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Department of Information Technology
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Unit 1 Notes
Subject: IP **Semester: VI**

UNIT I:

HTML and common tags: Introduction, www, Internet, URL, **Common tags:** Text formatting tags Line and Paragraph tags, **Lists:** ordered list Unordered List, definition List, anchor tag , Absolute and relative path, Tables and its attributes, Image tag- alt attribute, image mapping frames, forms , cascading style sheet, External style sheet, internal Style sheet.

Introduction

Q. 1. Define internet. What are the tasks perform by internet also define the history of internet.

Ans:

A network of network is called internet. The internet is used to perform the following types of tasks:

- Electronic Mail
- Research
- Discussion
- Interactive Games.

Internet is defined as an Information super Highway, to access information over the web. However, It can be defined in many ways as follows:

- Internet is a world-wide global system of interconnected computer networks.
- Internet uses the standard Internet Protocol (TCP/IP).
- Every computer in internet is identified by a unique IP address.
- IP Address is a unique set of numbers (such as 110.22.33.114) which identifies a computer location.
- A special computer DNS (Domain Name Server) is used to give name to the IP Address so that user can locate a computer by a name.
- For example, a DNS server will resolve a name http://www.tutorialspoint.com to a particular IP address to uniquely identify the computer on which this website is hosted.
- Internet is accessible to every user all over the world.

Browsers and the Web

- The web is simply a way of looking at the internet. This vast network consists of computers that manage data and the communication links via software and hardware called server.
- Web servers receive requests for information, go out and find it in t heir databases, and return the proper pages of data to the requesting computer. Browsers assisted users in finding information on the web and properly displaying it on computer screens.
- Hypertext Transfer Protocol (HTTP) was developed as a way to find information and retrieve it over telephone lines.

Evolution:-

The concept of Internet was originated in 1969 and has undergone several technological & Infrastructural changes as discussed below:

- The origin of Internet devised from the concept of Advanced Research Project Agency Network (ARPANET).
- ARPANET was developed by United States Department of Defence.

- Basic purpose of ARPANET was to provide communication among the various bodies of government.
- Initially, there were only four nodes, formally called Hosts.
- In 1972, the ARPANET spread over the globe with 23 nodes located at different countries and thus became known as Internet.
- By the time, with invention of new technologies such as TCP/IP protocols, DNS, WWW, browsers, scripting languages etc. Internet provided a medium to publish and access information over the web.

World Wide Web (WWW):-

- The World Wide Web is known as WWW.
- The World Wide Web is an architectural frame work for accessing linked documents and repository of information spread all over the Internet.
- The WWW has a unique combination of flexibility, portability and user-friendly features that distinguish it from other services provided by the Internet.
- The main reason for its popularity is the use of a concept called hypertext.
- Hypertext is a new way of information storage and retrieval, which enables authors to structure information in novel ways.
- The WWW uses the client-server model, and an Internet protocol called hypertext transport protocol (HTTP) for interaction between the computers on the Internet.

Introduction to HTML

Q. 2. Explain the basic structure of HTML with suitable example.
Ans:
HTML documents are made up of elements called tags, which define the presentation of the web page.
Most tags in an HTML document must be followed somewhere in the file with a closing tag.
For example:
This is an opening tag: <blockquote>
This is a closing tag: </blockquote>
HTML page is written in this basic format:

```
<html>
<head>
<title>Page Title</title>
</head>
<body>
The main part of the document goes here.
</body>
</html>
```

Every HTML document must include the opening <html> tag at the top of the file, and the closing </html> tag at the very end of the file.
Beneath the opening html tag you'll find the <head> section. Here you will place your web page keywords, description, and page title. Some of the tags associated with the head section are:

- <head> </head>
  These tags open and close the head section. Your keyword, description, and title tags must be placed between these tags.
- <title> </title>
  The title of your web page will go between these tags. The title you include here will appear at the top of the browser window when someone views your web page, and will also appear when someone creates a bookmark this page.

- <meta>
  You can use meta tags to describe your site and help search engines catalog your web page. Learn more.

The body of the page your page content, including text, images, and links appears after the closing head tag. With the opening <body> tag, you can also set a background image or color for your page, as well as the color of your text and HTML links.
For example:
<body bgcolor="#000000" text="#ffffff" link="#0000ff" vlink="#800080">
The best way to learn HTML is to use it. For help learning and practicing HTML, please check out some recommended third-party HTML resources.

Q.3. What are the basic elements of HTML ?
Ans:
The basic elements of an HTML page are:
A text header, denoted using the <h1>, <h2>, <h3>, <h4>, <h5>, <h6> tags.
A paragraph, denoted using the <p> tag.
A horizontal ruler, denoted using the <hr> tag.
A link, denoted using the <a> (anchor) tag.
A list, denoted using the <ul> (unordered list), <ol> (ordered list) and <li> (list element) tags.
An image, denoted using the <img> tag
A divider, denoted using the tag
A text span, denoted using the tag
The next few pages will give an overview of these basic HTML elements.
Each element can also have attributes - each element has a different set of attributes relevant to the element. There are a few global elements, the most common of them are:
id - Denotes the unique ID of an element in a page. Used for locating elements by using links, JavaScript, and more.
class - Denotes the CSS class of an element. Explained in the CSS Basics tutorial.
style - Denotes the CSS styles to apply to an element. Explained in the CSS Basics tutorial.
data-x attributes - A general prefix for attributes that store raw information for programmatic purposes. Explained in detailed in the Data Attributes section.
Text headers and paragraphs
There are six different types of text header you can choose from, h1 being the topmost heading with the largest text, and h6 being the most inner heading with the smallest text. In general, you should have only one h1 tag with a page, since it should be the primary description of the HTML page.
As we've seen in the last example, a paragraph is a block of text separated from the rest of the text around it.
Let's see an example of the <h1>, <h2> and <p> tags in action:

```
<!DOCTYPE html>
<html>
  <head>
  </head>
  <body>
    <h1>My First Page</h1>
    <p>This is my first page.</p>
    <h2>A secondary header.</h2>
    <p>Some more text.</p>
  </body>
</html>
```

Horizontal rulers
A horizontal ruler <hr> tag acts as a simple separator between page sections.

```
<!DOCTYPE html>
<html>
  <head>
  </head>
  <body>
    <h1>My First Page</h1>
```

```
    <p>This is my first page.</p>
    <hr/>
    <p>This is the footer - all rights are reserved to me.</p>
  </body>
</html>
```

Common Tags

Q.4. What are the different text formatting tag explain ant five with example.

Ans:

Traditional Text and Formatting

Text Layout

- There are 2 basic types of text affecting elements in html.
- The first kind performs text layout tasks and the second affects text's appearance.

The P Element

- The <p> tag is used to denote the beginning of a new paragraph.
- Although the end tag </P> exists, its use is optional.
- If the end tag is not used, the beginning of the next block level element is interpreted as the end of the paragraph.
- The align attribute is used to set the alignment of the paragraph with respect to the page size. Values are LEFT, RIGHT, CENTER and JUSTIFY. Example: <p align="center">

<P> tag Example

```
<P align=left>
        This paragraph is Left Aligned.
</P>
<P align=center>
        This paragraph is Centered.
</P>
<P align=right>
        This paragraph is Right Aligned.
</P>
<P align=justify>
        This paragraph is justified.
</P>
```

The BR Element

- The
 tag inserts a single line break.
- The
 tag is an empty tag which means that it has no end tag.
- When placed after images, the clear attribute controls how text is handled when wrapping around those images.
- The clear attribute has four possible values: none, left, right and all.

The CENTER Element

- The CENTER element causes all text between its start and end tags to be centered between the margins.
- <CENTER> Text Goes Here. </CENTER>

The HN Element

- The highest level of heading is represented by <H1> tag, the lowest by the <H6> tag.

