

Introduction

Hyper Text Markup Language is used to create web pages.

For any website, collection of web pages are needed. A webpage can contain text, images, textboxes, hyperlinks etc.. It is also termed as frontend design application.

Let us try to understand the HTML in brief.

HTML is a subset of Standard Generalized Mark-up Language (SGML).

This is the language which is used to create Static WebPages. That means, we can only design the webpage and will not be able to do any validations or interactive application.

HTML is all about specifying the structure and format of a Web page.

The basic element of an HTML document is ASCII text. This makes all the web documents platform independent.

This example shows the basic syntax of an HTML program.

Every HTML program starts with `<HTML>` and ends with `</HTML>` tags.

Ending Tag is represented using a `'/'` symbol.

In between these tags, we use two important tags `<HEAD>` and `<BODY>`.

`<HEAD>` tag is used to declare `<Title>` tag, which will display on title bar of the browser.

`<BODY>` tag is used to write the information, which has to display on browser screen.

- ❑ HTML is a subset of Standard Generalized Mark-up Language (SGML).

- ❑ This is the language which is used to create Static WebPages.

- ❑ HTML is all about specifying the structure and format of a Web page.

- ❑ The basic element of an HTML document is ASCII text. This makes all the web documents platform independent.

Example 2.1

```
<HTML>
<HEAD>
<TITLE>My First Web Page</TITLE>
</HEAD>
<BODY>
<H1>Welcome All!</H1>
</BODY>
</HTML>
```

HTML Versions

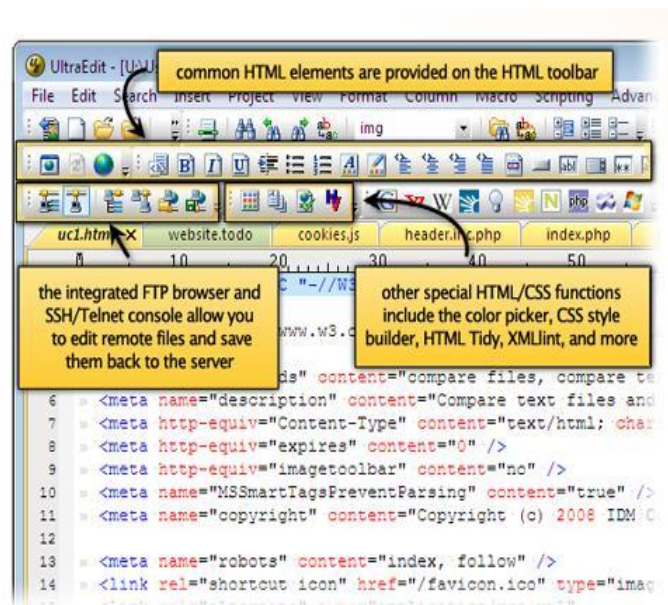
- ❑ HTML was originated by Tim Berners-Lee, a physicist at a European laboratory CERN.
- ❑ HTML 2.0 was developed under the aegis of IETF (Internet Engineering Task Force) in late 1994.
- ❑ Latest version is HTML 4.0 and includes a lot of new features such as Style Sheets, Richer Tables, Enhancements to Forms etc.

Usage of HTML

- ❑ HTML gives authors the means to publish on line documents which include sound clips, video clips and other applications directly in their documents.
- ❑ Retrieve on line information via hypertext links.
- ❑ Design forms for conducting transactions with remote services, for use in searching information, and for other business purposes.

Tools and Editors

- ❑ **HTML Editor** - is the program you use to create and save your HTML documents.
- ❑ **Web Browser** - is the program you use to view and test your HTML documents.
- ❑ **Editors**
- ❑ **Text or Code-based Editors** - which allow you to see the code as you are creating documents e.g. Notepad, WordPad etc., .
- ❑ **WYSIWYG Editors** - show the results of the code, similar to the way it will appear in the browser e.g., Netscape Composer, Microsoft FrontPage.



