

Basics of Web Development and HTML

Outline

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 - Label Tag
 - Radio Button
 - Checkbox
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- HTML Charset

Web Development

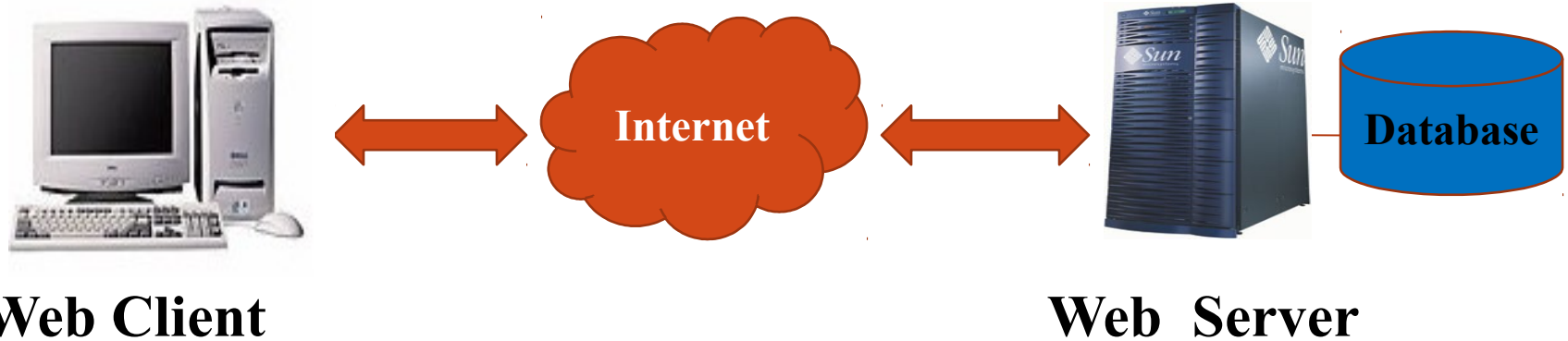
□ Steps to develop a website:

- Obtain the appropriate **equipment**
 - Web server – hardware and software
- Register the web server to an **Internet Service Provider(ISP)**
 - Obtain the IP address and DNS address
- Develop the **contents**
 - Web Programming

Web Programming

- ❑ Writing the necessary source code to create a website. At the very least, it refers to writing the HTML pages.
- ❑ Web programming can also be divided into
 - **Client-side programming**: to define the operation to be performed on the client's machine.
 - **Server-side programming**: to define the operation to be performed on the server.

Cont...



Client-side Programming

Skills that are often required:

- HTML
- CSS
- JavaScript
- Java

Sever-Side Programming

Skills that are often required:

- CGI
- PHP
- Perl
- ASP
- Java

Client-Side Programming

- ❑ Client-side programming refers to the class of computer programs on the web that are executed on the user's web browser.
- ❑ Client-side scripting languages are one of the easiest way to add dynamic contents to the web pages.

Scripting Languages

- ❑ A form of programming language that is usually interpreted rather than compiled.

- ❑ Characteristics
 - Simple Syntax
 - Easy to Learn
 - Can perform tasks with minimum number of commands
 - Interpreted
 - Portable

Different Scripting Languages

□ JavaScript

- Client-side scripting language
- Easy to use
- Enhance dynamics and interactive features of a web page
- Allows to perform calculation, write interactive games, add special effects, customize graphics selections, create security passwords

Cont...

VBScript

- Microsoft's scripting language
- Client-side scripting language
- Very easy to learn
- Includes the functionality of Visual Basic

Cont...

❑ **CGI(Common Gateway Interface)**

- Server-side scripting language.
- Needs to launch separate instance of application for each web request
- Allows direct interaction with users

Cont...

□ Perl

- Old UNIX language
- Found on all Windows and Linux servers
- Excellent web scripting language

Cont...

❑ **PHP(Hypertext Preprocessor)**

- Especially good at connecting to MySQL
- Very popular language
- Runs on UNIX and Windows
- HTML – embedded scripting language
- Syntax looks like C, JAVA and PERL
- Generate Dynamic content and good user interface
- Server side execution

Cont...

❑ **Active Server Page(ASP)**

- Server side scripting language
- Developed by Microsoft
- Good at connecting to Microsoft databases
- Runs only on Microsoft servers

HTML

Hypertext Markup Langauge

- Constitutes a collection of platform independent styles that defines a various components of a web developement.