<H1> This is an H1 heading. </H1>

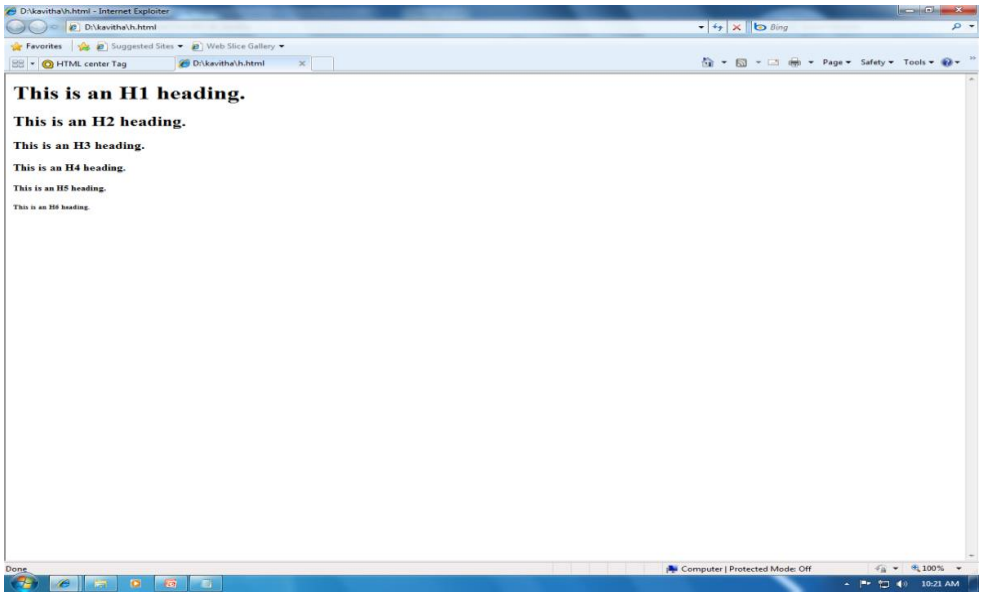
<H2> This is an H2 heading. </H2>

<H3> This is an H3 heading. </H3>

<H4> This is an H4 heading. </H4>

<H5> This is an H5 heading. </H5>

<H6> This is an H6 heading. </H6>



The HR Element

- Horizontal rules are used to visually divide different segments of web pages from one another.
- A simple horizontal rule is coded as follows:

<HR>

Text Styles

The B and STRONG Elements

- Using the <B> and <STRONG> tags has the effect of rendering text in bold print.

The I and EM elements

- Using the <I> and <EM> tags has the effect of rendering text in italicized print.

STRIKE and U Elements

- The STRIKE element causes text to be struck through.
- The U element underlines the affected text.

The BIG, SMALL, SUP and SUB elements

- These four elements actually change the size or position of the affected text.

The FONT and BASEFONT Elements

- The FONT and BASEFONT Elements perform the same task and use the same methods for doing so.
- The difference between them is the scope of their effect.
- Both set the size, color and font face for the text, but the basefont element is global for all body text in the document, whereas the FONT element is strictly local and affects only the text between its start and end tags.
- Example
  <BASEFONT size=4 color="#000000" face="arial">

  <P>

  This is body text using the base font size.

  <P>

  <FONT size=+3> This is locally increased font. </FONT>

Lists

Q.5. Define List. Give different types of lists with example.

Ans:

Lists

- One of the most popular methods for organizing information is by using lists.
- HTML presents three basic kinds of lists: unordered lists, ordered lists, and definition lists.
- In unordered lists, the list items are marked with bullets.
- In ordered lists, they are marked with numbers, Roman numerals, or letters.
- Definition lists are a little different; they have a pair of values, one for the term, the other for its definition.

Unordered Lists

- Unordered lists are specified with the <UL> tag.
- Unordered lists are used when the order of the list items is unimportant.
- The type attribute defines the type of bullets used to denote the individual list items.
- The three options are: disc, circle and square.

Example

<UL type="disc">

<LH> UG Courses </LH>

<LI> BE (CSE) </LI>

<LI> BE (ECE) </LI>

<LI> BE (EEE) </LI>

</UL>

<UL type="square">

<LH> PG Courses </LH>

<LI> MCA </LI>

<LI> ME (CSE) </LI>

<LI> MBA </LI>

</UL>

Ordered Lists

- Ordered lists are specified with the <OL> tag.
- They are used when the order of the list item is significant.
- OL elements have the type and start attributes.
- The type attribute selects the kinds of numbering system utilized to order the list.

Example

<html>

<body>

<h4>An Ordered List:</h4>

<ol type=I>

Coffee

Tea

Milk

</body>

</html>

Definition Lists

- Definition lists are specified with the <DL> tag.
- Definition lists consist of pairs of values, the first being the term to be defined, and the second being the definition of the tem.
- Example
  <DL>

  <DT> Satellite Dish

  <DD> Antenna like device which functions to receive and concentrate television

  signals.

Nested Lists

- Any kind of list – ordered, unordered or definition – can be nested within another list.
  <UL type=disc>

  <LI> UG COurses </LI>

  <OL type=i>

  <LI> BE (CSE) </LI>

<LI> BE (ECE) </LI>

<LI> BE (EEE) </LI>

</OL>

<LI> PG COurses </LI>

<OL type=i>

<LI> ME (CSE) </LI>

<LI> MCA </LI>

<LI> MBA </LI>

</OL>

</UL>

Q.6. Define table also explain different table element.

Ans:

Using Tables for Organization and Layout

What are the HTML Table Elements

- HTML tables begin and end with the table tags, <table> and </table>
- They contain rows, defined with the row tags <tr> and </tr>.
- Cells defined with cell tags, <td> and </td>
- Captions for tables are created with the begin and end caption tags, <caption> and </caption>.
- Some cells can be designated as table row headers with the use of the <th> and </th> tags.
- **The basic Table Elements**

Attribute	Description
Align	How table aligns with other elements.
Bgcolor	Background color for table
Width	Width of table
Cols	Number of columns within table.
Border	Width in pixels of frame around table.
Frame	Which sides of the frame surrounding table are visible.
Rules	Which rules appear between table columns and rows
Cellspacing	The space between cell border and table frame.

Cellpadding	The space between cell border and cell contents.

- The frame attribute has several values.
    i. Void – no frame
    ii. Above – top side only
    iii. Below – bottom side only
    iv. Hsides – horizontal sides
    v. Vsides – vertical sides only
    vi. Lhs – left side only
    vii. Rhs – right side only
    viii. Box – all four sides
    ix. Border – all four sides
- The acceptable values for the rules attribute

    None – no rules

    Groups – rules appear only between groups

    Rows – rules appear between rows

    Cols – rules appear between columns

    All – rules appear between all elements.

- **TH and TD element attributes**

Attribute	**Description**
Nowrap	Disbale automatic text wrapping
Bgcolor	Background color of cell
Rowspan	Numbers of rows spanned by cell
Colspan	Number of columns spanned by cell.

Column Grouping with COLGROUP and COL

- The columns of the table can be grouped by using the colgroup element.
- Once grouped, you can apply a width to all of the columns included within the group.
- A second element col, can also supply specific width and alignment information for one or more columns within the group.
- Example

```
<table border="1">
  <colgroup span="3">
    <col width="50"></col>
    <col width="100"></col>
    <col width="20"></col>
  </colgroup>
  <tr>
```

<td>col 1</td>

<td>col 2</td>

<td>col 3</td>

</tr>

</table>

Row Grouping with thead, tfoot and tbody elements

- Each table has at least one row, and this becomes the default table body.
- However, the rows that make up the body can also be delimited with one or more tbody elements.
- The rows that make up the table head for a specific row grouping can be delimited with the thead element.
- The foot of the table row grouping can be delimited with the tfoot element.
- Example
  <table width=60% frame=border border=8 rules=groups cols=3 cellspacing=3 cellpadding=5 align=center>