WYSIYG- What You See Is What You Get

HTML Tags

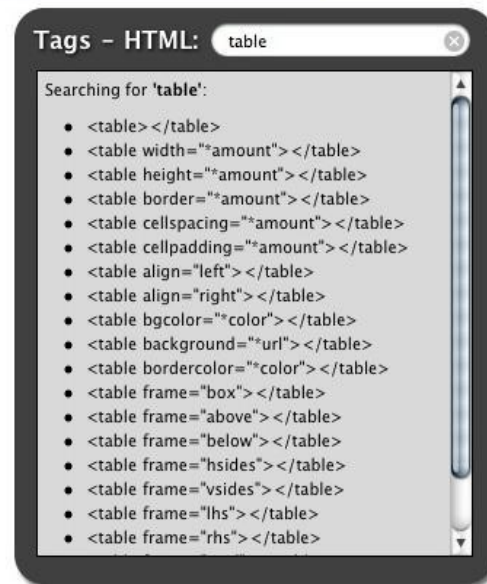
Tag: It is a command or instruction, which tells the browser how to display a text or image on the screen.

- ❑ HTML codes, also referred to as HTML tags, are enclosed by the less than (<) and greater than (>) brackets and may be written in capital or lower case letters.
- ❑ There are two types of tags :
 - ✓ Container Tags
 - ✓ Empty Tags.
- ❑ Container Tags - are tags that contain both an on and an off tag. Eg: <html>.....</html>
- ❑ Empty Tags - are tags that have only an on tag and no off tag.

Container Tags are also called as Dependent Tags and paired Tags.

Empty Tags are also called as Independent Tags and Single Tags.

Eg for Empty Tags:
, <hr>



Font Tags

- ❑ < FONT > Tag - sets Font characteristics for text.
- ❑ Some attributes of are
 - ✓ SIZE -- specifies font size on a scale of 1 through 7, 1 being the smallest
 - ✓ COLOR -- specifies the font color
 - ✓ FACE -- specifies the font type
- ❑ < P > Tag - Defines a Paragraph.
 - ✓ The optional attribute ALIGN indicates the preferred alignment for the contents of this paragraph.
 - ✓ Browsers do not use the default alignment for the next paragraph unless this paragraph is explicitly closed.



Source

Execute

An attribute is property of a tag, which increases the functionality of a tag.

Web Programming_2_HTML

< P > Tag - Defines a Paragraph.

The optional attribute ALIGN indicates the preferred alignment for the contents of this paragraph. You can use align=left/right/center/justify. By default it is left aligned. Browsers do not use the default alignment for the next paragraph unless this paragraph is explicitly closed.

<source>

```
<HEAD>
  <TITLE>
    &lt;font&gt; and &lt;p&gt; tags Example
  </TITLE>
</HEAD>

<BODY>
  <FONT SIZE="5" COLOR="blue">This text is formatted by the &lt;font &gt; tag
    </FONT>

  <p>This is a new paragraph started out side the &lt;font&gt; tag
    </p>
  <p align="center">This is one more paragraph with center alignment
    </p>
</BODY>
```

</source>

<Execute>

This text is formatted by the tag

This is a new paragraph started out side the tag

This is one more paragraph with center alignment

</Execute>

Character Formatting tags

< STRONG > -- applies Stronger Emphasis; displayed as bold

We need to understand two thing here, 1) There are some tags, which will give you same output and 2) There are some tags which are compatible to specific browsers only. Means, some tags work in some browsers only.

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Character Formatting Tags

❑ `< B >` --applies Boldface

❑ `< I >` --applies Italics

❑ `< U >` --applies Underline

❑ `< EM >` -- applies Emphasis; displayed as italics

❑ `< EM >` -- applies Emphasis; displayed as italics



```
<html>
<head>
<title>Character formatiing tags</title>
</head>
<body>
<b>Bold</b><br><br>
<i>Italics</i><br><br>
<s>Strike through</s><br><br>
<strike>strike through</strike><br><br>
e<sub>2</sub><br><br>
```

`<source>`

```
<HEAD>
    <TITLE>describing different tags</TITLE>
</HEAD>

<BODY>
    <center>
        <br><br><br>

        Now I am in <B> Bold.</B>          <br>

        I am in <I>Italics</I>  <br>

        I am <U>Underlined</U>  <br>

        But when Emphasized I look like <EM>This</EM><br>

        I am very <STRONG>Strong</STRONG>

    </center>

</BODY>
```

`</source>`

`<Execute>`

Web Programming_2_HTML

Now I am in **Bold**.
I am in *Italics*
I am Underlined
But when Emphasized I look like *This*
I am very **Strong**

</Execute>

Character Formatting Tags contd. . .

