HTML

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- HTML was first created by Tim Berners-Lee while working at CERN in 1989. The current standard is HTML 4.01 from 1999, although there is a working draft for the next version, HTML5.

Static vs. Dynamic Websites

- Static website design is the simplest way to create web pages. They are normal HTML pages which will have images, texts and widgets. These are the most affordable type of web pages, but nevertheless very effective if designed properly.

- HTML is a **markup** language for **describing** web documents .
- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- A markup language is a set of **markup tags**
- HTML documents are described by **HTML tags**
- Each HTML tag **describes** different document content

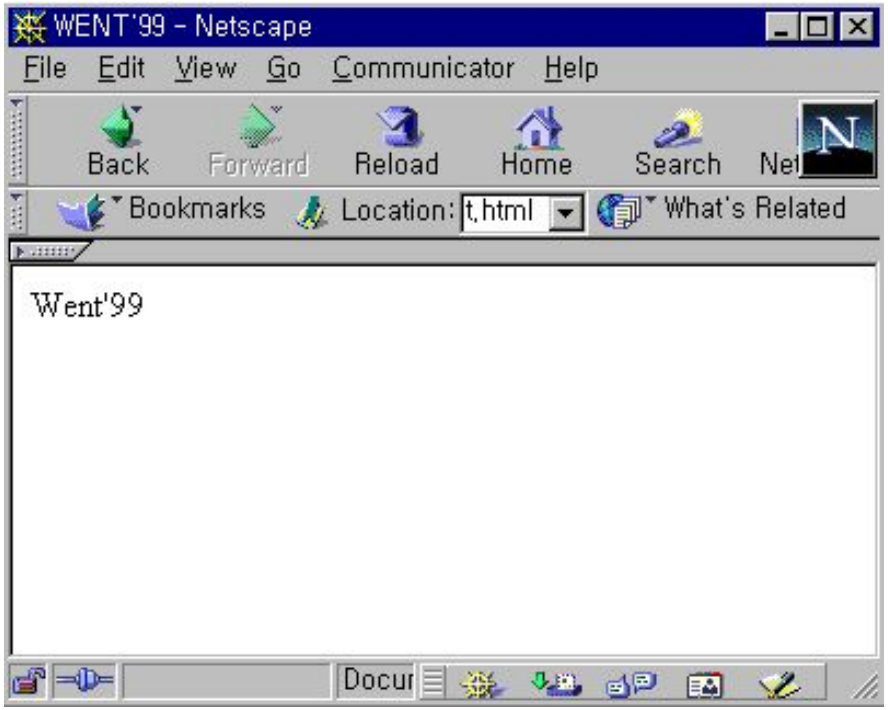
- **hyper** as it allows for links to other documents.
- **text** as it is a text document, so we only use standard characters, even to represent non-standard characters or commands.
- **markup** as it is an annotated document, where *tags* are used to insert commands within the text.

Basic HTML Document Format

```
<HTML>
<HEAD>

<TITLE>WENT'99</TITLE
>
</HEAD>
<BODY>
  Went'99
 </BODY>
 </HTML>
```

See what it looks



Tags are ;

- surrounded with angle brackets like this
  - <B> or <I>.
- Most tags come in pairs
  - exceptions: <P>, <br>, <li> tags …
- The first tag turns the action on, and the second turns it off.

- The second tag(off switch) starts with a forward slash.
  - For example ,<B> text </B>
- can embedded, for instance, to do this:
  - <HEAD><TITLE> Your text </HEAD></TITLE> it won't work.
  - The correct order is <HEAD><TITLE> Your text </TITLE></HEAD>
- not case sensitivity.
- Many tags have attributes.
  - For example, <P ALIGN=CENTER> centers the paragraph following it.
- Some browsers don't support the some tags and some attributes.