  <caption> This is an example table </caption>

  <thead align=left>

  <tr>

  <th> </th>

  <th> second Value </th>

  <th> Third Value </th> </tr>

  <tfoot>

  <tr> <td> Month Two Subtotals </td>

  <td> 1446 </td>

  <td> 189889 </td>

  </tr>

  </tfoot>

  <tbody>

  <tr>

  <td rowspan=2> Month One Values: </td>

  <td> 0.5 </td>

  <td> .5 </td>

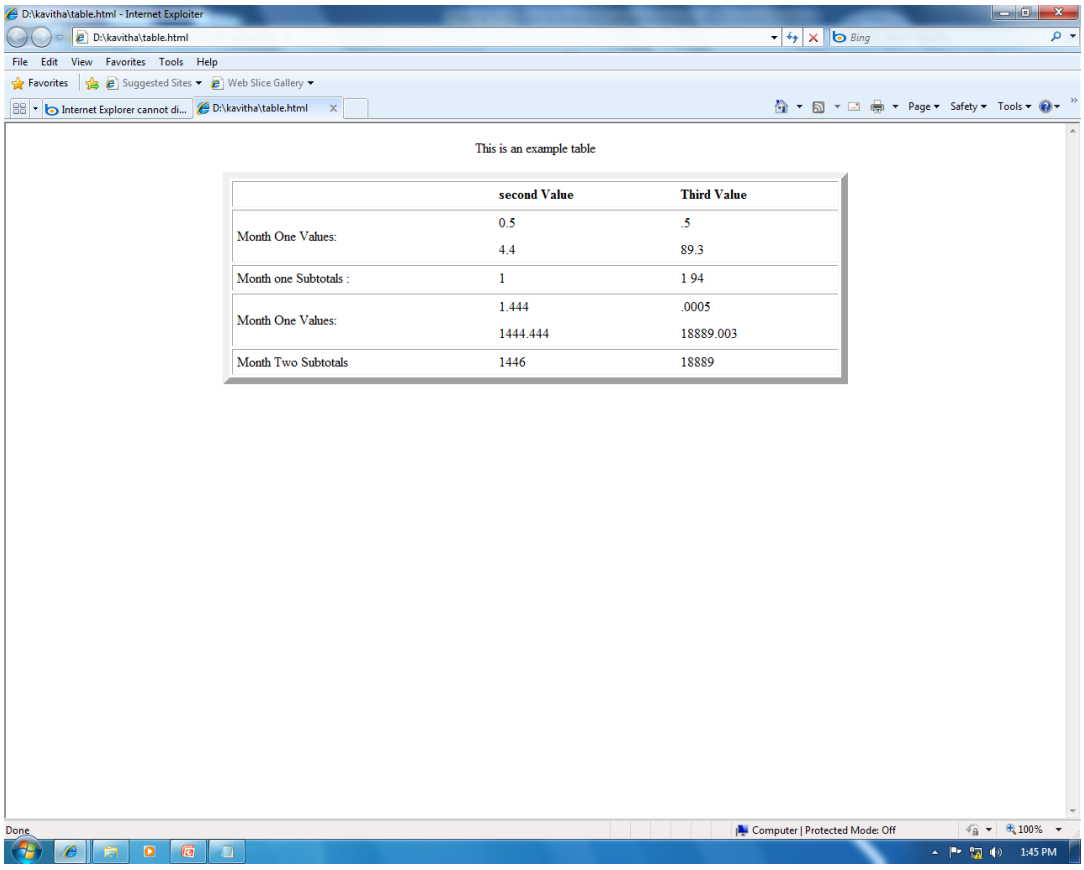
  </tr>

  <tr><td> 4.4 </td>

  <td> 89.3 </td>

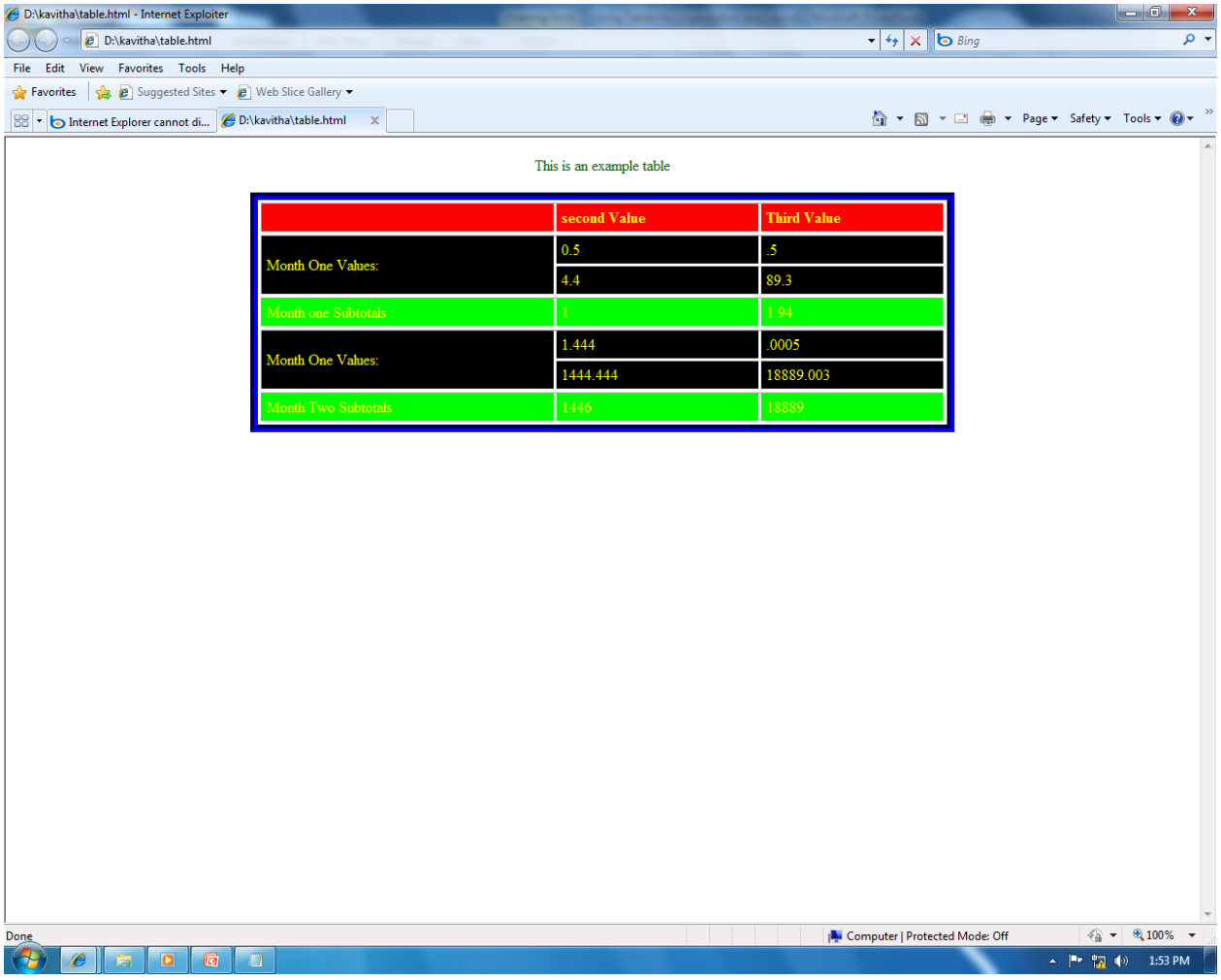
  </tr>

```
<tfoot>
<tr>
<td> Month one Subtotals : </td>
<td> 1 </td>
<td> 1  94 </td>
</tr>
<tbody>
<tr>
<td rowspan=2> Month One Values: </td>
<td> 1.444 </td>
<td> .0005 </td>
</tr>
<tr><td> 1444.444 </td>
<td> 18889.003 </td>
</tr>
</tbody>
</table>
```



Combining the Use of HTML Tables and CSS1 Style Sheets

```
<head>
<style type="text/css">
Thead { background-color: red; color: yellow}
Tbody  { background-color:black ; color: yellow}
Tfoot { background-color:lime; color: yellow}
Table { border-style: groove; border-color:blue;
        color: darkgreen;
Th { font-family : fantasy }
</style>
```



Q. 7. Create simple html table to create a layout for link.

Ans:

Using an html table to create a Layout for Links

- A popular use of html tables is to maintain the layout of a links page or a section of a page that contains resource links
- One column table used to control layout of a links list.
- Example

```
<html>

<body>

<table width=80% cellpadding=10 cellspacing=15 border=5 frame=border rules=none align=center>

<caption align=bottom> Internet Explorer Dynamic Html Links </caption>

<tr> <td> <h1> My IE Dynamic Html Resources </h1> </td> </tr>

<tr><td> <a href="http://www.w3.org/pub/www/tr/wd-positioning"> W3C Positioning Draft </a> </td></tr>

<tr><td> <a href="http://www.microsoft.com/ie/ie40"> Internet Explorer 4.0 Platform Preview </a> </td></tr>

</table>

</body>

</html>
```

Creating Page Columns with a Table

- Another popular use of html tables is to create columns within a page.

```
<table width=100% cols=3 cellspacing =10>

<colgroup span=3>

<col width="30%">

<col width="35%">

<col width="35%">
```

Controlling a Form Layout with a Table

- With a table, the form elements can be easily aligned.
- Example…

Q. 8. Write short note on :

a) Advanced Layout b) Positioning with Style Sheet

Ans:

Advanced Layout and Positioning with Style Sheets

- CSS positioning attributes

Attribute	Description
Position	Determines whether element is positioned explicitly or relative to the natural flow of web page document.
Left	Position of the left side of the rectangular area enclosing the element.

