Web Design Course

Advance HTML and Web Browsers

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Instructional Units in the Module

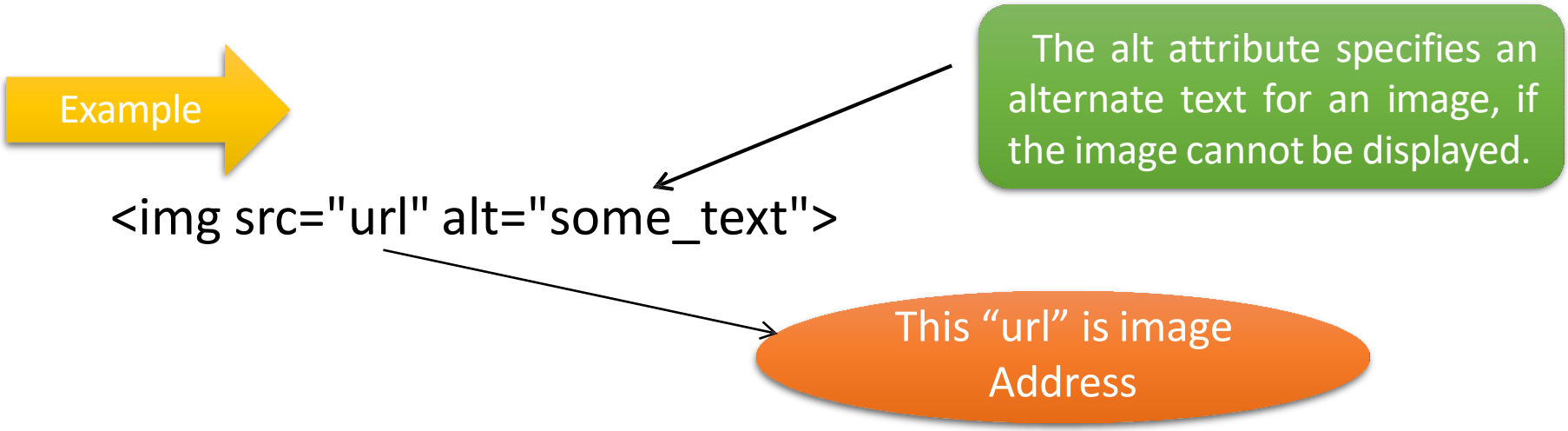
IU #	IU Description	Required / Optional
01	Web Design Concepts	Required
02	HTML Basics	Required
03	**Advanced HTML & Web Browsers**	**Required**
04	Structuring & Styling with CSS	Required
05	Working with CSS : An Example	Required
06	Javascript Basics	Required
07	Advanced Javascript	Required

Browsers

S. No.	Topic Description
01	Images, Formatting and Styling images
02	Using images a background and bullets
03	Hyperlinks, URLs, Anchor tag
04	Ordered and Unordered List, Styling Lists, Tables, Styling Tables
05	Form Elements, Various types of Input types in Forms, Form Controls
06	Web Browsers
07	Web Browser HTML 5 Support Comparison
08	Impact of Browser on Website
09	Cross Browser Testing

HTML Images

- **HTML Images**
  - can be used to depict many complex concepts in simple way on your web page.
  - can also be used to make your web page more attractive.
- **HTML Images Syntax**
  - In HTML, images are defined with **<img>** tag.
  - The <img> tag is empty, it contains attributes only, and it does not have a closing tag.
  - The src attribute specifies the URL (web address) of the image:



HTML Images

- **Insert Image**
  - You can insert any image in your web page with the **<img>** tag.

Example

```
<!DOCTYPE html>
<html>
<head> <title>Using Image in Webpage</title> </head>
 <body>
 <p>Simple Image Insert</p>
 <img
src="/html/images/test.png"
alt="Test Image" />
 </body>
</html>
```

o/p

HTML Images

- **Set Image Width/Height**
  - You can set image width and height using width and height attributes
  - You can specify width and height of the image in terms of either percentage or pixels of its actual size.

Example

```
<!DOCTYPE html>
<html>
 <head>
<title>Set Image Width and Height</title>
</head>
<body>
<p>Setting image width and height</p>
 <img src="/html/images/test.png" alt="Test Image" width="150" height="100" />
 </body>
 </html>
```

o/p

HTML Images

❑ Set Image Border

- By default, image will have a border around it
- you can set border thickness in terms of pixels using **border** attribute.
- A thickness of 0 specifies that no border around the picture.

Example

```
<!DOCTYPE html>
<html>
 <head> <title>Set Image Border</title> </head><body>
<p>Setting image Border</p>
 <img src="/html/images/test.png" alt="Test Image" border="3"/>
 </body>
 </html>
```

o/p

HTML Images

❑ Set Image Alignment

- By default, image will appear at the left side of the page
- but you can change the appearance of the image in the center or right by using **align** attribute.

Example

```
<!DOCTYPE html>
<html>
 <head>
        <title>Set Image Alignment</title>
</head>
<body>
        <p>Setting image Alignment</p>
        <img src="/html/images/test.png"
        alt="Test Image" border="3"
        align="right"/>
 </body>
</html>
```

o/p

Images background in document

- The background attribute specifies a backgroundimage for a document.
- By default, your webpage background is white in color.
- You can change the background of your web page in twoways.
  - With Color
  - With Images

Images background in document

❑ Html Background with Colors

- The **bgcolor** attribute is used to set the background of an HTML element, specifically page body and table backgrounds.
- Following is the syntax to use bgcolor attribute with any HTML tag.

