**Html Document (v1)**

**Created by**

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**HTML**

1)HTML is a language for describing web pages

2)It stands for Hyper Text Markup Language

3) HTML is a markup language and not a programming language

4)HTML uses markup tags to describe web page

5)Html document is saved with .htm or .html extension

6)At the top of html document is DTD (described below)

7)Tags and attributes are case insensitive

8) End tags not required for every element

A) Group tag: contains body(which can be other tags too) like div, span

B) Void tag: contains no body(these tags need not be closed) like br, img

**An HTML document appears as follows:**

<!DOCTYPE HTML>

<html>

<head>

<title> page title</title>

</head>

<body>

My first page <b>This text is bold</b>

</body>

</html>

<!DOCTYPE HTML> is DTD (document type definition) ie. DTD defines the structure and legal element and attributes of html

**Few Tags for formatting characters**

<b>..</b> To specify bold text

<i>..</i> Displays content in italic to define a part of text in an

italic

<u>..</u> Tags make text between them underlined text

<s>..</s> Tags make text between them appear striked out

**Headings**

<h1> I am biggest </h1>

<h2>I am smaller compared to h1</h2>

<h3>I am smaller compared to h2</h3>

<h4>I am smaller compared to h3</h4>

<h5>I am smaller compared to h4</h5>

<h6>I am smaller compared to h5</h6>

**Document Spacing**

Horizontal Spacing

Use <hr> tag for including horizontal rule in an HTML document to divide sections

Vertical Spacing

<p>: Paragraph Break

<br>: Line Break

**Divisions in an HTML Document**

The <div> tag defines a division or a section in an HTML document.

The <div> tag is used to group block-elements to format them with CSS.

<!DOCTYPE html>

<html>

<body>

<div>This is first block occupying whole horizontal space</div>

<div>This is second block occupying whole horizontal space</div>

</body>

</html>

**span in an HTML Document**

The HTML <span> tag is used for grouping and applying styles to inline

elements.

<!DOCTYPE html>

<html>

<body>

<span>we are </span>

<span>in same line</span>

</body>

</html>

The span tag is used with inline elements whilst the div tag is used with

block-level content.

**Rules**

Block elements are not allowed inside an inline element

block elements cant be put in <p> element including another paragraph tag

**Creating Tables**

An HTML table can be created using <table> elements

**<table>**  Define an HTML table

Other elements like <tr>can be nested inside <table> element

An HTML table has two kinds of cells

Header Cells

**<th>** Defines a table header

**<tr>**  Defines a table row

A row can have one or more <td> or <th> elements

**<td>** Defines a table cell data

Example below

<table>

<tr> <th>Column1 Header</th> <th>Column2

Header</th></tr>

<tr> <td>Cell 1,1</td> <td>Cell 1,2</td>

</tr>

<tr> <td>Cell 2,1</td> <td>Cell 2,2</td>

</tr>

</table>

**List**

List in html can be ordered (numbered) or unordered

Ordered list example

<ol>

<li>INDIA</li>

<li>SRILANKA</li>

</ol>

By default numbering is mentioned but letters can be used too

<ol start="1" type="a">

<li>INDIA</li>

<li>SRILANKA</li>

</ol>

Unordered List example

<ul>

<li>INDIA</li>

<li>SRILANKA</li>

</ul>

Bullets in unordered list can be customized ,options are square,none,circle,disc

**NO Bullet**

<ul style="list-style-type: none;">

<li>Mumbai</li>

<li>Hyderabad</li>

</ul>

**Square Bullet**

<ul style="list-style-type: square;">

<li>Mumbai</li>

<li>Hyderabad</li>

</ul>

**Links**

**<a>** tag is used for linking documents

Pathfor the linked document is specified in href attribute

<a href="http://google.com">go to google</a>

This specifies ex2.html is in the same directory where ex1 is

<a href="ex2.html" >go to second page</a>

**target** attribute specifies where to load linked document

Values of target can be

1. \_self : this is default
2. \_blank :the document will open in new tab

By default linked document will open in same window

By specifying target="\_blank" , the document will open in new tab

<a href="ex2.html" target="\_blank">go to second page</a>

**Images**

**<img>** tag is used to display images

<img style="width: 50px; height:50px;"

src="images/flag1.png"

alt="Alternate text">

src property to specify path of the image , in our example pic is in images directory which is inside current directory

Alt is used for alternate text , it will not be visible if pic is available and will be displayed when pic is not available

**Forms**

HTML forms are used to accept user inputs and then submit data for

processing.

A form is an area that contains form elements.