Top	Position of the left side of the rectangular area enclosing the element.
Width	Width of the rectangular area enclosing the element.
Height	Width of the rectangular area enclosing the element.
Clip	The clipping shape and dimensions used to control what portion of the element displays.
Overflow	The portion of the element contents that exceeds the bounds of the rectangular area enclosing the element.
Z-index	The stacking order of the element if two or more elements are stacked on top of each other.
Visibility	Whether element is visible.

Positioning images and other elements

- Images have some positioning capability, with the hspace and vspace IMG attributes, and can be aligned with the align attribute.
- One technique web developers did not have before IE 4.0 is the ability to layer text and other html elements on images, or to layer images themselves.
- Also, developers could not exactly position images or any other element.
- CSS positioning changes all of this.
- With CSS, the position attribute is set to a value of absolute, which means that the element is positioned exactly, regardless of how any other element is positioned.
- Using CSS positioning to position three images

```
<html><head><style type=text/css>

Img { position: absolute; width:90;height:90; top 100}

#one { left:100}

#two { left:200 }

#three {left:300}

</style>

</head>

<body>

<img src=red.jpg id=one>

 <img src=yellow.jpg id=two>

<img src=green.jpg id=three>

</body> </html>
```

- Using DIV blocks to position images

```
<html><head>

<style type=text/css>

DIV { position: absolute; top: 100}

#one { left:100}

#two { left:200 }

#three {left:300}

</style>

</head>

<body>

<div id=one> <img src=red.jpg>  </div>

<div id=two>  <img src=yellow.jpg > </div>

<div id=three> <img src=green.jpg>  </div>

</body> </html>
```

- You can layer html elements, including placing text above images.
- One key to for using layers is to set the z-index CSS positioning attribute to a higher integer for the element you want to display at the top of the stack.
- Layering text and images with z-index ordering

```
<html><head>

<style type="text/css">

    Body { font-family: arial; color:white; font-weight: bold}

    Div { position: absolute }

    #one { top:25; left:20; z-index:1 }

    #two { top:125; left:20; z-index:1 }

    #three { top:225; left:20; z-index:1 }

</style>

 </head>

<body>

    <div style="top:50; left:40; z-index:2">

    Product <br> One  </div>

    <div style="top:150; left:40; z-index:2">

    Product <br> two  </div>

    <div style="top:250; left:40; z-index:2">

    Product <br> Three  </div>

    <div id=one>   <img src=red.jpg width=90 height=90>   </div>
```

 <img src=yellow.jpg width=90 height=90>

 <img src=green.jpg width=90 height=90>

</body>

</html>

Creating page columns and using html Tables and CSS positioning together

- Web developers use html tables to create columnar contents.
- CSS positioning can be used to create multi column web page content.
- In addition html tables and CSS positioning can be used for one web page.

Converting an Existing Table – Based Web Page

- Using a table to control page layout isn't a bad approach, but there are limitations.
- First with the menu bar, you should layer the menu bar text on the image itself, rather than having to set each text block below the image.
- A second limitation is that because the text and images alternate, the images tend to have a large space surrounding them
- To convert the page using CSS positioning, the first step is to recreate the menu bar at the top of the page.
- A new document is started.
- Div blocks were used, which supports positioning directly with images.
- Menu bar section code:

<style type="text/css">

DIV { position: absolute; font-size: 10pt;font-family:arial;}

#logo (position:absolute; top: 50 px; left: 50px; z-index: 5; width:105}

#image1 { position:absolute; top:10px; left:185 }

#image2 { position:absolute; top:10px; left:295 }

#image3 { position:absolute; top:10px; left:395 }

#image4 { position:absolute; top:10px; left:500 }

#title1 {position:absolute; top:20px; left:200; z-index:5; height: 20px; width: 80px }

#title2 {position:absolute; top:20px; left:300; z-index:5; height: 20px; width: 80px }

#title3 {position:absolute; top:20px; left:410; z-index:5; height: 20px; width: 80px }

#title4 {position:absolute; top:20px; left:510; z-index:5; height: 20px; width: 80px }

</style> </head>

<body>

<!-- set menu images →

 <img src="logi.gif" width=104 height=153>

<img src="menu.jpg" border=0 width=101 height=153>

<img src="sample.jpg" border=0 width=101 height=153>

<img src="image.jpg" border=0 width=101 height=153>

<img src="photo.jpg" border=0 width=101 height=153>

<!-- set menu Titles -- >

  Main

.

Q.9. What do mean by HTML form. Give suitable example.

Ans:

.Creating Forms with HTML

What are HTML forms?

- An HTML form is not a visual element.
- It is a container and can contain one or more buttons, textboxes or other form elements.
- The form elements can be used to access information from the reader and then process that information within the webpage.
- The information can also be sent to a CGI or web server application for further processing.

The FORM Objects and its Attributes

- A form is created using the begin and end form tags <FORM> and </FORM>.
- Though not required , there are form attributes that can control what happens to the information, the method used to deliver this information and where feedback derived from the form contents should be sent.
- Syntax for Creating Form

<Form name="mailForm" action = "url" Method=post>

……

</Form>

- Form attributes are:
  i. name – Form name.

  ii. target – Location of window where from responses are sent.

  iii. action – URL of webserver application that process form information.

  iv. enctype – By default this attribute has a value of application x/www-form-urlencoded, but can be set to multipart/form-data if the file upload element is used.

  v. method – A value of get or post, which determines how form information is sent.

The forms array

- Each form has a separate entry in a built-in array called forms.
- This array can be accessed in script through the document object, which contains this array as a property.

Web page with 2 forms and 4 elements

```
<html>
<head>
<title>forms</title>
<script language="javascript">
<!--
function list_values()
 {
   var string="";
   for(i=0;i<document.forms.length;i++)
         {
               string+="form name: "+document.forms[i].name+"<br>";
               for(j=0;j<document.forms[i].elements.length;j++)
               string+=document.forms[i].elements[j].name+" ";
               document.forms[i].elements[j].value+ "<br>";
               string+="<p>";
         }
   document.writeln(string);
 }
-->
</script>
function
</head>
<body>
 <!--form 1 -->
<FORM name="form1">
<input type=text name="textname">
<input type=button name="button1" value="push me">
</FORM>
<!--form 2-->
<form name="form2">
<select name="randomvalues">
```

<option value="1">one

<option selected value="2">Two

</select>

<input type=button name="button2" value="no, push me" onclick="list_values()">

</form>

</body>

</htmL>

Q.10. What are the form elements also explain different form elements with suitable example.