Example : <tagname bgcolor="color_value"....>

❑ This color_value can be given in any of the following formats:

```
<!-- Format 1 - Use color name -->
<table bgcolor="red" >

<!-- Format 2 - Use hex value -->
<table bgcolor="#f1f1f1" >

<!-- Format 3 - Use color value in RGB terms -->
<table bgcolor="rgb(0,0,120)" >
```

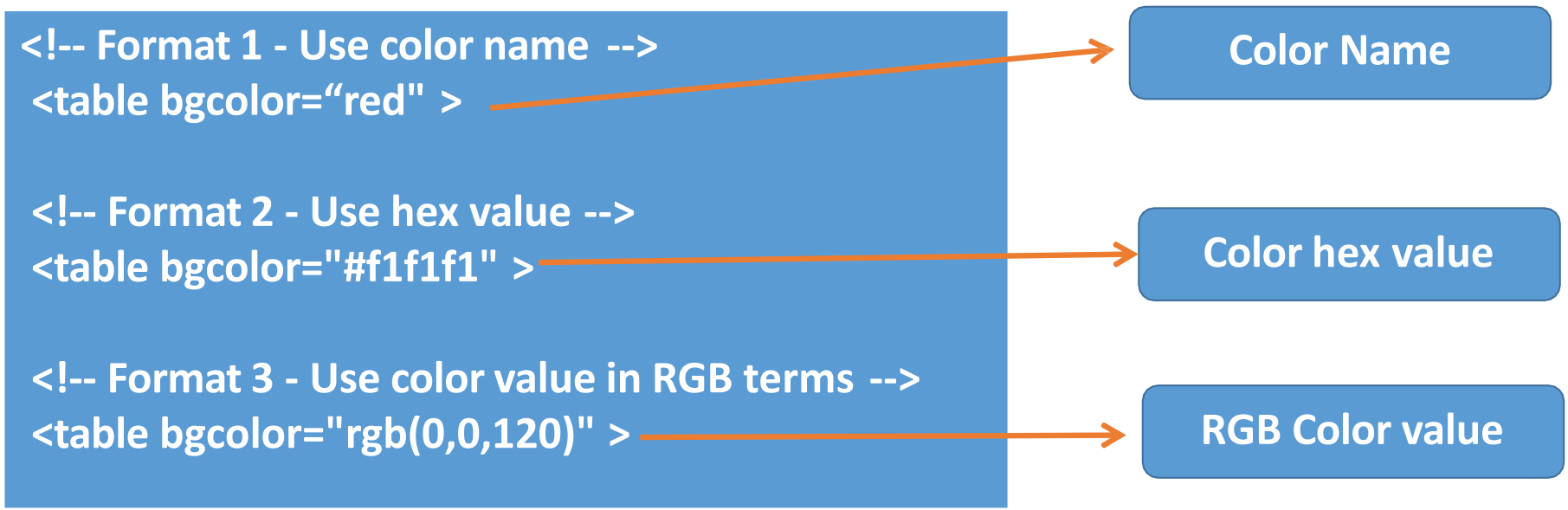


Image Bullets on HTML Lists

- **Reasons for using custom bullets in lists**
  - To make your lists more distinctive
  - To create a attractive presentation
  - To differentiate items by type

Example：

```
<ul style="list-style-image :url(imageBullet.gif);">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Coca Cola</li>
</ul>
```

Result:

- Coffee
- Tea
- Coca Cola

HTML Hyperlinks

- **Hyperlinks**
  - A hyperlink is an image or text which you can click on to jump to another document.
- **Syntax of Hyperlinks**
  - HTML <a> Tag
- **Definition and Usage**
  - The <a> tag defines a hyperlink, which is used to link from one page to another.
  - href attribute is the most important attribute of the <a> element , which indicates the link's destination.
- **By default, links will appear as follows in all browsers:**
  - An unvisited link is underlined and blue
  - A visited link is underlined and purple
  - An active link is underlined and red
  - Example : link text