HTML Unordered Lists

- <html> <head> <title>HTML Unordered List</title> </head> <body> Beetroot Ginger Potato Radish </body> </html>

- **The type Attribute**
- You can use **type** attribute for <ul> tag to specify the type of bullet you like. By default it is a disc. Following are the possible options:
- <ul type="square">
- <ul type="disc">
- <ul type="circle">

HTML Ordered Lists

- <html> <head> <title>HTML Ordered List</title> </head>
- <body>
-
- Beetroot
- Ginger
- Potato
- Radish
- </body> </html>

HTML Definition Lists

- Definition List makes use of following three tags.
- <dl> - Defines the start of the list
- <dt> - A term
- <dd> - Term definition
- </dl> - Defines the end of the list

- <html> <head> <title>
- HTML Definition List</title> </head> <body> <dl>
- <dt>
- HTML</dt>
- <dd>This stands for Hyper Text Markup Language</dd> <dt>
- HTTP</dt>
- <dd>This stands for Hyper Text Transfer Protocol</dd> </dl> </body> </html>

Tags in Body

- **Let's talk Text**
  - Heading: <H1> </H1>
  - Center:<Center> </Center>
  - Line Break <P> ,
  - Phrase Markups: <I></I> ,<B></B>

- **Create a List**
  - Unordered list : <UL>
  - Ordered list: <OL>
  - Nested

- **Add Images**
  - Use <IMG SRC=imagefilename> tags
  - How to specify Relative pathnames
  - Attributes of IMG tag
    - -width,height
    - -Alt
    - -Align
    - -<Img src=my.gif width=50 height=50 align=right alt="My image">

- Changing Text color

  <BODY BGCOLOR=#19378a TEXT=#ffffff LINK=#ffff66 VLINK=#66ffff>

- Spot color

  <FONT COLOR=#66ffcc>WENT'99</FONT>

- Image Background

  <BODY BACKGROUND=bgimg.gif >

- Use <A href=filename|URL>tags
  - This is a link

HTML <hr> Tag

- <h1>HTML</h1>
  HTML is a language for describing web pages.....

  <hr>

  <h1>CSS</h1>
  CSS defines how to display HTML elements..... </body>
- </html>

Comments

- <!DOCTYPE html>
- <html>
- <body>

- **<!-- This is a comment -->**
- This is a paragraph.
- **<!-- Comments are not displayed in the browser -->**

- </body>
- </html>

HTML (Hypertext Markup Language)

- **Common features**
  - **Tables**
  - **Frame**
  - **Form**
  - **Image map**
  - **Character Set**
  - **Meta tags**
  - **Images, Hyperlink, etc…**

table

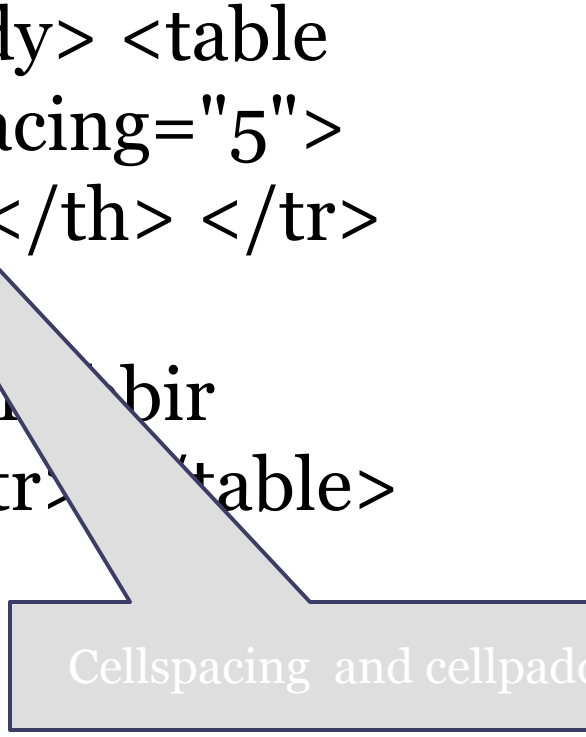
- <table border="2">
  <tr>
  <th>Firstname</th>
  <th>Lastname</th>
  <th>Age</th>
  </tr>
  <tr>
  <td>Jill</td>
  <td>Smith</td>
  <td>50</td>
  </tr>
  <tr>
  <td>Eve</td>
  <td>Jackson</td>
  <td>94</td>
  </tr>
  </table>

Cellpadding and Cellspacing Attributes

- There are two attributes called *cellpadding* and *cellspacing* which you will use to adjust the white space in your table cells. The cellspacing attribute defines the width of the border, while cellpadding represents the distance between cell borders and the content within a cell.