Ans:

The FORM elements

- The Form elements are : button, check box, fileupload, hidden, password, radio, reset, select, submit, text and textarea.
- Each element has a different look and performs a different function.
- The INPUT tag creates most of these elements. As an example of creating an element, the following code creates a text field:
  <INPUT type="text" name=semefield>

The BUTTON Element

- Probably the most common of the form elements is the button element.
- You can create a button using the following code
  <input type="button" name="somebutton" value="PUSH ME">

A simple form , button with the words "push me"

<html>

<head>

<title>but</title>

</head>

<body>

<input type="button" name="somebutton" value="push me">

</body>

</html>

Applying CSS1 style sheets to several buttons

<html>

<head>

<title> buttons</title>

<style type="text/css">

```
 #one{color: red; font-weight: bold}

 #two{color: darkgreen; font-weight: bold; background-image: url(C:\Users\Public\Pictures\Sample Pictures\forest.jpeg); width:200; height:150}

 #three{color: firebrick; background-color: ivory; border-color: firebrick; font-family: chiller}

 #four{color: white; background-color: blue; border-color: yellow; border-style: groove; border-width:10; width:200}

 #five{text-decoration: underline; background-color: green; color: lime}

</style>

</head>

<body>

<!--form 1-->

<form name="form1">

 <!--button 1-->

 <input id="One" type=button name="button1" value="push me">

 <!--button 2-->

 <input id="Two" type=button name="button1" value="push me">

 <!--button 3-->

 <input id="Three" type=button name="button1" value="push me">

 <!--button 4-->

 <input id="Four" type=button name="button1" value="push me">

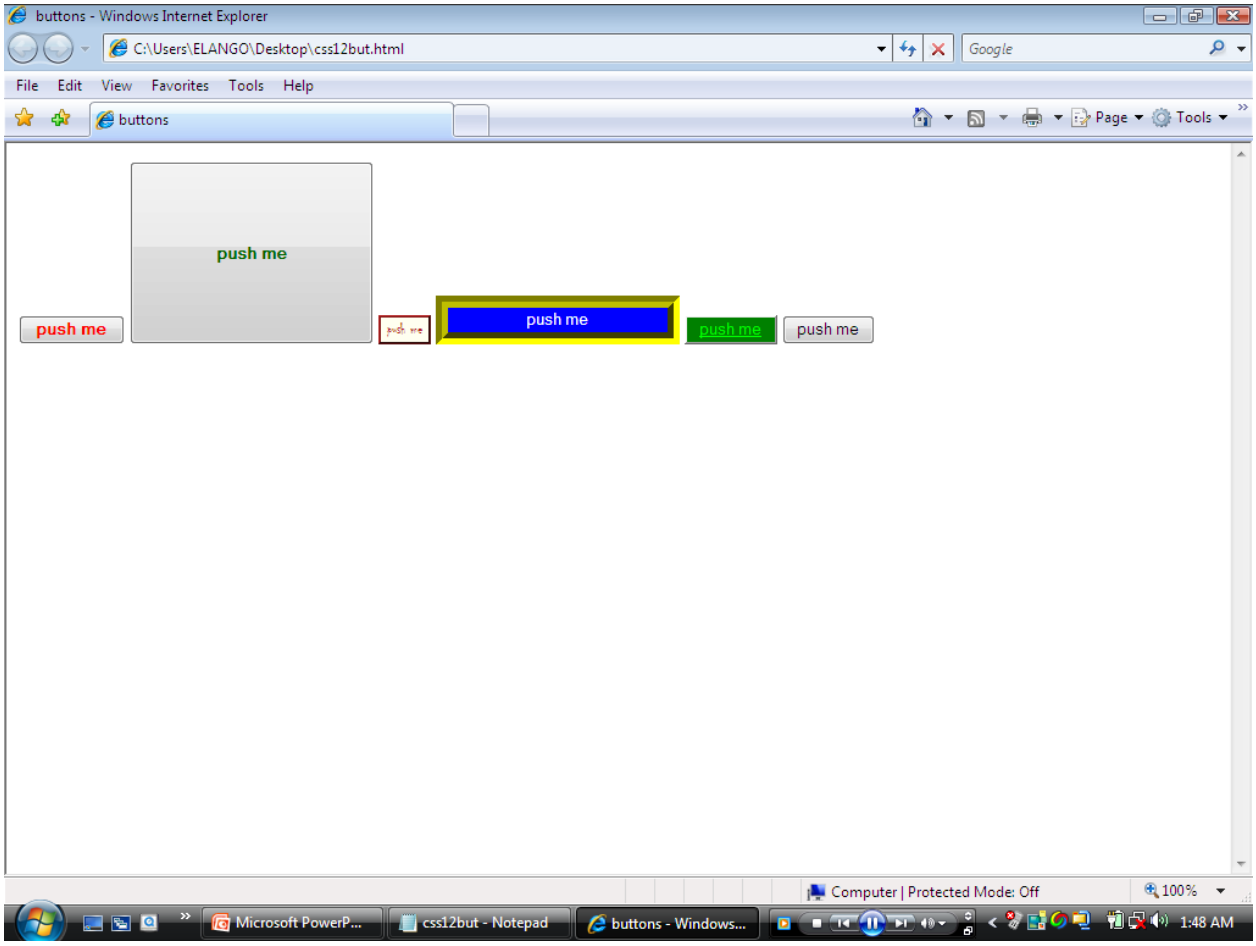
 <!--button 5-->

 <input id="Five" type=button name="button1" value="push me">

 <!--button 6-->

 <input type=button name="button" value="push me">

</form>  </body>   </html>
```



Creating a SELECTION list

- A selection list, or drop-down list box is really a couple of different element.
- The first is the select element, which is the box, and the second is one or more option elements, which contain the box entries.
- Creating a selection list generates a text-field-sized element with an arrow.
- Clicking the down arrow in the box next to the list exposes the list elements in a drop-down box big enough to hold all the elements.
  Example:

```
<html>

<head>

 <title>but</title>

</head>

<body>

 <select name="selection">

    <option> ONE </option>

    <option> TWO </option>

    <option selected> THREE </option>
```

```
    <option> FOUR </option>
</body>
</html>
```

- There are three attributes for the SELECT object:
  name – element name.

  size – number of options visible when page opens, set to one by default.

  multiple – specifies that more than one option can be selected.

Applying CSS1 attributes to a select and option elements

```
<html>
<head>
 <title>list</title>
<style type="text/css">
 option {background-color: lime; color: red}
 option.two{background-color: blue; color: yellow}
 select{background-color: red; margin: 1.0in; font-family: algerian; font-weight: bold;font-size: 18pt}
</style>
</head>
<body>

<!--form 1-->
<form name="form1">
 <select name="selection">
    <option value=1> First selection
    <option class=two value=2> Second selection
    <option value=3 selected> Third selection
    <option class=two value=4> Fourth selection
</select>
</form>
</body>
</html>
```

Adding Radio Buttons and Checkboxes to a webpage

- The radio button is a way to provide a set of mutually exclusive choices.

- Only one button can be checked with the radio button, and clicking one of the buttons deselects any previous selection.
- Checkboxes, on the other hand , provide a method of selecting several mutually inclusive choices.
- You can select one box or more of the options represented by the boxes.

```
<html>

<head>

 <title>but</title>

</head>

<body>

<!--radio buttons-->

 <input type="radio" name="thegroup" value="one" checked>one

  <input type="radio" name="thegroup" value="two" >two

  <input type="radio" name="thegroup" value="three">three

<p>

<!--checkboxes-->

 <input type="checkbox" name="ckhbox1" value="checkone" checked>check one

  <input type="checkbox" name="ckhbox2" value="checktwo">Two

  <input type="checkbox" name="ckhbox3" value="checkthree">three

</body>

</htmL>
```

Uploading files with fileupload

- The fileupload element provides a means for the web page reader to specify a file for loading to the web server.
- When you create one of these controls, a textbox for the filename and a button labeled browse… are created within the webpage.
- The web page reader can type a filename and path into the box or click the browse button to select a file.
- When the form is submitted, the file is also appended to the form data being sent to the server.

Accessing Text with the Text Controls: text, text area and password

- The text, text area and password input elements are all methods of accessing text from the web page reader.
- The text element provides for single-line text values such as a name, and text area provides a control that can accept a block of text several words wide and several lines long.
- The password element hides the values being entered with the usual display of asterisks.

Three HTML input elements , a text control,a textarea control and a password control

```
<html>

<head>

 <title>text</title>

</head>
```

```
<body>

 <input type="text" value="Enter information here" name="text1" size=80>

<p>

 <textarea rows=20 cols=50></textarea>

<p>

 <input type="password" size=20>

</body>

</html>
```

Creating Interpage Persistence with the hidden Element

- There is a great trick to use when maintaining information persistently between the webserver application and the web pages showing on the client.
- This technique is accomplished using the hidden form elements.
- The hidden form element is an element that contains information stored within the web page but not displayed to the web page reader.

Submitting and Resetting the form with submit and reset

- These two INPUT elements submit the form to the form processing application , or reset the form values, respectively.
- To create either of these elements, the following code is used,

```
<INPUT TYPE="submit" VALUE="Send Form">

<INPUT TYPE="reset" VALUE="Reset Form Value">
```

- Using the submit element submits the form.
- An alternative approach could be to create some other element , and based on trapping an element event, issue the form submit method, as shown here:

```
document.forms[0].submit();

document.forms[0].reset();
```

Working with the New HTML 4.0 form Elements and Extensions

- The HTML 4.0 has several new form elements and form element attributes.
- Label, image and fieldset are the three new HTML 4.0 form elements.
  >> The label element is used to provide a label for a control, such as the text or text area controls.