HTML Hyperlinks

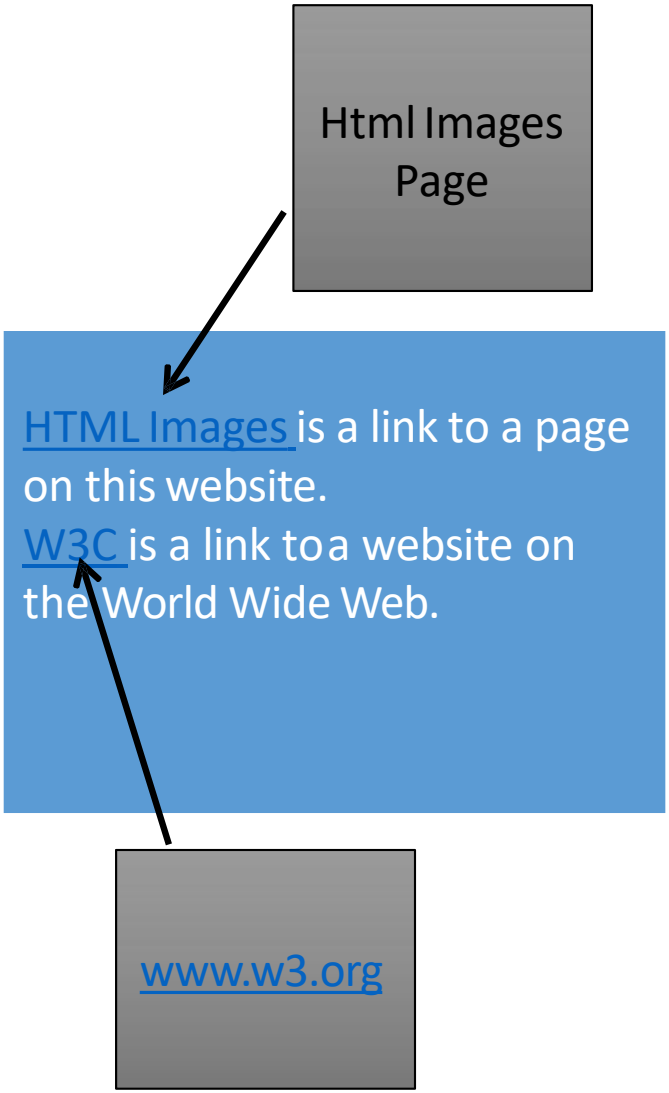
- **HTML Hyperlinks Example**

```
<!DOCTYPE html>
<html>
<body>

<p><a href="html_images.asp">HTML Images</a> is a link to a page on this website.</p>

<p><a href="http://www.w3.org/">W3C</a> is a link to a website on the World Wide Web.</p>

</body>
</html>
```



HTML URLs

HTML Uniform Resource Locators(URL)

- A Uniform Resource Locator (URL) is used to address a document (or other data) on the web.
- A URL is another word for a web address.
- A URL can be composed of words (www.google.com), or an Internet Protocol (IP) address (74.125.224.72).
- With the help of the URL, Web browsers request pages from web servers.
- An underlying <a> tag redirects to an address on the web, when you click on a link .

HTML URLs

Example

```
scheme://prefix.domain:port/path/filename
```

Explanation:

- **scheme** - defines the **type** of Internet service (most common is **http**)
- **prefix** - defines a domain **prefix** (default for http is **www**)
- **domain** - defines the Internet **domain name** (w3schools.com)
- **port** - defines the **port number** at the host (default for http is **80**)
- **path** - defines a **path** at the server (If omitted: the root directory of the site)
- **filename** - defines the name of a document or resource

HTML List

❑ List

- HTML offers three ways for specifying lists of information.
- All lists must contain one or more list elements.

❑ Type of List

- Unordered List
- Ordered List
- Description List

Unordered List

- Item
- Item
- Item
- Item

Description List

Coffee
- black hot drink

Milk
- white cold drink

Ordered List

1. First item
2. Second item
3. Third item
4. Fourth item

HTML List

❑ HTML Unordered Lists

- 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):

❑ The type Attribute

- To specify the type of bullet you like you can use **type** attribute for <ul> tag . By default it is a disc. Below are the possible options:

```
<ul type="square">
<ul type="disc">
<ul type="circle">
```

❑ HTML Unordered Lists Example

Example

```
<!DOCTYPE html>
<html>
<body>
<h2>Unordered List with Default
Bullets and Square Bullets</h2>
<ul>
  <li>Coffee</li>
  <li>Tea</li>
</ul>
<ul type=“square”>
  <li>Coffee</li>
  <li>Tea</li>
</ul>
</body>
</html>
```

o/p

Unordered List with Default Bullets and Square Bullets

- Coffee
- Tea

- Coffee
- Tea

HTML List

❑ HTML ordered Lists

- An ordered list starts with the **<ol>** tag.
- Each list item starts with the **<li>** tag.
- The list items will be marked with numbers:

❑ The type Attribute

- to specify the type of numbering you like you can use **type** attribute for <ol> tag.
- By default it is a number.
- Following are the possible options:

<ol type="1"> - Default case Numerals
<ol type="I"> - Upper case Numerals
<ol type="i"> - Lower case Numerals
<ol type="a"> - Lower case Letters
<ol type="A"> - Upper case letters

HTML List

- **HTML ordered Lists Example**

Example

```
<!DOCTYPE html>
<html>
<body>
<h2>ordered List with example</h2>
<ol type="1">
  <li>Coffee</li>
  <li>Tea</li>
</ol>
<ol type="I">
  <li>Coffee</li>
  <li>Tea</li>
</ol>
</body>
</html>
```

o/p

ordered List with Example

1. Coffee
2. Tea

I. Coffee
II. Tea

HTML List

HTML Description Lists

- HTML also supports description lists.
- A description list is a list of terms, with a description of each term.
- The **<dl>** tag defines the description list, the **<dt>** tag describes the term (name), and the**<dd>** tag describes each term:

```
<!DOCTYPE html>
<html>
<body>
<h2>A Description List</h2>
<dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
  <dd>- white cold drink</dd>
</dl>
</body>
</html>
```

o/p

Description List

Coffee

- black hot drink

Milk

- white cold drink

HTML List

- **HTML List Tags**

Tag	Description
	Defines an ordered list
	Defines an unordered list
<dl>	Defines a description list
	Defines a list item
<dd>	Defines the description in a description list
<dt>	Defines the term in a description list