Example

- <html> <head> <title>HTML Table Cellpadding</title> </head> <body> <table border="1" cellpadding="5" cellspacing="5"> <tr> <th>Name</th> <th>Salary</th> </tr> <tr> <td>Ramesh Raman</td> <td>5000</td> </tr> <tr> <td>Shabbir Hussein</td> <td>7000</td> </tr> </table> </body> </html>



Rowspan and colspan

- <td rowspan="*number*">
- Specifies the number of rows a cell should span. **Note:**rowspan="0" tells the browser to span the cell to the last row of the table section

Example

```
<html><head><style>
table, th, td {
   border: 1px solid black;
}
</style></head><body>
<table>
  <tr>
    <th>Month</th>
    <th>Savings</th>
    <th>Savings for holiday!</th></tr>
  <tr>
    <td>January</td>
    <td>$100</td>
    <td rowspan="2">$50</td>
  </tr>
  <tr>
```

Assignment

Report	
Football commentators	Good taste=5%
	Bad taste=95%
Others	Good taste=90%
	Bad taste=10%

HTML frames

- HTML frames are used to divide your browser window into multiple sections where each section can load a separate HTML document.
- A collection of frames in the browser window is known as a frameset.
- The window is divided into frames in a similar way the tables are organized: into rows and columns.

EXAMPLE-The <frame> tag is not supported in HTML5.

- <html>

- <frameset cols="25%,*,25%">
- <frame src="frame_a.html">
- <frame src="frame_b.html">
- <frame src="frame_c.html">
- </frameset>

- </html>

Following is the example to create three horizontal frames:

- <html> <head> <title>HTML Frames</title></head>
- <frameset rows="10%,60%,30%">
- <frame name="top" src="2.html" />
- <frame name="main" src="3.html" />
- <frame name="bottom" src="image.html" />
- <noframes>
- <body> Your browser does not support frames. </body> </noframes>
- </frameset> </html>

Following is the example to create three vertical frames:

- <html> <head> <title>HTML Frames</title> </head>
- <frameset cols="25%,50%,25%">
- <frame name="left" src="/html/top_frame.htm" /> <frame name="center" src="/html/main_frame.htm" />
- <frame name="right" src="/html/bottom_frame.htm" />
- <noframes> <body> Your browser does not support frames. </body> </noframes> </frameset> </html>

HTML Iframes

- An iframe is used to display a web page within a web page.
- An HTML iframe is defined with the **<iframe>** tag:
- <iframe src="*URL*"></iframe>

Example

- <html>
- <body>

- <iframe src=“abc.html" height="200" width="300"></iframe>

- </body>
- </html>

Iframe - Target for a Link

- <html>
- <body>

- <iframe height="300px" width="100%" src="abc.html" name="iframe_a"></iframe>

- W3Schools.com

- When the target of a link matches the name of an iframe, the link will open in the iframe.

- </body>
- </html>

The Problem with Frames

- Usability challenges: With the rise in popularity of mobile devices and tablets with small displays it's more important than ever that websites offer multiple views which change based on the size of the device viewport. While frames can be manipulated to provide a certain degree of responsiveness, they are simply not well-suited to creating responsive websites.

- Accessibility challenges: Screen readers and other assistive technologies have a very hard time understanding and communicating websites that use frames.

The Difference Between Frames and Iframes

- When you use frameset you split the visual real estate of a browser window into multiple frames.
- An iframe, on the other hand, embeds a frame directly inline with the other elements of a webpage.

  While both frames and iframes perform a similar function – embedding a resource into a webpage – they are fundamentally different.
- Frames are layout-defining elements.
- Iframes are a content-adding elements.

Form Tag

- The <form> tag is used to create an HTML form for user input.
- It contains following tags:
- <input>
- <textarea>
- <button>
- <select>
- <option>
- <optgroup>
- <fieldset>
- <label>

<input> tag

- The <input> element can be displayed in several ways, depending on the **type** attribute.
- <input type="text">==Defines a one-line text input field.
- <input type="radio">==Defines a radio button (for selecting one of many choices)
- <input type="submit">==Defines a submit button (for submitting the form)

Example

- <form>
  First name:
  <input type="text" name="firstname">
  Last name:
  <input type="text" name="lastname">
  </form>

form

```
<html><body>
<form>
  First Name:
  <input type="text" name="firstname"><br>
  Last Name:
  <input type="text" name="lastname"><br>
  Password:
  <input type="password" name="pwd"><br>
  Radio Button: Are you male or female?<br>
  <input type="radio" name="sex" value="male">Male
  <input type="radio" name="sex" value="female">Female<br>
  Check Box: Check the languages you know<br>
  <input type="checkbox" name="language" value="html">HTML<br>
  <input type="checkbox" name="language" value="php">PHP<br>
  <input type="checkbox" name="language" value="c">C<br>
  <input type="submit" value="submit"><br>
</form>
  </body>
</html>
```