- ❑ < S > , < STRIKE > -- applies Strikethrough to text.
- ❑ < BIG > -- specifies that the enclosed text should be displayed using a big font.
- ❑ < SMALL > -- specifies that the enclosed text should be displayed using a small font.
- ❑ < BLINK > -- makes text Blink (Netscape specific).
- ❑ < CITE > -- indicates Citations or References, displayed as italics.

Usage of strike, Big, Small Tags

Source

Execute

```
File Edit Format View Help
<html>
<head>
<title>Character formatting tags</title>
</head>
<body>
<b>Bold</b><br><br>
<i>Italics</i><br><br>
<s>Strike through</s><br><br>
<strike>strike through</strike><br><br>
e<sub>2</sub><br><br>
e<sup>2</sup><br><br>
<tt>This applies a fixed width font</tt><br><br>
This applies a fixed width font [without tt
tag]<br><br>
<u>underline</u>
</body>
</html>
```

<source>

```
<HEAD>
  <TITLE>
    Character Formatting Tags Example
  </TITLE>
</HEAD>

<BODY>
  Dear <STRIKE>Friends</STRIKE>Associates,
  our <BIG> SATYAM COMPUTERS SERVICES LTD</BIG>
  is not a <SMALL>small</SMALL>
  Company
</BODY>
```

</source>

<Execute>

Dear Friends Associates,
our SATYAM COMPUTERS
SERVICES LTD is not a small Company

</Execute>

Character Formatting Tags contd. .

- ☐ **< CODE >** -- displays program code; similar to the **<P>** tag.
- ☐ **< SUB >** -- formats text as Subscript.
- ☐ **< SUP >** -- formats text as Superscript.
- ☐ **< KBD >** -- is used to indicate the text to be typed by a user and is rendered in mono spaced font.
- ☐ **< VAR >** -- is used to indicate a variable name and is rendered in italics

Usage of Code, Sup, KBD Tags

Source

Execute

```
File Edit Format View Help
<html>
<head>
<title>Character formatiing tags</title>
</head>
<body>
<b>Bold</b><br><br>
<i>Italics</i><br><br>
<s>Strike through</s><br><br>
<del>strike through</del><br><br>
e<sub>2</sub><br><br>
e<sup>2</sup><br><br>
<tt>This applies a fixed width font</tt><br><br>
This applies a fixed width font [without tt
tag]<br><br>
<u>underline</u>
</body>
</html>
```

</source>

```
<HTML>
  <HEAD>
    <TITLE>
      Character Formatting Tags
    </TITLE>
  </HEAD>
  <BODY>
    The following is the syntax for writing a message to the output screen<br>
    <CODE>document.write("Hello Users!");</CODE><br>
    This line describes the usage of &lt;SUP&gt;Tag--2<sup>2</sup>=4      <br>
    This line describes the usage of&lt;SUB&GT;tag--water is indicated as H<sub>2</sub></sub>0 <br>
    Enter Your Name   <KBD> Michale </KBD> <br>
    A variable in javascript is declared as <VAR> var my_name</VAR>
  </BODY>
```


</source>

<Execute>

The following is the syntax for writing a message to the output screen
`document.write("Hello Users!");`

This line describes the usage of <SUP>Tag-- $2^2=4$

This line describes the usage of<SUB>tag--water is indicated as H₂O

Enter Your Name Michale

A variable in javascript is declared as *var my_name*

</Execute>

Heading Tags

▣ Headings are broadly classified into six categories from <H1> to <H6>. <H1> indicates the largest heading. <H6> indicates the smallest heading.

<H1>	heading 1	<H1>Heading 1 Example</H1>	Heading 1 Example
<H2>	heading 2	<H2>Heading 2 Example</H2>	Heading 2 Example
<H3>	heading 3	<H3>Heading 3 Example</H3>	Heading 3 Example
<H4>	heading 4	<H4>Heading 4 Example</H4>	Heading 4 Example
<H5>	heading 5	<H5>Heading 5 Example</H5>	Heading 5 Example
<H6>	heading 6	<H6>Heading 6 Example</H6>	Heading 6 Example

<source>

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```
<head>
    <title>
        HEADING TAGS
    </title>
</head>
    <BODY>
        <H1>Sample text as header 1</H1>
        <H2>Sample text as header 2</H2>
        <H3>Sample text as header 3</H3>
        <H4>Sample text as header 4</H4>
        <H5>Sample text as header 5</H5>
        <H6>Sample text as header 6</H6>
    </BODY>
```

</source>

<Execute>

Sample text as header 1

Sample text as header 2

Sample text as header 3

Sample text as header 4

Sample text as header 5

Sample text as header 6

</Execute>

Center and Address Tags

<CENTER> & <ADDRESS> TAGS

<CENTER> Tag

- ❑ All lines of text between the begin and end of<CENTER> are centered between the current left and right margins.

<ADDRESS> Tag

- ❑ ADDRESS tag is used for address and contact information.
- ❑ It is identical in function to the italics tag.