HTML Tables

HTML Tables

- used to arrange data like text, images, links, other tables, etc. into rows and columns of cells.
- to create a table use <table> tag
- to create table rows, use <tr> tag within the <table> tag
- to create table columns, use <td> tag within the <tr> tag
- To create header column use <th> tag instead of <td> tag

Example

```
<table>
 <tr>
  <th>Month</th>
  <th>Savings</th>
 </tr>
 <tr>
  <td>January</td>
  <td>$100</td>
 </tr>
</table>
```

Output

Month	Savings
January	$100

HTML Tables

❑ An HTML Table with a Border Attribute

- If you do not specify a border for the table, it will be displayed without borders.
- A border can be added using the border attribute:

```
<!DOCTYPE html>
<html>
<body>
<table border="1" style="width:100%">
 <tr>
<td>Jill</td>
<td>Smith</td>
<td>50</td>
 </tr>
 <tr>
  <td>Eve</td>
  <td>Jackson</td>
  <td>94</td>
 </tr></table></body></html>
```

Result:

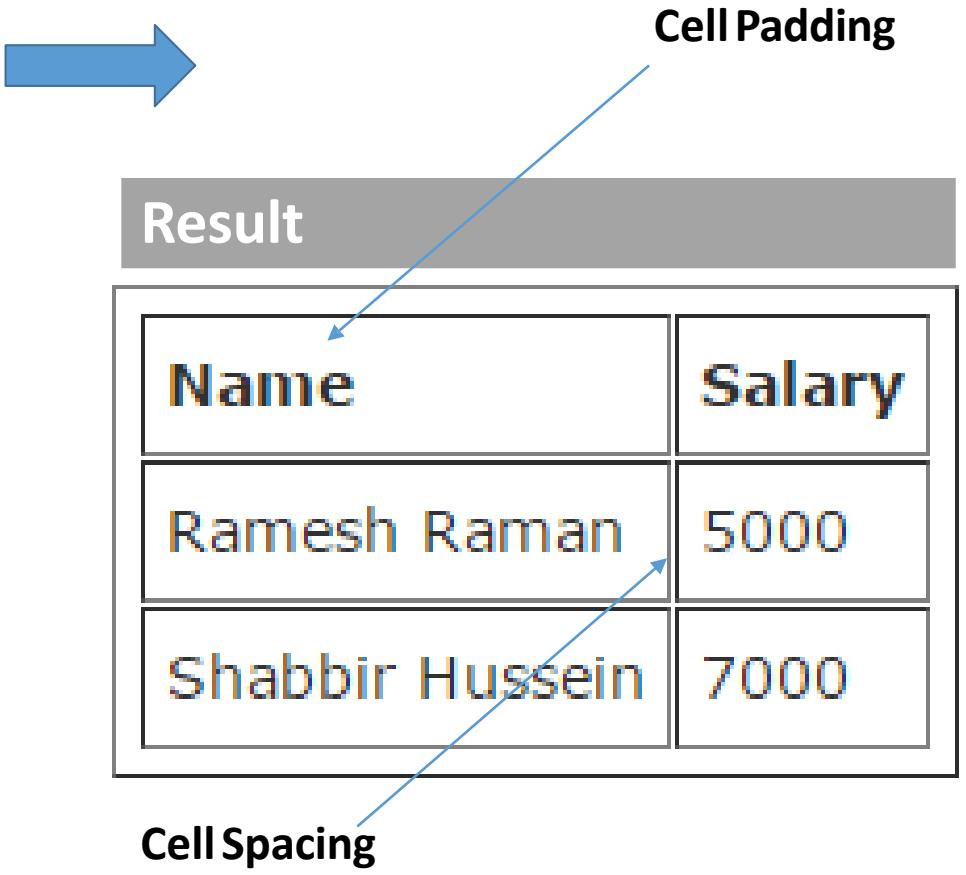
Jill	Smith	50
Eve	Jackson	94

HTML Tables

❑ Cellpadding and Cellspacing Attributes

- *cellpadding* is the space between the cell border and the text within it.
- *cellspacing* is the space between cells

```
<!DOCTYPE html>
<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 Hussei</td>
<td>7000</td>
</tr>
</table>
<body>
<html>
```



HTML Tables

❑ Colspan and Rowspan Attributes

- use **colspan** attribute to merge two or more columns into a single column
- use **rowspan** to merge two or more rows.

```
<body>
<table border="1">
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
<tr><td rowspan="2">Row 1 Cell 1</td><td>Row 1 Cell 2</td><td>Row 1 Cell 3</td></tr>
<tr><td>Row 2 Cell 2</td><td>Row 2 Cell 3</td></tr>
<tr><td colspan="3">Row 3 Cell 1</td></tr>
</table>
</body>
```

Result

Column 1	Column 2	Column 3
Row 1 Cell 1	Row 1 Cell 2	Row 1 Cell 3
	Row 2 Cell 2	Row 2 Cell 3
Row 3 Cell 1		

HTML Tables

❑ Tables Backgrounds

- **set table background in one of the two ways:**
  - **bgcolor** attribute - set background color for whole table or just for one cell.
  - **background** attribute - set background image for whole table or just for one cell.
  - set border color also using **bordercolor** attribute.

```
<body>
<table border="1" bordercolor="green" bgcolor="yellow">
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
<tr><td rowspan="2">Row 1 Cell 1</td><td>Row 1 Cell 2</td><td>Row 1 Cell 3</td></tr>
<tr><td>Row 2 Cell 2</td><td>Row 2 Cell 3</td></tr>
<tr><td colspan="3">Row 3 Cell 1</td></tr>
</table>
</body>
```