Combo box

- <select name="country"/>
- <option value="" selected/> --Select–
- <option value="indi"/> India
- <option value="pakistan"/> Pakistan
- <option value="beangladesh"/> Beangladesh
  <option value="srilanka"/> Srilanka
- </select>

First Name:

Last Name:

Password:

Radio Button: Are you male or female?

Male Female

Check Box: Check the languages you know

HTML

PHP

C

submit

The Action Attribute

- The action attribute defines the action to be performed when the form is submitted.
- <form **action=“success.html**">

The Target Attribute

- The target attribute specifies if the submitted result will open in a new browser tab, a frame, or in the current window.
- The default value is "_self" which means the form will be submitted in the current window.
- To make the form result open in a new browser tab, use the value "_blank":

<form action="success.html" target="_blank">

The Method Attribute

- The method attribute specifies the HTTP method (**GET** or **POST**) to be used when submitting the form data:
- <form action="/action_page.php" **method="get"**>
- <form action="/action_page.php" **method="post"**>

When to Use GET?

- The default method when submitting form data is GET.
- However, when GET is used, the submitted form data will be **visible in the page address field**:
- /action_page.php?firstname=Mickey&lastname=Mouse

GET features

- Appends form-data into the URL in name/value pairs
- The length of a URL is limited (about 3000 characters)
- Never use GET to send sensitive data! (will be visible in the URL)
- Useful for form submissions where a user wants to bookmark the result
- GET is better for non-secure data, like query strings in Google
-

When to Use POST?

- Always use POST if the form data contains sensitive or personal information. The POST method does not display the submitted form data in the page address field.
- **Notes on POST:**
- POST has no size limitations, and can be used to send large amounts of data.
- Form submissions with POST cannot be bookmarked
-

The Name Attribute

- Each input field must have a name attribute to be submitted.
- If the name attribute is omitted, the data of that input field will not be sent at all.
- This example will only submit the "Last name" input field:

- <html>
- <body>

- <h2>The name Attribute</h2>

- <form action=“kkk.php">
- First name:
- <input type="text" value="Mickey">
-
- Last name:
- <input type="text" name="lastname" value="Mouse">
-

- <input type="submit" value="Submit">
- </form>
- If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".
- Notice that the value of the "First name" field will not be submitted, because the input element does not have a name attribute.
- </body>
- </html>

Image map

- In HTML and XHTML, an **image map** is a list of coordinates relating to a specific image, created in order to hyperlink areas of the image to different destinations.

A client-side imagemap in HTML consists of two parts:

- The actual image, which is embedded with the <img> tag. The image tag must have an attribute *usemap*, which names the imagemap to use for this image (multiple imagemaps may exist on a single page).
- A <map> element, and inside that, <area> elements, each of which defines a single clickable area within the imagemap. These are similar to the <a> tag defining which URL should be opened for an ordinary web link.

Image Map

- **HTML <map> Tag**
- **HTML <area> alt Attribute**

- The <map> tag is used to define a client-side image-map. An image-map is an image with clickable areas.
- The required name attribute of the <map> element is associated with the <img>'s usemap attribute and creates a relationship between the image and the map.
- The <map> element contains a number of <area> elements, that defines the clickable areas in the image map.

Example

- <!DOCTYPE html>
- <html>
- <body>

- Click on the sun or on one of the planets to watch it closer:

- <img src="planets.gif" width="145" height="126" alt="Planets" usemap="#planetmap">

- <map name="planetmap">
- <area shape="rect" coords="0,0,82,126" alt="Sun" href="sun.htm">
- <area shape="circle" coords="90,58,3" alt="Mercury" href="mercur.htm">
- <area shape="circle" coords="124,58,8" alt="Venus" href="venus.htm">
- </map>

- </body>
- </html>

- The <area> elements can be rectangles (shape="rect"), polygons (shape="poly") or circles (shape="circle"). Shape-Values are coordinate-pairs. Every pair has an X and a Y value (from left/top of an image) and is separated with a comma.
- Rectangle: Set four coordinates: x1,y1,x2,y2
- Polygon: Set as many coordinates as you want (a multiple of two): x1,y1,x2,y2, [...] xn,yn
- Circle: One coordinate-pair and another value with a radius: x1,y1,radius