Markup Language

- One where we can embed special tags or fromatting commands in the text.
- To describe how the text should be displayed/ printed.

HTML Elements

- HTML elements are added to the contents of a page to describe its structure. An element consists of the opening and closing tags, plus its content.
- Tags usually comes in pair with an opening tag and closing tags. There are few empty elements with no content(eg,). They have one self-closing tag.
- Opening tags can carry attributes, which tells us more about that element. Attributes have a name and a value. The value is usually giving in quotes.
 - <p class = "fruit">Apple</p>

HTML Tags

Tag	Example
Meta	<title>, <link>, <meta> , <style>, etc..
Text	<p>, <h1>, <h2>, <ins>, , etc..
Link	<a>, <base>, etc..
Image and Object	, <map>, <param> and <object>, etc..
List	, , , <dl>, <dt>, <dd>, etc..
Table	<table>, <tr>, <td>, <tbody>, <thead>, <col>, <colgroup> and <caption>, etc..
Form	<form>, <input>, <textarea>, <select>, <option>, <optgroup>, <button>, <label>, etc
Script	<script>

HTML Formatting

Tag	Syntax
Bold	<code>.....</code>
Italic	<code><i>.....</i></code>
Marked	<code><mark>.....</mark></code>
Underlined	<code><u>.....</u></code>
Strike	<code><strike>.....</strike></code>
Monospaced Font	<code><tt>.....</tt></code>

Superscript

^{.....}

Subscript

_{.....}

Deleted

.....

Inserted

<ins>.....</ins>

Larger

<big>.....</big>

Smaller

<small>.....</small>

HTML Anchor Tag <a>

➤ HTML Anchor tag defines a hyperlink that links one page to another page.

- Eg. Click for Second Page

➤ href attribute

- It is used to define the address of the file to be linked. It points out the destination page.

➤ Appearance of HTML Anchor:

- Unvisited link is underlined and blue color.
- Visited link is underlined and purple color.
- Active link is underlined and red color.

HTML Link Tag <link>

- The link tag defines a link between a document and external resource.
- It can be used to link external style sheet.
 - Eg. <link *rel* = “stylesheet” *type* = “text/javascript” *href* = “abc.css”>
- **rel**
 - Specifies the relationship between the current document and the linked document
- **type**
 - Specifies the media type of the linked document.
- **href**
 - Specifies the location of the linked document

Image Tag

- Image tag is used to display image on the web page.
 - Eg.
- src attribute:
 - It defines the source or path of the image. It instructs the browser where to look for the image on server.
- alt attribute:
 - It is used for alternate text for the image, if it cannot be displayed.

HTML Table

- HTML table tag is used to display data in tabular form.
- Earlier table was used to manage the layout of the page eg. header section, navigation bar, body content, footer section etc.

Tag	Description
<table>	It defines a table.
<tr>	It defines a row in a table.
<th>	It defines a header cell in a table.
<td>	It defines a cell in a table.
<caption>	It defines the table caption.

Example:

```
<table border = "1">
<tr>
<th>Name</th><th>RollNo</
th><th>Marks</th>
</tr>

<tr>
<td>ABC</td><td>123</td><td>75</td>
</tr>

<tr>
<td>DEF</td><td>456</td><td>85</td>
</tr>

<tr>
<td>GHI</td><td>789</td><td>95</td>
</tr>
</table>
```

Output

Name	RollNo	Marks
ABC	123	75
DEF	456	85
GHI	789	95

HTML List Tags

- HTML List are used to specify list of information.

- There are three types of lists:
 - Ordered List or Numbered List(ol)
 - Unordered List or Bulleted List(ul)
 - Description List or Definition List(dl)

Example: Ordered List

Output

```
<ol>
```

```
<li>ABC</li>
```

```
<li>CDE</li>
```

```
<li>FGH</li>
```

```
</ol>
```

1. ABC

2. CDE

3. FGH

Example: Unordered List

```
<ul>  
<li>ABC</li>  
<li>CDE</li>  
<li>FGH</li>  
</ul>
```

Output

- ABC
- CDE
- FGH

Example: Description List

<dl>

<dt>HTML</dt>

<dd>-It's a markup language used to create web page</dd>

<dt>CSS</dt>

<dd>-It's a style sheet language used to describe the look and formatting of a document written in markup language.</dd>

<dt>JavaScript</dt>

<dd>-It's a scripting language used to create interactive and dynamic web page.</dd>

</dl>

Output

HTML

-It's a markup language used to create web page

CSS

-It's a style sheet language used to describe the look and formatting of a document written in markup language.