Result

Column 1	Column 2	Column 3
Row 1 Cell 1	Row 1 Cell 2	Row 1 Cell 3
	Row 2 Cell 2	Row 2 Cell 3
Row 3 Cell 1		

HTML Tables

❑ Table Height and Width

- set a table width and height through **width** and **height** attributes
- specify table width or height in terms of percentage or in terms of pixels .

```
<body>
<table border="1" width="400"height="150">
<tr>
<td>Row 1,Column 1</td>
<td>Row 1,Column 2</td>
</tr>
<tr>
<td>Row 1,Column 1</td>
<td>Row 1,Column 2</td>
</tr>
</table>
</body>
```

Result

Row 1, Column 1	Row 1, Column 2
Row 2, Column 1	Row 2, Column 2

HTML Tables

- HTML Tables are divided into three sections:
  - a header
  - a body
  - a footer
- Use the below tags to create the 3 sections of the table
  - **<thead>** - to create a separate table header.
  - **<tbody>** - to indicate the main body of the table.
  - **<tfoot>** - to create a separate table footer.

HTML Tables

```
<body>
<table border="1" width="100%">
<thead>
<tr>
<td colspan="4">This is the head of the table</td>
</tr>
</thead>
<tfoot>
<tr>
<td colspan="4">This is the head of the table</td>
</tr>
</tfoot>
<tbody><tr><td>Cell 1</td>
<td>Cell 2</td>
<td>Cell 3</td>
</tr>
</tbody>
</table>
<body>
```

Result

This is the head of the table			
Cell 1	Cell 2	Cell 3	Cell 4
This is the foot of the table			

HTML Forms

- **HTML Forms**
  - Used to collect data from the website visitor
  - e.g: during user registration, use form to collect name, email address, mobile number, etc.
  - Takes input from user and sends it to a back-end application such as CGI, ASP Script or PHP script etc.
  - The back-end application will perform necessary processing on the passed data based on defined business logic inside the application.
- HTML forms have various elements e.g:
  - text fields
  - textarea fields
  - drop-down menus
  - radio buttons
  - Checkboxes
  - Select Box Controls
  - File Select boxes
  - Clickable Buttons
  - Submit and Reset Button etc

HTML Form Controls

- The HTML <form> tag is used to create an HTML form and it has following syntax:

```
<form action="script URL" method="get|post".
        form elements like input,text area,etc.
</form>
```

HTML Form Controls

- **Three types of text input controls:**
  - Single-line text input controls
  - Password input controls
  - Multi-line text input controls
- **Single-line text input controls**
  - used only for one line of user input, such as search boxes or names.
  - created using HTML <input> tag (attribute type="text")
- **Password input controls**
  - single-line text input but it masks the character as soon as a user enters it.
  - created using HTML <input> tag (attribute type="password")
- **Multi-line text input controls**
  - used when the user is required to give details that are longer than a single sentence
  - Multi-line input controls are created using HTML <textarea> tag

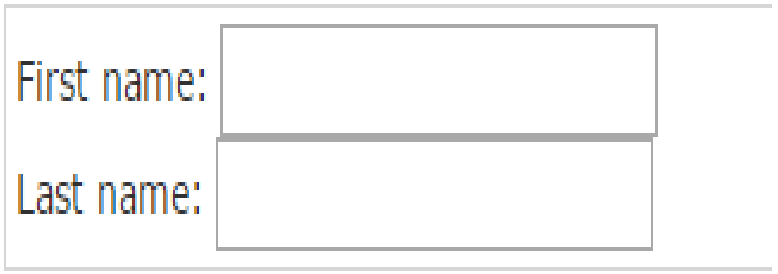
HTML Form Controls

Single-line text input controls : Example

Example

```
<body>
<form>
First name: <input type="text" name="first_name" />
<br>
Last name: <input type="text" name="last_name" />
</form>
</body>
```

o/p



Single-line text input controls : Attributes List

- List of attribute for <input> tag for creating text field

Attribute	Description
Type	Indicates the type of input control
Name	Used to give a name to the control and get the value
Value	Used to provide an initial value
Size	Used to specify the width of the text input control in terms of character
maxlength	Used to specify the maximum number of character a user can enter into text box

HTML Form Controls

Password input controls : Example

Example

```
<body>
<form>
<User Id:    <input type="text"
name="user_id' />
<br>
Password:   <input type="password"
name="password" />
</form>
</body>
```

o/p

Password input controls : Attributes List

- List of attribute for <input> tag for creating password field

Attribute	Description
type	Used to indicate type of input control
name	Used to give a name to the control and get the value
value	Used to provide an initial value
size	Used to specify the width of the text-input control in terms of character
maxlength	Used to specify the maximum number of character a user can enter into the text box

HTML Form Controls

Multiple-Line Text Input Controls : Example

Example

```
<body>
<form>
Description : <br />
<textarea rows="5" cols="50"
name="description">
Enter description here....
</textarea>
</form>
</body>
```

o/p

Multiple-Line Text Input Controls : Attributes List

- List of attribute for <textarea> tag

HTML Form Controls

Attribute	Description
Name	Used to give a name to control and get the value
Rows	Indicates the number of rows to text area box
cols	Indicates the number of columns of text area box

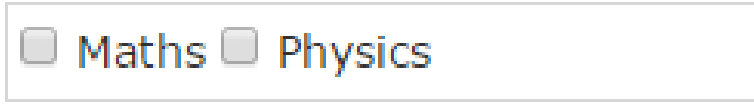
Checkbox Control

- Checkboxes are used when more than one option is required to be selected.
- Created using HTML <input> tag but type attribute is set to **checkbox**.