```
<html>
<head>
    <meta http-equiv="Content-Language" content="en-us">
    <meta name="description" content="Your description">
    <meta name="keywords" content="keyword1, keyword2">

    <title>Your Title</title>
</head>

<body>

    <p> Content </p>

    <h1>Header Tags H1</h1>

    <p align="left">Align Left</p>
    <p align="center">Align Center</p>
    <p align="right">Align Right</p>
```

<source>

```
<HEAD>
  <TITLE>
    EXAMPLE ON TAGS
  </TITLE>

  <BODY>
    The following text displayed using <center>tag
    <center>
      Every satyamite is a leader
    </center>

    Contact us:
    <address>
      imax
      <br>
      khairathabad
      <br>
      Hyderabad
    </address>
  </BODY>
```

</source>

</Execute>

The following text displayed using <center>tag

Every satyamite is a leader

Contact us:

imax

khairathabad

Hyderabad

</Execute>

Marquee and Blockquote Tags

Other Attributes which you can refer with marquee tag are:
Direction = left/right/up/down
Width= number
Height=number

Here number specifies, pixel size.

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<MARQUEE> Tag

- ❑ Creates a region of text that can be made to scroll across the screen (IE specific).
- ❑ Attribute BEHAVIOR specifies how text displayed in the marquee should behave. Values are SCROLL, SLIDE and ALTERNATE.

<BLOCKQUOTE> Tag

- ❑ BLOCKQUOTE tag indents the left margin of regular text in the browser window, just as you might find a blocked quotation formatted in a plain window.
- ❑ It generally adds a return or one extra line on either side of the tag.

HTML Empty Tags

HTML Empty Tags

- ❑ < BR > tag - is used to break a line in a specific place.
- ❑ < NOBR > tag -- specifies that all the text between the start and end of <NOBR> cannot have line breaks inserted.
- ❑ COMMENT tag - The comment tag is used to make the Web browser ignore and hide anything the tag contains. It is written as <!-- This is a comment -->.
- ❑ HORIZONTAL RULE tag - The <HR> tag is used to insert a line between long sections of text.
- ❑ Some attributes of <HR> are :
 - ✓ SIZE - specified in pixels
 - ✓ WIDTH - specified in pixels or percentages
 - ✓ ALIGN - values can be LEFT, RIGHT, CENTER

Drawing a line between two sentences using HR tag

Source

Execute



<source>

Web Programming_2_HTML

```
<HEAD>
  <TITLE>
    EXAMPLE ON TAGS
  </TITLE>
<BODY>

  <!-- TEXT USING COMMENT TAG -->

  <BR>
    First line

  <HR>

    second line with a line in between achieved using HR tag.

</BODY>
```

</source>

</Execute>

First line

second line with a line in between achieved using HR tag.

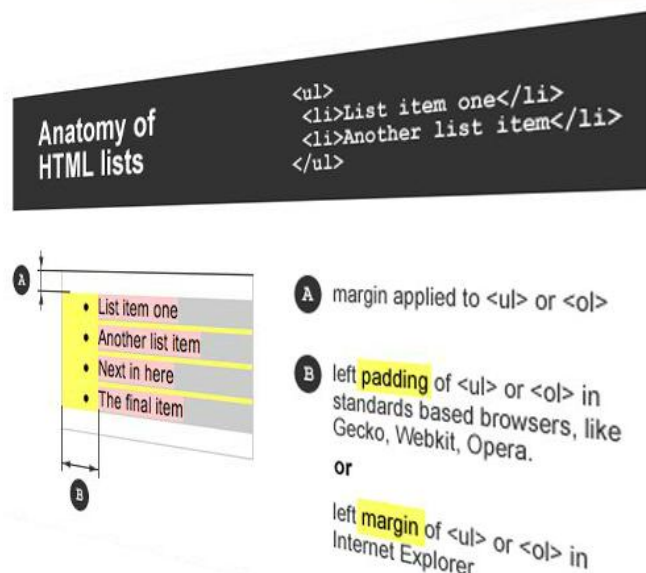
</Execute>

HTML Lists

HTML LISTS

HTML Support 3 types of lists. They are

- ✓ Ordered Lists.
- ✓ Unordered Lists.
- ✓ Definition Lists.



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ORDERED LIST -

- ❑ Order List always start with Tag
 - ❑ < OL START=10 >
- ❑ START - specifies a number other than one with which a list could be started. (Default start=1)
- ❑ TYPE - used for LIST appearance.
For Ordered Lists : TYPE = A, a, I, i, 1 (default).
- ❑ VALUE - used to change specific numbers within a list.
< LI TYPE=i VALUE=7 >
- ❑ Tag is used for List Item.



Example: Following Example displays the month names with index of alphabets with capital letters.