- *x1,y1,x2,y2* ----------Specifies the coordinates of the left, top, right, bottom corner of the rectangle (for shape="rect")

- *x,y,radius*----------Specifies the coordinates of the circle center and the radius (for shape="circle")

HTML Entities

- Character entities are used to display reserved characters in HTML.
- &*entity_name*;
- OR
- &#*entity_number*;

- **Note:** Entity names are case sensitive.

Entity Name	Entity Number		
	non-breaking space		
<	less than	&lt;	&#60;
>	greater than	&gt;	&#62;
&	ampersand	&amp;	&#38;
"	double quotation mark	&quot;	&#34;
'	single quotation mark (apostrophe)	&apos;	&#39;
¢	cent	&cent;	&#162;
£	pound	&pound;	&#163;
¥	yen	&yen;	&#165;
€	euro	&euro;	&#8364;
©	copyright	&copy;	

- I will display €
  I will display €

CSS Background

- CSS background properties are used to define the background effects of an element.
- CSS properties used for background effects:
- background-color
- background-image
- background-repeat
- background-attachment
- background-position

HTML Encoding (Character Sets)

```
<html>
<head>
<style>
body {
    background-color: #b0c4de;
}
</style>
</head>
<body>

<h1>My CSS web page!</h1>
<p>Hello world! This is a W3Schools.com example.</p>
</body>
</html>
```

In the example below, the <h1>, , and elements have different background colors:

- <html>
- <head>
- <style>
- h1 {
- background-color: #6495ed;
- }
- p {
- background-color: #e0ffff;
- }
- div {
- background-color: #b0c4de;
- }
- </style>
- </head>
- <body>
- <h1>CSS background-color example!</h1>
-
- This is a text inside a div element.
- This paragraph has its own background color.
- We are still in the div element.

tag-----block level

- A block-level element always starts on a new line and takes up the full width available

Example

- <html>
- <body>

- Hello
- World

- The DIV element is a block element, and will start on a new line.

- </body>
- </html>

tag as container

- <html>
- <body>

-
- <h2>London</h2>
- London is the capital city of England. It is the most populous city in the United Kingdom, with a metropolitan area of over 13 million inhabitants.
- Standing on the River Thames, London has been a major settlement for two millennia, its history going back to its founding by the Romans, who named it Londinium.
-

- </body>
- </html>

<marquee> tag

- <!DOCTYPE html> <html> <head> <title>HTML marquee Tag</title> </head> <body> <marquee>This is basic example of marquee</marquee> <marquee direction="up">The direction of text will be from bottom to top.</marquee> </body> </html>

Defines the direction of scrolling the content.

- direction
- up
  down
  left
  right

HTML Colors - Hex Codes

- A hexadecimal is a 6 digit representation of a color. The first two digits(RR) represent a red value, the next two are a green value(GG), and the last are the blue value(BB).
- A hexadecimal value can be taken from any graphics software like Adobe Photoshop, Paintshop Pro or MS Paint.

- #000000
- #FFFFFF

HTML media

- Video
- <html>
- <body>

- <video width="320" height="240" controls>
- <source src="movie.mp4" type="video/mp4">
- <source src="movie.ogg" type="video/ogg">
- Your browser does not support the video tag.
- </video>