Example

```
<body>
<form>
<input type="checkbox" name="maths"
value="on">Maths
<input type="checkbox" name="physics"
value="on">Physics
</form>
</body>
```

o/p



Checkbox Control : Attribute List

- Following is the list of attribute of checkbox <input> tag.

Attribute	Description
type	Used to indicate type of input control
name	Used to give a name to the control and get the value
value	Used to provide an initial value
checked	Set to Checked if you want to select it by default

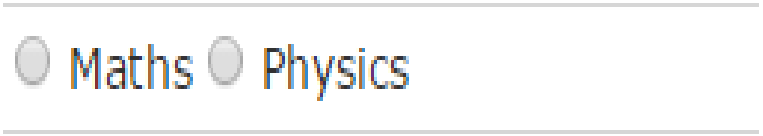
Radio Button Control

- Radio buttons are used when out of many options, just one option is required to be selected.
- Created using HTML <input> tag but type attribute is set to **radio**.

Example

```
<body>
<form>
<input type="radio" name="subject"
value="maths">Maths
<input type="radio" name="subject"
value="physics">Physics
</form>
</body>
```

o/p



Radio Button Control : Attributes List

- Following is the list of attribute for radio button <input> tag

Attribute	Description
type	Used to indicate type of input control
name	Used to give a name to the control and get the value
value	Used to provide an initial value
checked	Set to Checked if you want to select it by default

Select Box Control

- A select box, also called drop down box which provides option to list down various options in the form of drop down list, from where a user can select one or more options.

Example

```
<body>
<form>
<select name="dropdown">
<option value="Maths"
selected>Maths</option>
<option
value="Physics">Physics</option>
</select>
</form>
</body>
```

o/p

Select Box Control : Attribute List

- Following is the list of attribute for <select> tag

Attribute	Description
name	Used to give a name to the control and get the value
size	Used to present a scrolling list box
multiple	If set to “multiple” then allows a user to select multiple items from the menu

HTML Form Controls

- Following is the list of attributes for <option> tag

Attribute	Description
Value	The value that will be used if an the select box is selected
Selected	Specifies that this option should be the intially selected value when the page loads
label	An alternative way of labeling option

HTML Form Controls

❑ File Upload Box

- If you want to allow a user to upload a file to your web site, you will need to use a file upload box, also known as a file select box. This is also created using the <input> element but type attribute is set to **file**.

Example

```
<!DOCTYPE html>
<html>
<head>
<title>File Upload Box</title>
</head>
<body>
<form>
<input type="file" name="fileupload"
accept="image/" />
</form>
</body>
</html>
```

o/p

❑ File Upload Box

Attributes

Following are the important attributes of the File Upload

Attribute	Description
name	Used to give a name to the control and get the value
accept	Describes the type of the file that server accepts

HTML Form Controls

❑ Button Controls

- There are various ways in HTML to create clickable buttons. You can also create a clickable button using <input> tag by setting its type attribute to **button**.

Example

```
<body>
<form>
<input type="submit" name="sub"
value="Submit" />
<input type="reset" name="clr"
value="Clear" />
<input type="button"name="ok"
value="OK" />
</form>
</body>
```

o/p

Submit Reset OK

HTML Form Controls

❑ Button Controls

- Various Attributes of button Controls

Type	Description
submit	This creates a button that automatically submits a form
reset	This creates a button that automatically resets form controls to their initial values
button	This creates a button that is used to trigger a client-side script when the user clicks that button
image	This creates a clickable button but we can use an image as background of the image

- are computer software programs that access and display content from Internet websites.
- interpret Web programming code and present it in a way that is easy to view and support user interactions.
- Information on the Web can be stored and accessed from many different physical locations around the World.
- each browser interprets, displays and interacts with web sites is (usually) different.
- use modern, updated browsers in order to successfully and effectively interact with websites built on these technologies.

Common Features of Web Browser

- should be able to look at the Web pages throughout Internet or to connect to various sites to access information and explore resources.
- must enable you to follow the hyperlinks on a Website and follow the URL
- Feature of browser is to have a number of other commands readily available through menus, icons, and buttons.
- Need a way to save links to the sites you have visited on the WWW so that youcan get back to them during other sessions.
  - Use bookmark list, which you use to keep a list of WWW pages you want to access any time you use your browser.
  - The name of the site and its URL are kept in these lists. The bookmark list is particularly important and the browser contain tools to manage and arrange it.

Common Features of Web Browser

- main feature of a browser is to search the information on the current page as well as search the WWW itself.
- give you the facility to
  - save a Web page in a file on your computer,
  - print a Web page on your computer
  - send the contents of a Web page by e-Mail to others on the Internet.
- Few Web browser are complete Internet package, means they come with components like
  - e-Mail client
  - newsgroup client
  - HTML composer
  - telnet client
  - ftp client, etc.