  >> The image control creates an image-based control that can be clicked in a manner similar to a button.

  >> The fieldset control is an element that provides a visual grouping of other form elements,such as radio buttons.

- Accesskey, tabindex, disabled and read only are the new HTML 4.0 element attributes.
- The accesskey attribute can be used to associate an accelerator key with a specific form element.
- The disabled attribute disables the focus from an element and prevents that same element's value from being submitted with the form.
- The tabindex attribute associates a specific tab order with an element.

Q.11. Define following term

a) Frames b) Framesets

Ans:

Frames and Framesets

- Html frames slip the web page window into separate window views, each capable of holding a different html document.

Creating and Working with Frames

- Frame windows are made from more than one html file.
- One file contains the Frameset definition, including which source files make up the frames and how much space each will occupy.

The Frameset Element

Main.html

```
<frameset rows="80,*">
    <frame src="top.html"
    <frame src="content.html">
</frameset>
```

- Instead of creating two rows, you can also create two columns and load the web page contecnts into each.

```
<frameset cols="80,*">
    <frame src="menu.html">
    <frame src="main.html">
</frameset>
```

Nested Frameset

- Framesets that contain other framesets.
- Example

```
<frameset rows="*,250">
    <frame src="main.html">
    <frameset cols="200,200,*">
        <frame src=rose.jpg>
        <frame src=lily.jpg>
        <frame src=tulip.jpg>
    </frameset>
</frameset>
```

Frame Element Attributes

Attribute	Description

Name	Frame name
Src	Frame source
Frameborder	Setting this value to 1, draws a border around the frame. 0 removes the border.
Noresize	Turns off frame resizing
Marginwidth	Frame horizontal margin
Marginheight	Frame vertical margin
Scrolling	Setting this value to auto provides scrolling only when frame content does not fit within the frame space. Setting this value to yes always provides a scroll bar. Setting this value to no always turns off the scroll bar.

Accessing External References from Frames

- One of the disadvantage to using frames is that including a hypertext link within a frame page to a web page at an external web site loads that page into the frame, rather than directly into the browser window.
- This problem can be resolved by the target attribute which can be used with link elements.
- There are several different reserved keywords that can serve as the target attribute value:
    - Blank - loads page to new unnamed window
    - self - loads page to current frame or window
    - Parent - loads page to parent window
    - Top - loads page to original window

Inline Frames with IFrame

- Html 4.0 created a new frame element called the inline frame, which uses the tags <iframe> and </iframe>.
- Inline frames have the same attributes regular frames have, except that each inline frame window is embedded within a web page and attributes are specified directly for the frame window.
- Example:

```
<html>

<body>

<h1> This demonstrate inline frames  </h2>

<iframe src="main.html" height=120 width=95%>  </iframe>

<iframe src="content.html" height=300 width=95%>  </iframe>

</body>

</html>
```

Q.12. what do mean by embedding image .Explain with suitable example.
Ans:

Using Images with HTML

Embedding images within an Html Document

- Images are embedded within a web page with the use of IMG tag.
- This tag contains the source of the image file and other information, and does have an end tag.

The image formats

- The Graphics Interface Format (GIF) is the most popular image format in use within html files.
- The GIF89a version allows for the specification of the number of colors to include within the image file.
- The Joint Photographic Experts Group (JPEG) format retains all the image's colors – but also supports a compression technique that discards data from the image nonessential to the display.
- Higher levels of compression lead to smaller file sizes, but also decrease the quality of the image.
- The Portable Network Graphics (PNG) format is considered a replacement for the GIF format.
- PNG supports a more efficient compression routine and two-dimensional interlacing, which controls how an image is displayed while it downloads.

The IMG Attributes

- Images are embedded within a web page using the IMG tag.
  <img src=flowes.gif width=100 height=100 alt="Flowers are very Beautiful" hspace=20>

- Attributes supported for IMG tag are:
  - src – URL of the image source file
  - alt - alternative text
  - Align – how image aligns, deprecated
  - Height – height to reserve for image, deprecated
  - Width - width to reserve for image, deprecated
  - Border - size of border surrounding image, deprecated
  - Hspace – horizontal white space on either side of image, deprecated
  - Vspace - vertical white space on either side of image, deprecated
  - Id - image name
  - Class - style sheet class
  - Style - style sheet information
  - Title - element title

The IMG Width and Height Attributes

- The width and height of the image define the area of the window the image occupies.
- The same image object with different widths and heights

<img src=logo.jpg width=100 height=100>

<img src=logo.jpg width=50 height=50>

<p>

<img src=logo.jpg width=300 height=300>

<img src=logo.jpg width=200 height=150>

The alt Attribute

- Alt attribute provides alternative text for the browsers that do not pick up images.
- <img src=flower.jpg alt=" Flower – Rose">

The image object and accessing images within script

- The image object is accessed by creating a new image object or by accessing the images embedded into the web page via the image array.
- Each img tag within the web page is associated with one entry in the images array.
- Example

```
<html>
<head>
<title> Images </title>
<script language="javascript">
Function change_image(num)
{
Var img=" ";
if(num==1)
    img = "photo7.jpg";
Else if(num==2)
    img = "photo8.jpg";
Else if(num==3)
    img = "photo9.jpg";
Else
    img = "photo10.jpg";
Document.images[0].src=img;
}
</script>
</head>
<body>
<form name=f1>
<img src="photo7.jpg">
<input type=radio name=r1 value=one onclick="change_image(1)"> one
<input type=radio name=r1 value=one onclick="change_image(2)"> Two
<input type=radio name=r1 value=one onclick="change_image(3)"> Three
<input type=radio name=r1 value=one onclick="change_image(4)"> Four
</form>
</body> </html>
```

Q.13. What are the image object properties.

Ans:

The image object properties, accessed via image array

- Src - image URL

- Width - image width
- Height - image height
- Lowsrc - lowsrc image's url, first displayed when page is opened.
- Hspace - horizontal space
- Vspace - vertical space
- Border - border width
- Name - image name
- Complete - whether image has completed loading.

Images and Caching

- When you access an image for the first time, the image must be downloaded from the server.
- After the image is downloaded, though, it is cached on the client machine and subsequent accesses to the image pull it from the cache rather than the server.
- Example

```
<html> <head> <title> images </title>

<script language=javascript>

image_array = new array(4);

For(i=0; i<image_array.length; i++)

  image_array[i] = new image(100,150);

image_array[0].src = "photo7.jpg";

image_array[1].src = "photo8.jpg";

image_array[2].src = "photo9.jpg";

image_array[4].src = "photo10.jpg";

Function change_image(num)

{     document.images[0].src = image_array[num].src;    }

</script>

</head>

<body>

<form name=f1>

<img src="photo7.jpg">

<input type=radio name=r1 value=one onclick="change_image(1)"> one

<input type=radio name=r1 value=one onclick="change_image(2)"> Two

<input type=radio name=r1 value=one onclick="change_image(3)"> Three

<input type=radio name=r1 value=one onclick="change_image(4)"> Four

</form>

</body>

</html>
```

Creating Image Rollover Effects

- The most popular use of changing images is to create a rollover effect for images that represent active links.
- When the reader moves the mouse over the image, the image takes on a different appearance, adding a highlight that provides feedback to the reader.
- Roll over with mouse down and mouse up events

```
<html>

<head> <title> images </title>

<script language="javascript">

Highimage = new image(106,157);

Lowimage = new image(106,157);

Lowimage.src = "optnrm.jpg";

Highimage.src = "pothigh.jpg";

Function change_high(num)

{ document.images[num].src = highimage.src. }

Function change_low(num)

{ document.images[num].src = lowimage.src. }

</script> </head>

<body>

<a href="" onmousedown="change_high(0)" onmouseup="change_low(0)"> <img src="optnrm.jpg"width=106 height=157 hspace=10> </a>

<a href="" onmousedown="change_high(1)" onmouseup="change_low(1)"> <img src="optnrm.jpg"width=106 height=157 hspace=10> </a>

<a href="" onmousedown="change_high(2)" onmouseup="change_low(2)"> <img src="optnrm.jpg"width=106 height=157 hspace=10> </a>

</body.

</html>
```

Q.14.Explain style sheet. What are the formatting future of it?