```
<ol start=1 type=A>
<li> January
<li>February
<li>March
```

<source>

```
<HEAD>
    <TITLE>
        LISTS EXAMPLE
    </TITLE>
</HEAD>

<BODY>
<B>
Ordered Lists
</B>

<OL>
    <LI> start
    <LI> read a, b
    <LI> c= a + b
    <LI> print c.
    <LI> end.
</OL>

</BODY>
```

</source>

<Execute>

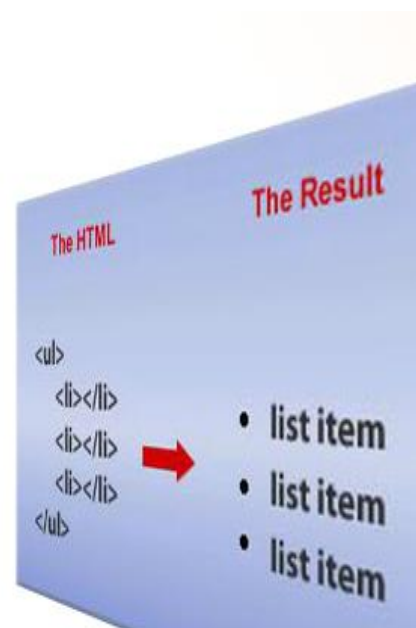
Ordered Lists

1. start
2. read a, b
3. $c = a + b$
4. print c.
5. end.

</Execute>

UNORDERED LISTS -

- ❑ An unordered list starts with the tag. Each list item starts with the tag.
- ❑ An unordered list is a list of items. The list items are marked with bullets.
- ❑ TYPE - used for LIST appearance
 - ✓ For Unordered Lists :
 - TYPE = SQUARE, CIRCLE, DISC (default).



Example: Following Example displays the month names with bullet symbol disc

```
<ul type=disc>
<li> January
<li>February
<li>March
```

<source>

```
<HEAD>
  <TITLE>
    UNORDERED LISTS
  </TITLE>
</HEAD>

<BODY>
  <B>
    Unordered Lists
  </B>

  <UL>
    <LI> have breakfast
    <LI> go to temple
    <LI> see a movie
    <LI> read newspaper
  </UL>
</BODY>
```

</source>

<Execute>

Unordered Lists

- have breakfast
- go to temple
- see a movie
- read newspaper

</Execute>

Definition Lists :It has 2 tags. dt and dd

- ❑ A definition list is not a list of items. This is a list of terms and explanation of the terms.
- ❑ A definition list starts with the <dl> tag.
- ❑ Each definition-list term starts with the <dt> tag.
- ❑ Each definition-list definition starts with the <dd> tag.



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Example: Following Example will make you understand of how to use definition list.

```
<dl>
<dt> List Types
<dd> Html provide, 3 types of List tags to display the content.
</dt>
```

<source>

```
<HEAD>
  <TITLE>
    LIST TYPES
  </TITLE>
</HEAD>

<BODY>
<B>
  Definition Lists
</B>

<DL>
  <DT> ASCII
    <DD> American Standard Code for Information Interchange
  <DT> BASIC
    <DD> Beginners All purpose Symbolic Instruction Code
  <DT> SQL
    <DD> Structured Query Language
  <DT> W3C
    <DD> World Wide Web Consortium
</DL>
</BODY>
```

</source>

<Execute>

Definition Lists

ASCII

American Standard Code for Information Interchange

BASIC

Beginners All purpose Symbolic Instruction Code

SQL

Structured Query Language

W3C

World Wide Web Consortium

</Execute>