- should be able to handle text, images of the World Wide Web, as well as the hyperlinks to digital video, or other types of information.
- browser needs to properly display and handle Web pages that contain animated or interactive items.
- Google Chrome can incorporate these features through its ability to interpret programs written in Java and Java Script.

- interact not just with the Web, but also with your computer's operating system and with other programs, called plug-ins, that gives the browser enhanced features.
- A browser that caches, keeps the pages you visit so that it does not have to download them again.
- Reloading a page from the cache is much quicker than downloading it again from the original source.
- If you are within a secured network, you may have to configure your browser to work through a special computer on your network called a proxy server.

- Google Chrome
- Microsoft Edge
- Firefox
- Safari
- Opera

- According to w3schools.com, these are the most popular browsers of 2016

Browser Name	Market Share
Chrome	73.7 %
IE	4.8 %
Firefox	15.5 %
Safari	3.5 %
Opera	1.1 %

Browsers Comparison

- Below is the Basic Comparison of Popular Browsers

			
	EDGE	**CHROME**	**FIREFOX**
Speed & Performance	✓		
Layout / Ease of Use			✓
Extensibility		✓	
Standards Support		✓	
Special Features		✓	
TOTAL	**1**	**3**	**1**

Browser HTML5 Support Comparison

BROWSERS

	492 Chrome 52	473 Edge 15	461 Firefox 48	383 Safari 10.0
parsing rules	5	5	5	5
`<!DOCTYPE html>` triggers standards mode	Yes ✓	Yes ✓	Yes ✓	Yes ✓
HTML5 tokenizer	Yes ✓	Yes ✓	Yes ✓	Yes ✓
HTML5 tree building	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Parsing inline SVG	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Parsing inline MathML	Yes ✓	Yes ✓	Yes ✓	Yes ✓
elements	25	22	24	25
Embedding custom non-visible data	Yes ✓	Yes ✓	Yes ✓	Yes ✓
New or modified elements				
▶ Section elements	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ Grouping content elements	Yes ✓	Partial ○	Yes ✓	Yes ✓
▶ Text-level semantic elements	Partial ○	Partial ○	Partial ○	Partial ○
▶ Interactive elements	Partial ○	No ✗	Partial ○	Partial ○

Browser HTML5 Support Comparison

Global attributes or methods				
`hidden` attribute	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ Dynamic markup insertion	Yes ✓	Yes ✓	Yes ✓	Yes ✓
forms	**64**	**63**	**44**	**39**
Field types				
▶ `input type=text`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=search`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=tel`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=url`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=email`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=date`	Yes ✓	Yes ✓	No ✗	No ✗
▶ `input type=month`	Yes ✓	Yes ✓	No ✗	No ✗
▶ `input type=week`	Yes ✓	Yes ✓	No ✗	No ✗
▶ `input type=time`	Yes ✓	Yes ✓	No ✗	No ✗
▶ `input type=datetime-local`	Yes ✓	Yes ✓	No ✗	No ✗
▶ `input type=number`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=range`	Yes ✓	Yes ✓	Yes ✓	Yes ✓

Browser HTML5 Support Comparison

▶ `input type=color`	Yes ✓	Yes ✓	Yes ✓	No ✗
▶ `input type=checkbox`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=image`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `input type=file`	Partial ○	Partial ○	Partial ○	Partial ○
▶ `textarea`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `select`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `fieldset`	Yes ✓	Partial ○	Yes ✓	Yes ✓
▶ `datalist`	Yes ✓	Yes ✓	Yes ✓	No ✗
▶ `output`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `progress`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ `meter`	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Fields				
▶ Field validation	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ Association of controls and forms	Yes ✓	Partial ○	Partial ○	Yes ✓
▶ Other attributes	Yes ✓	Partial ○	Partial ○	Yes ✓
▶ CSS selectors	Yes ✓	Yes ✓	Yes ✓	Yes ✓
▶ Events	Yes ✓	Yes ✓	Yes ✓	Yes ✓

Browser HTML5 Support Comparison

Forms				
▶ Form validation	Yes ✓	Yes ✓	Yes ✓	Yes ✓
web components	8	2	2	6
Custom elements	Yes ✓	No ✗	No ✗	No ✗
Shadow DOM	Partial ○	No ✗	No ✗	Yes ✓
HTML templates	Yes ✓	Yes ✓	Yes ✓	Yes ✓
HTML imports	Yes ✓	No ✗	No ✗	No ✗
location and orientation	20	20	20	15
Geolocation	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Device Orientation	Yes ✓	Yes ✓	Yes ✓	No ✗
Device Motion	Yes ✓	Yes ✓	Yes ✓	No ✗
output	8	8	8	8
Full screen support	Prefixed ✓	Prefixed ✓	Prefixed ✓	Prefixed ✓
Web Notifications	Yes ✓	Yes ✓	Yes ✓	Yes ✓