Ans:

Style Sheets : Formatting for the future

CSS1 standard

- Style sheets are embedded directly into a page, or linked in from an external file, and provide web page developers the ability to redefine the appearance of all elements of a certain type, or one specific element.
- The following code is a simple style sheet, embedded into the head section of the web page.

```
<STYLE type="text/css">

        H1 { color: red;font-family: Arial; margin: 1.0in }

</STYLE>
```

- With this style sheet setting, all H1 elements within the document are set to use the new style.

Including Style Sheets

- There are 4 different techniques to Include style sheet definitions
  1. Including a style sheet in the document's head section.
  2. Linking in a style sheet stored externally.
  3. Importing in a style sheet stored externally.
  4. Including an inline style sheet definition directly in an html element.
- The most common approach is to embed style sheets into the head of the web page and provide settings for all of the elements within the web page.
- Example
  <STYLE type="text/css">

  BODY { background-color: aqua; color: firebrick;

  margin: 0.5 in}

  </STYLE>
- A second technique is to link the style sheet into the web page using the link syntax:
  <HEAD> <TITLE> CSS Test Content </TITLE>

  <LINK rel=stylesheet type="text/css" href=style.css>

  </HEAD>
- Another approach to incorporate style sheets into a page is to import the style sheet into the file.
- The code to import style sheet:
  <STYLE type="text/css">

  @import url(style.css);

  </STYLE>
- A last technique to include style sheet settings is to embed them directly into an element.
- The syntax for this is:
  <P style="color: yellow; font-style: italic">

Applying styles to Specific Groups of Elements

Using the class name style sheet selector

- A class name is a way to apply style sheet settings to a group of named elements, using the following syntax:
  <style type="text/css">

  P.someclass {color: red; margin-left: 1.5 in }

  .otherclass {color: green; font-size: 18 pt }

  </style>

Example:

<html>

<head> <title> css </title>

```
<style type="text/css">
        P.someclass {color: red; margin-left: 1.5 in }
        .otherclass {color: green; background-color: yellow }
</style> </head>
<body>
<p class=someclass> text1.
<p class=otherclass> text2
<h1 class = otherclass> This is heading1.
</body>
</html>
```

Creating an overall look for the web page

- The body tag is the tag specifier to use when applying style sheets to an entire document page.
- Background-color and image and setting the page margins are the common attributes with the body tag.
- Example

```
<style type="text/css">
body{ margin: 0.3 in; color: white; background-color: black;
        background-image: url(back1.jpg)
        background-repeat: repeat-x; background-attachment: fixed}
```

The background, margin and color css1 attributes

1. Background
2. Background-color
3. Background-image
4. Background-repeat - repeat-x // repeat horizontally
5. Background-attachment - scroll // scroll with page
6. Background-position - top center
7. Color - white
8. Margin - 20 px 10 px // top/bottom set to 20 pixels, left/right margins set to 10 pixels.
9. Margin-left
10. Margin-right
11. Margin-top
12. Margin-bottom

Modifying Font and Text Appearance

- Font and text css1 properties

CSS1 attribute	Sample Value
Font	Italic bold 18pt arial
Font-family	"times new roman" Arial

Font-size	Larger
Font-weight	800
Letter-spacing	0.1 em
Word-spacing	1.5em
Text-decoration	Underline
Text-transform	Capitalize
Text-align	Center
Text-indent	10%
Font-style	normal | italic | oblique
Font-variant	normal | small-caps

Creating Borders Around Elements

- There are certain CSS1 attributes that impact the box that surrounds a block level Html element.
- Padding and border CSS1 attributes

CSS1 attribute	Value
Border	Thick groove yellow
Border-color	Yellow red blue
Border-width	Thin thick
Border-style	Inset
Border-top	3px solid red (width,style,color)
Border-right	Yellow
Border-bottom	5px solid
Border-left	Solid
Border-top-style	Ridge

Border-bottom-style	Double
Border-left-style	None
Border-right-style	groove
Border-top-color	#FFFF00

CSS1 attribute	Value
Border-bottom-color	Black
Border-right-color	#0000CC
Border-left-color	Blue
Border-top-width	Thin
Border-left-width	Thick
Padding	12% 18px
Padding-left	18 px
Padding-right	0.25 in
Padding-top	4%
Padding-bottom	5px

Controlling the Appearance of Lists and other HTML elements

- The classifying and display CSS1 attributes

CSS1 Attribute	Value
Display	None
White-space	Pre
List-style	Square outside
List-style-type	Disc

List-style-image	url(someimage.jpg)
List-style-position	Inside
Width	150 px
Height	25%

- The display attribute can define that an element display as a list item or not display at all.
- The following example turns off the display of any element using the nodisplay class:

```
<style type="text/css">

    .nodisplay { display: none }

</style>
```

The Pseudo – Elements and classes

- A pseudo element is an html elelment in which some external factor influences the presentation of the element.
- Style settings can be applied based on this external factor.
- The following code demonstrates the use of this pseudo-class:

```
A:visited { color:red }

A:unvisited { color: yellow}

A:active { color: lime }
```

UNIT II

Q. 1) What is java scripts? Also explain the use of java scripts.

6m

What is javascript?

- JavaScript is a client – side scripting language for the world wide web, that is similar to the syntax of the Java programming language.
- JavaScript is designed to provide limited programming functionality.

Why JavaScript?

- By executing more web functionality on the user's machine, webmasters can optimize their servers to serve more pages.
- The decrease in traffic from constant interaction with the server can also improve a server's performance.
- Because the local machine is doing the script processing, the user can view web pages much faster

Introducing JavaScript Syntax

- A simple JavaScript program:

```
<html>

<head>

<Title> Hello World  </Title>

</head>

<body>

<script language="JavaScript">

        document.write("Hello,World wide web");
```

```
</script>

</body>  </html>
```

Statements

- It is simply a line of code that contains some kind of instructions.
- Example

```
Document.write("<h2> Hello, WWW </h2>");
```

Blocks

- The grouping of statements is a block:

```
{

document.write("<h2> Each line is a statement </h2>");

document.write("<P> These statements, <BR>");

document.write("are part of a block");

}
```

Q.2) What are the different type of data types available in java scripts also give rules for variable names. 6

Data Types

- There are 5 basic data types in JavaScript: string, number, Boolean, object and function.

Variables

- Variables are "containers" for storing information.

Rules for JavaScript variable names:

- Variable names are case sensitive (y and Y are two different variables)
- Variable names must begin with a letter or the underscore character

Declaring (Creating) JavaScript Variables

- Creating variables in JavaScript is most often referred to as "declaring" variables.
- You can declare JavaScript variables with the **var statement**:

```
var x;
var carname;
```

- After the declaration shown above, the variables are empty (they have no values yet).
- However, you can also assign values to the variables when you declare them:

  Varx=5;

  var carname="Volvo";

Expressions

- The methods that can be employed to manipulate the data are called expressions.
- There are 2 types of expressions: numerical and logical
- Numerical expressions deal with the number data type.
- Logical expression might compare two data values, including strings, to see if they match.

Numerical expressions

- Addition, subtraction, multiplication and division are all types of numeric expressions.
- Numeric operators are: +, -, *, /, %

Logical Expressions

- These are expressions that, when evaluated, can return either a true or a false.
- Logical Operators

  && - And

  || - Or

  ! - Not

  == - Equal

  != - Not Equal

  > - Greater than

  >=

  <

  <=

Flow Control

- Conditional statements are used to perform different actions based on different conditions.

- In JavaScript we have the following conditional statements:
- **if statement** - use this statement to execute some code only if a specified condition is true
- **if...else statement** - use this statement to execute some code if the condition is true and another code if the condition is false
- **if...else if....else statement** - use this statement to select one of many blocks of code to be executed
- **switch statement** - use this statement to select one of many blocks of code to be executed

If Statement

- Use the if statement to execute some code only if a specified condition is true.

