Virtual Labs</div>
```

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with previewing the output of <div> tag in Preview Section given at the top of the Simulator by giving the values for different attributes like text and align along with the properties and values in style attribute for inline CSS, in Simulator.
2. After previewing the output we can see the syntax of <div> tag in adjacent the Syntax Section.
3. After understanding the syntax, write HTML code for inserting a division in the Write Code Section given at the left bottom of simulator.
4. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
5. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION:

9) Creating Webpage Layout in HTML

SYNTAX:

- <header>:** It is used to define a header for a document or a section
- <nav>:** It is used to define a container for navigation links
- <section>:** It is used to define a section in a document
- <article>:** It is used to define an independent self-contained article
- <aside>:** It is used to define content aside from the content (like a sidebar)
- <footer>:** It is used to define a footer for a document or a section
- <details>:** It is used to define additional details
- <summary>:** It is used to define a heading for the <details> element

PROCEDURE:

These steps will be followed on the simulator

1. The experiment begins with clicking the Start Button in Simulator.
2. Observe the values of different attributes of table tag, click Add to insert it in the web page.
3. Observe the syntax of added attributes in the Syntax Section given below and Output in the Output Section given on the right side.
4. After understanding the syntax and previewing the output, click Add to insert the next code and observe the syntax and output until the whole web page layout is created.
5. Write HTML code for creating a web page in the Write Code Section given at the left bottom of simulator.
6. If there will be any error in the code then Simulator will highlight that error so that it can be rectified.
7. Finally after rectifying the errors the result of correct HTML code can be seen in the adjacent Preview Result Section.

SIMULATION :

Virtual Labs

HTML: Design table with thin s

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https://html-iitd.vlabs.ac.in/exp/webpage-layout-in-html/simulation.html

Virtual Labs

Virtual Lab of IITD

Creating Web Page Layout in HTML

Task 1) Choose the html tags required for the designing a web page layout.

Task 2) Outline a webpage layout for your profile web page.

Task 3) Make use of different html tag to write code for the layout outlined in the above task.

Task 4) Design a web page layout for Virtual Labs Nodal Center of your Institute.

Xcode

Write Code Section

```
1 <!DOCTYPE HTML>
2 <html>
3
4 <body>
5   <table border="3px solid black" style="width:300px;height:300px;">
6     <tbody>
7       <tr>
8         <td style="height:80px;">
9           <center>
10            <table border="3px" style="width:500px;">
11              <tbody>
12                <tr>
13                  <td style="width:22%;">
14                    <center>logo</center>
15                  </td>
16                  <td style="width:56%;">
17                    <center>heading</center>
18                  </td>
19                  <td style="width:22%;">
20                    <center>mono</center>
21                  </td>
22                </tr>
23              </tbody>
24            </table>
25          </center>

```

Preview Result Section

logo	heading	mono		
Menus1	Menus2	Menus3	Menus4	Menus5
Image				
content1		content2		

RESULT: I have successfully performed all the given experiments in virtual lab.