JavaScript

-It's a scripting language used to create interactive and dynamic web page

HTML Form Tag

- An HTML form is a section of a document which contains controls such as text field, password field, checkbox, radio button, submit button, menus etc.
- An HTML form facilitates the user to enter data that is to be sent to the server for processing.
- Form syntax :
 - `<form action = “server URL” method = “get|post”>`

TextField Control

- The type="text" attribute of input tag creates textfield control also known as single line textfield control.
- The name attribute is optional, but it is required for the server side component such as JSP, ASP, PHP etc.

Eg.

<form>

First Name: **<input type = "text" name = "firstname" id = "name" />**
**
**

</form>

Password Field Control

- The password is not visible to the user in password field control.

Eg.

<form>

<input **type** = “password” **name** = “password” **id** =
“password”**>**

</form>

Email Field Control

- The email field is new in HTML 5. It validates the text for correct email address. You must use @ and . in this field.

Eg.

```
<form>
```

```
  <input type="email" id="email" name="email"/> <br/
```

```
>
```

```
</form>
```

Label Tag in Form

- If you click on the label tag, it will focus on the control.
- **for** attribute is used to link label with corresponding text control .
- **for** attribute must be same as **id** attribute of input tag.

Eg.

<form>

<label for = “firstname”>FirstName</label>

**<input type = “text” name = “firstname” id =
“firstname”>**

</form>

Radio Button Control

- The radio button is used to select one from multiple options.
- If you use one name for all radio button only one radio button can be selected at a time.

Eg.

<form>

<label **for** = “gender”>Gender</label>

<input **type** = “radio” **name** = “gender” **id** = “gender”
/>Male

<input **type** = “radio” **name** = “gender” **id** = “gender”
/>Female

</form>

FAST FOOD SHOP

Food Items	Price
------------	-------

<input type="radio"/> Pizza	70
-----------------------------	----

<input type="radio"/> Burger	75
------------------------------	----

<input type="radio"/> Ice Cream	30
---------------------------------	----

GetBill

BILL is :

CheckBox Control

- Checkbox control is used to check multiple options from given checkbox.

Eg.

<form>

<input type = “checkbox” name = “cricket” id =
“cricket”/>Cricket

<input type = “checkbox” name = “hockey” id =
“hockey”/>Hockey

<form>

Select Tag <select>

➤ It is used to create drop-down list.

➤ Eg.

```
<select name = "country" id = "country" >
```

```
<option value = "India">
```

```
<option value = "Japan">
```

```
<option value = "China"></select>
```

Div Tag

- The **HTML <div> tag** is used to group the large section of HTML elements together.

```
<div id = "demo"  
  style="border:1px solid pink;padding:20px;font-  
size:20px">  
  <p>Welcome to Web Programming</p>  
  <p>This is second paragraph</p>  
</div>
```


Difference Between Div Tag and Span Tag

Div Tag	Span Tag
HTML div is a block element.	HTML span is an inline element
HTML div element is used to wrap large sections of elements.	HTML span element is used to wrap small portion of texts, image etc.

Button Tag <button>

- The <button> tag is used to create a clickable button within HTML form on your webpage.
- Different browser use different default type for the button element.
- HTML Button tag can be used inside and outside the form.
 - Inside the form it works as **submit** and **reset**.
 - Outside the form it is used to **call function**.

HTML iframe

➤ HTML iframe is used to display nested webpage(a webpage within a webpage).

➤ It is define as Inline Frame.

- Eg. `<iframe src = "http://www.nitc.ac.in"></iframe>`

HTML Charset

- HTML charset is also called as HTML characters set or HTML encoding.
- It is used to display an HTML page correctly and properly.
- To avoid any error, web browser must know which character set to use.

HTML Character Encoding

- In HTML, first ever character encoding standard is ASCII.
- ASCII provides 128 different alphanumeric characters that could be used on the internet: numbers(0-9), english letters (A-Z) and special character.

UTF-8

- **UTF-8** is a variable width character encoding which covers almost all the characters and symbols in the world.
- **ANSI**(Windows-1252) was the original windows character set, which is supported 256 different codes.
- **ISO-8859-1** was the default character set for HTML 4.
- The default character encoding for HTML 5 is **UTF-8**.
 - Eg. `<meta charset = “UTF-8”>`