Types of elements which can be included in a form are

Label

Single line text field

Password field

Text area

Drop down menu

Radio button

Checkbox

<form method=“get or post” action=”url to processing server ” >

Field definitions

</form>

action: the URL of the script

method: the HTTP request method to use,

With get , data is sent as part of url

With post, data is sent as part of http request body

enctype: Specifies how the data is to be encoded(Used only with Post method)

<form method="post" action="processing server url">

<div>

<label>Username</label>

<input type="text" name="username" placeholder="write name">

</div>

<div>

<label>Password</label>

<input type="password" name="password">

</div>

<input type="submit" value="Submit Form">

</form>

In above form example <input> tag is used to display textbox so user can input his text , name is given to input field as data will be associated with this field when it will be sent for processing

**Checkbox**

Checkbox is also a form input element

If more than one option is required to be selected from multiple options

then create checkbox as shown below:

<form method="get">

<div>

<input type="checkbox" name="language" value="java">

<label>Java</label>

</div>

<div>

<input type="checkbox" name="language" value="python">

<label>python</label>

</div>

<input type="submit" value="Submit Form">

</form>

**Radio**

<form method="get">

<div>

<input type="radio" name="language" value="java">

<label>Java</label>

</div>

<div>

<input type="radio" name="language" value="python">

<label>python</label>

</div>

<input type="submit" value="Submit Form">

</form>

**Dropdown**

Drop down list allow the user to select one or more values from a predetermined options

Tags for creating drop down list with options are:

<select> : Creates drop down list

<option>: Defines an option in a select list.

**File upload**

File upload will allow the user to select a file from the desktop and then that file can be sent to server

<form method="POST">

<input type="file" name="pic">

<input type="submit" value="Submit Form">

</form>

**Button**

<input type=“button”>

Button A clickable button, that activates a JavaScript when it is clicked

<input type=“submit”>

Submit button, Defines a button for submitting a form

<input type=“reset”> Reset button Define a reset button (resets all

form values to default values)

**Html 5**

* Was released in 2008 by w3c( world wide web consortium)
* Backward compatible to html4
* JavaScript APIs to enhance storage, multimedia, and hardware access.
* Many semantic tags were added <header> <footer>, <article>, <section> and <figure>
* Audio and Video tags are the two major addition to HTML5
* DTDs <!doctype html> , <!DOCTYPE html>
* Default character encoding is UTF-8 to set any character encoding <meta charset=”UTF-8″>

**Semantic tags**

* Non-Semantic tags tell nothing about its content foreg. <div> and <span>
* Sematic tags existed even before html5 foreg. <form>, <table>
* Semantic tag describes meaning to both the browser and the developer
* Many Semantic tags were added in html5 so that document source is easily readable and maintainable

**Article**

* Use <article> tag for independent, self-contained content.
  + Block Level element
* An article should be independent or complete on its own, can represent something separate from the current html page
* Examples – Post, Blog, News Stories , Articles etc

**Section**

* <section> tag defines a part of an existing document
* Used to divide a group of content
* Block Level Element

**Figure**

<figure> tag specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.

<figure>

<img src="flag.jpg" alt="India" style="width:100%">

<figcaption>Indian flag</figcaption>

</figure>

**Header**

* The <header> element represents a container for introduction of following content
* Mostly contains headings <h1> or other heading tags or logo

<article>

<header>

<h1>Article’s heading here</h1>

<p> Other information </p>

</header>

<p> Article body starts here</p>

</article>

**Footer**

* <footer> tag defines a footer for a document or section.
* Can contain copyright information, document or section information

<footer>

<p>Site is designed by XYZ </p>

</footer>

**Main (<main> )**

Specifies the main content of a document.

The content inside the <main> element should be unique to the document. It should not contain any content that is repeated across documents such as sidebars, navigation links, copyright information, site logos, and search forms.

More than one <main> element in a document shouldn’t be used.

The <main> element must NOT be a descendant of an <article>, <aside>, <footer>, <header>, or <nav> element.

**Video (<video>)**

* Contains one or more <source> tags with different video sources. The browser will choose the first source it supports.
* The text between the <video> and </video> tags will only be displayed in browsers that do not support the <video> element.
* There are three supported video formats in HTML: MP4, WebM, and OGG

**Audio (<audio>)**

* Used to embed sound content in a document, such as music or other audio streams.
* contains one or more <source> tags with different audio sources. The browser will choose the first source it supports.
* The text between the <audio> and </audio> tags will only be displayed in browsers that do not support the <audio> element.
* There are three supported audio formats in HTML: MP3, WAV, and OGG

**Nav (<nav>)**

The <nav> tag defines a set of navigation links.

All links of a document need not be inside a <nav> element

The <nav> element is intended only for major blocks of navigation links.

<nav>

<a href="contactus.html">Contact us</a> |

<a href="home.html">Home</a> |

<a href="products.html">Our Products</a> |

</nav>

**Canvas**

* The <canvas> tag is used to draw graphics
* The <canvas> tag is transparent, and is only a container for graphics.
* Any text inside the <canvas> element will be displayed in browsers with JavaScript disabled and in browsers that do not support <canvas>

**Webstorage**

* Web applications can store data locally within the user's browser.
* Javascript provides the api to support webstorage
* Large amounts of data can be stored locally, without affecting website performance.
* Api Supports CRUD operations on data

Local Storage : Stores data permanently (foreg. Chrome uses sqlite to store data), The file related to storage is kept in filesystem

localStorage.setItem("id", "1");

localStorage.setItem("username", "robin");

Session Storage: stores data for a particular session(browser tab closed, data expires)

sessionStorage.setItem("id", "1");

sessionStorage.setItem("username", "robin");