- </body>
- </html>

HTML <video> Autoplay

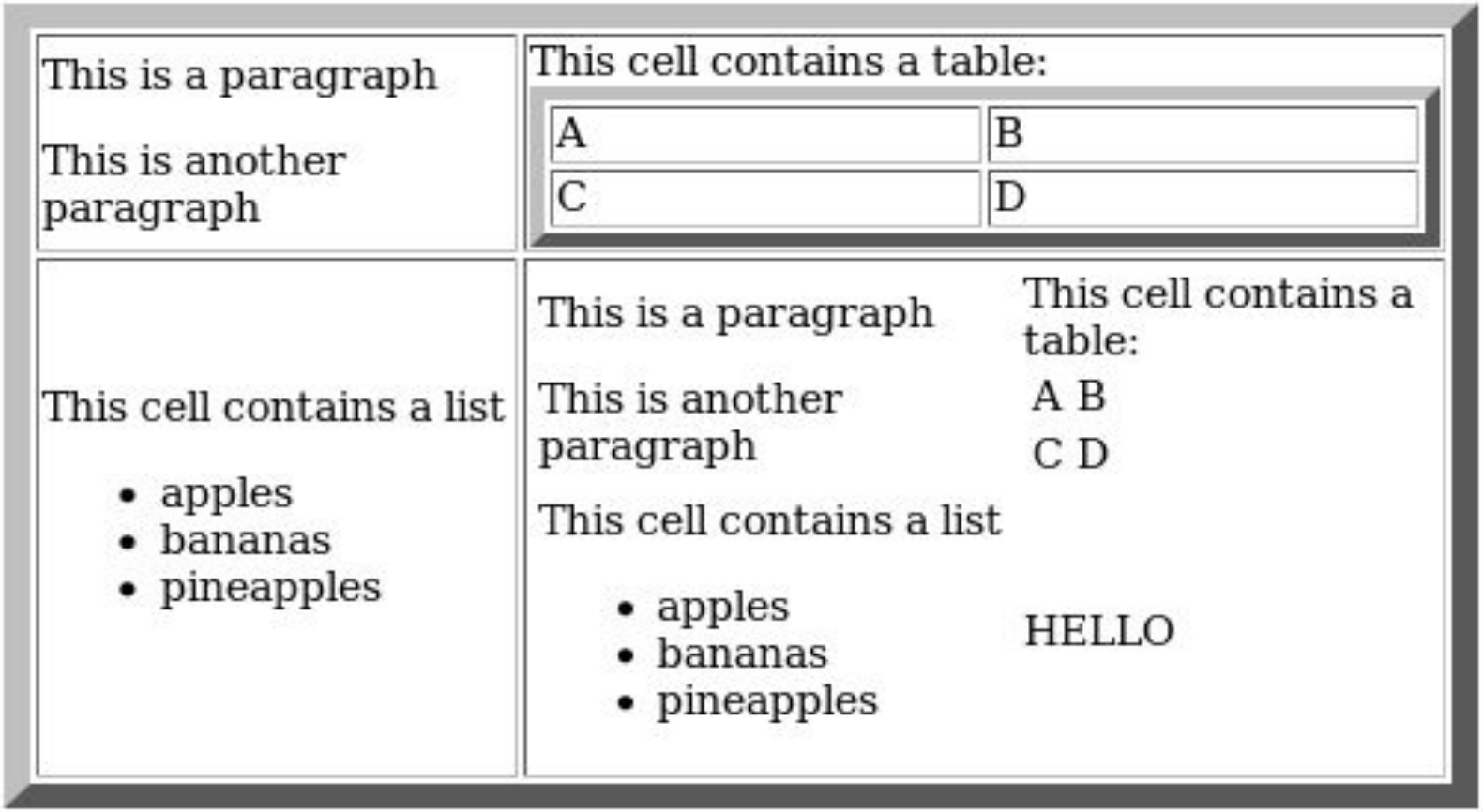
- <video width="320" height="240" autoplay>
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
  </video>

Audio

- <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>


This is a paragraph
This is another paragraph
This cell contains a table:
A
B
C
D
This cell contains a list
apples
bananas
pineapples
This is a paragraph
This is another paragraph
This cell contains a list
apples
bananas
pineapples
This cell contains a table:
A B
C D
HELLO

Assignment-2

- Design web pages to accept the student information. Student should enter the details like first name, last name, middle name, city up to 25 characters, and address up to 50 characters. Show the combo box to select the qualification, option button for gender selection. Display the information accepted in a formatted form.

Assignment-3

- Design web pages to display the information about college and CSE stream. Divide the page into three frames. The top frame should display the title of the college, left frame should display the streams of . Engineering and Management and the right frame display the details of selected CSE stream like fees, syllabus etc.

Example

- <html>
- <head>
- <title>Special tags</title>
- </head>
- <body>
- <h3 align=center> all information on this is &copy of xyz &amp

- company, 2005</h3>
-
- <del> To strike through the text use the del element </del>
- Use _{sub} element to turn text into subscript
- Use ^{sup} element to turn text into superscript
- Use <small>small </small> element to turn text into smalltext
- Use <big>Big</big> element to turn text into big text
- </body>
- </html>