Browser HTML5 Support Comparison

input	5	10	4	0
Gamepad control	Yes ✓	Yes ✓	Yes ✓	No ✗
Pointer Events	No ✗	Yes ✓	No ✗	No ✗
Pointer Lock support	Yes ✓	Yes ✓	Prefixed ✓	No ✗

video	29	33	29	33
`video` element	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Subtitles	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Audio track selection	No ✗	Yes ✓	No ✗	Yes ✓
Video track selection	No ✗	Yes ✓	No ✗	Yes ✓
Poster images	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Codec detection	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Video codecs				
MPEG-4 ASP support	No ✗	Yes ✓	No ✗	Yes ✓
H.264 support	Yes ✓	Yes ✓	Yes ✓	Yes ✓
H.265 support	No ✗	No ✗	No ✗	No ✗
Ogg Theora support	Yes ✓	No ✗	Yes ✓	No ✗
WebM with VP8 support	Yes ✓	No ✗	Yes ✓	No ✗
WebM with VP9 support	Yes ✓	No ✗	Yes ✓	No ✗

Browser HTML5 Support Comparison

audio	29	27	25	25
`audio` element	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Loop audio	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Preload in the background	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Advanced				
Web Audio API	Yes ✓	Yes ✓	Yes ✓	Prefixed ✓
Speech Recognition	Prefixed ✓	No ✗	No ✗	No ✗
Speech Synthesis	Yes ✓	Yes ✓	No ✗	Yes ✓
Audio codecs				
PCM audio support	Yes ✓	Yes ✓	Yes ✓	No ✗
MP3 support	Yes ✓	Yes ✓	Yes ✓	Yes ✓
AAC support	Yes ✓	Yes ✓	Yes ✓	Yes ✓
Dolby Digital support	No ✗	Yes ✓	No ✗	Yes ✓
Dolby Digital Plus support	No ✗	Yes ✓	No ✗	Yes ✓
Ogg Vorbis support	Yes ✓	No ✗	Yes ✓	No ✗
Ogg Opus support	Yes ✓	No ✗	Yes ✓	No ✗
WebM with Vorbis support	Yes ✓	No ✗	Yes ✓	No ✗
WebM with Opus support	Yes ✓	No ✗	Yes ✓	No ✗

Browser HTML5 Support Comparison

streaming	5	5	5	5
Media Source extensions	Yes ✓	Yes ✓	Yes ✓	Yes ✓
DRM support	Yes ✓	Yes ✓	Yes ✓	Prefixed ✓
Adaptive bit rate				
Dynamic Adaptive Streaming / MPEG-DASH	No ✗	Yes ✓	No ✗	No ✗
HTTP Live Streaming / HLS	No ✗	Yes ✓	No ✗	Yes ✓
Codecs				
▸ Video codecs	Partial ○	Partial ○	Partial ○	Partial ○
▸ Audio codecs	Partial ○	Partial ○	Partial ○	Partial ○

- Detailed Comparison can be done at

https://html5test.com/compare/browser/chrome-52/edge-15/firefox-48/safari-10.0.html

- All Browsers Are NOT Created Equal
- Websites look differently in different browsers
- Your website exists as code, written primarily in a programming language.
- When someone visits your website using a web browser, your web server (the computer that is hosting your site), sends a file that looks a lot like the figure below.

```
<!--[if lte IE 6]>
<script type="text/javascript" src="http://www.netsourceblog.com/wp-content/themes/thesis_151Nsource/cus
<![endif]-->
</head>

<body class="custom">

<script type="text/javascript" src="http://use.typekit.com/dbc3kvk.js"></script>
<script type="text/javascript">try{Typekit.load();}catch(e){}</script><div id="container">
<div id="page">
        <div id="header">
<ul id="tabs">
<li class="page_item page-item-452"><a href="http://www.netsourceblog.com/index.php/company/" title="Com
<ul>
        <li class="page_item page-item-1101"><a href="http://www.netsourceblog.com/index.php/company/mee
        <li class="page_item page-item-478"><a href="http://www.netsourceblog.com/index.php/company/our-
</ul>
</li>
<li class="rss"><a href="http://www.netsourceblog.com/index.php/feed/" title="NetSource Tips RSS Feed" r
</ul>
```

- Browser to translate that computer language into a visual presentation that is attractive to the website visitor
- The different browsers will translate the basic code for every website differently.
- Most of the time these differences are very slight – spacing and kerning differences in the font or tiny layout and display differences.
- But sometimes entire functional features just won't work in one browser, while the other browsers work just fine.

- CSS validation
- HTML or XHTML validation
- Page validations with and without JavaScript enabled
- Ajax and JQuery functionality
- Font size validation
- Page layout in different resolutions
- All images and alignment
- Header and footer sections
- Page content alignment to center, LHS or RHS
- Page styles
- Date formats
- Special characters with HTML character encoding
- Page zoom-in and zoom-out functionality
- **Test the above all in Linux, Unix, Windows & All Browser Types**

Cross Browser Testing

- The differences in the major browsers' display of websites is the reason for what's called cross-browser testing.
- After a website is completed (and typically at intermediate stages during development), a web designer will test the new pages in the major browsers to make sure everything is working correctly.
- Popular Browser Versions to Test For:
  - Google Chrome 56.0
  - Internet Explorer 11.0
  - Firefox 52.0
  - Firefox 51.0
  - Safari 10.0
  - Microsoft Edge 14
  - Google Chrome 57.0
- Rest of Browser account for less than one percent of all traffic.
- You can use Tools such as **BrowserStack.com**, **crossbrowsertesting.com** to test on chosen browsers

THANK YOU