Syntax

```
if (condition)
{
code to be executed if condition is true
}
```

Example

```
<script  type="text/javascript">
//Write a "Good morning" greeting if
//the time is less than 10
var d=new Date();
var time=d.getHours();
if (time<10)
  {
  document.write("<b>Good morning</b>");
  }
</script>
```

If … Else Statement

- Use the if....else statement to execute some code if a condition is true and another code if the condition is not true.

  Syntax

```
if (condition)
  {
```

code to be executed if condition is true
}
else
{
code to be executed if condition is not true
}

Example

- <script type="text/javascript">
  //If the time is less than 10, you will get a "Good morning" greeting.
  //Otherwise you will get a "Good day" greeting.
  var d = new Date();
  var time = d.getHours();
  if (time < 10)
  {
  document.write("Good morning!");
  }
  else
  {
  document.write("Good day!");
  }
  </script>

If...else if...else Statement

- Use the if....else if...else statement to select one of several blocks of code to be executed.
- **Syntax**
- if (*condition1*)
  {
  code to be executed if condition1 is true
  }
  else if (*condition2*)
  {
  code to be executed if condition2 is true
  }
  else

{

code to be executed if condition1 and condition2 are not true

}

JavaScript Switch Statement

- Conditional statements are used to perform different actions based on different conditions.
- Use the switch statement to select one of many blocks of code to be executed.
- **Syntax**

```
switch(n)
{
case 1:
  execute code block 1
  break;
case 2:
  execute code block 2
  break;
default:
  code to be executed if n is different from case 1 and 2
}
```

Example:

```
<script type="text/javascript">
//You will receive a different greeting based
//on what day it is. Note that Sunday=0,
//Monday=1, Tuesday=2, etc.
var d=new Date();
theDay=d.getDay();
switch (theDay)
{
case 5:
  document.write("Finally Friday");   break;
case 6:
  document.write("Super Saturday");    break;
case 0:
  document.write("Sleepy Sunday");    break;
```

```
default:
  document.write("I'm looking forward to this weekend!");
}
</script>
```

JavaScript For Loop

- Loops execute a block of code a specified number of times, or while a specified condition is true.
- **JavaScript Loops**
- Often when you write code, you want the same block of code to run over and over again in a row. Instead of adding several almost equal lines in a script we can use loops to perform a task like this.
- In JavaScript, there are two different kind of loops:
- **for** - loops through a block of code a specified number of times
- **while** - loops through a block of code while a specified condition is true

The for Loop

- The for loop is used when you know in advance how many times the script should run.

Syntax

```
for (var=startvalue;var<=endvalue;var=var+increment)
{
code to be executed
}
```

Example

```
<html>
<body>
<script type="text/javascript">
var i=0;
for (i=0;i<=5;i++)
{
document.write("The number is " + i);
document.write("<br />");
```

```
}
</script>
</body>
</html>
```

JavaScript While Loop

- The while loop loops through a block of code while a specified condition is true.

Syntax

- while (var<=endvalue)
  {
  code to be executed
  }

Example

```
<html>
<body>
<script type="text/javascript">
var i=0;
while (i<=5)
 {
 document.write("The number is " + i);
 document.write("<br />");
 i++;
 }
</script>
</body>
</html>
```

Q. 3) Define array. How array use in java scripts with suitable example.

Arrays

- The array concept is used to store a set of values in a single variable name. This is a very important concept in any programming language

Array Definition:

- The array must first be defined before it is accessed or used. There are a variety of ways this can be accomplished in JavaScript. Below are some of the ways of defining arrays in JavaScript.

Defining an Array in JavaScript:

- Array is defined in JavaScript by making use of the keyword new.
- General format of defining array in JavaScript is as follows:

  var varaiblename = new **Array**( )

- For example, if a programmer wants to define an array exforsys, it is written as follows:

  var exforsys = new **Array**( )

- The format for adding elements in this structure is as follows:

  var varaiblename = **new Array**( )
  variablename[0]=”element1”
  variablename[1]=”element2”
  variablename[2]=”element3”
  variablename[3]=”element4”
  ……

- **var** Exforsys = **new Array**( )
  Exforsys[0]=”Training”
  Exforsys[1]=”Division”
  Exforsys[2]=”Institute”
  Exforsys[3]=”Company”
- It is also possible that if the programmer is certain of the array length, it can be defined while defining the array itself as:

  var Exforsys = **new Array**(4)

Shorter form:

- The elements can also be defined in a shorter form as:
  var variablename=**new Array**(“element1”,”element2”,”elements3”,….)

Accessing Arrays in JavaScript

- You can access an array element by referring to the name of the array and the element's index number.

Displaying Array Elements

document.write(Exforsys[1])

Functions

- A function is simply a block of code with a name, which allows the block of code to be called by other components in the scripts to perform certain tasks.
- Functions can also accept parameters that they use complete their task.
- JavaScript actually comes with a number of built-in functions to accomplish a variety of tasks.

Creating Custom Functions

- In addition to using the functions provided by javaScript, you can also create and use your own functions.
- General syntax for creating a function in JavaScript is as follows:

```
function name_of_function(argument1,argument2,…arguments)
{

……
//Block of Code
……
}
```

Calling functions

- There are two common ways to call a function: From an *event handler* and from another function.
- Calling a function is simple. You have to specify its name followed by the pair of parenthesis.

```
<SCRIPT TYPE="TEXT/JAVASCRIPT">
    name_of_function(argument1,argument2,…arguments)
</SCRIPT>
<html> <head> <title>Henley's Department Store</title>
```

```
<Script Language="JavaScript">
function welcomeMessage()
{ document.write("Welcome to Henley's Department Store!"); }
 </Script>
</head> <body>
<h1>Henley's Department Store</h1>
 <h3>Customers Order Processing</h3>
<Script Language="JavaScript">
welcomeMessage();
</Script>
 </body> </html>
```

Q.4) Create a simple java scripts which show the use of date function

Creating Simple JavaScripts

Formatting Scripts

- JavaScript scripts are set apart from the rest of the html in a web page by using the <script> tag.

```
<script>
    Here is some JavaScript
</script>
```

- The script accepts a parameter called Language, which is used to specify the type of scripting language that is being used.

```
<script Language="JavaScript"> …  </script>
```

- The html comment takes the form of <!-- To mark the beginning of a comment and -- > to mark the end of a comment.

```
<!-- This an Html Comment.
```

It will be ignored by the browser -- >

- Browsers that understand the script tag ignore the Html comment and execute the script.
- If you need to make comments inside the script tag, you can do so using JavaScript comment.

Date and Time Entry

- The Date object is used to work with dates and times.
- Date objects are created with new Date().

<script Language="JavaScript">

rightNow = new Date()

</script>

Methods of Date() object

- getDate() - Returns the day of the month (from 1-31)
- getDay() Returns the day of the week (from 0-6)
- getFullYear() Returns the year (four digits)
- getHours() Returns the hour (from 0-23)
- getMilliseconds() Returns the milliseconds (from 0-999)
- getMinutes() Returns the minutes (from 0-59)
- getMonth() Returns the month (from 0-11)
- getSeconds() Returns the seconds (from 0-59)
- setDate() Sets the day of the month (from 1-31)
- setFullYear() Sets the year (four digits)
- setHours() Sets the hour (from 0-23)
- setMilliseconds() Sets the milliseconds (from 0-999)
- setMinutes() Set the minutes (from 0-59)
- setMonth() Sets the month (from 0-11)
- setSeconds() Sets the seconds (from 0-59)

Example

<Html>

<head> <Title> Date and Time Example </Title> </head>

```
<body>
<script language="JavaScript">
<!--
        rightNow = new Date();
        var status;
        hour = rightNow.getHours()
        minute = rightNow.gteMinutes()
        if (hour > = 13 )
                status = "PM";
        else
                status = "AM";
        if (hour>12)   hour = hour – 12;
Document.write (hour, ":", minute,status);
Month = rightNow.getMonth();
Month = month + 1;
Day = rightNow.getDate();
Year = rightNow.getYear();
Document.write(" ", month, "/", day, "/", year, " ");
-- >
</script>
</body>
</html>
```

Q.5) How determine browser information using navigator object

5m

Determining Browser Information

- The navigator object contains functions that are designed to return information about the browser, including the name and version of the browser and even the installed plug-ins.

Objects

- JavaScript is an object oriented programming language
- That means that elements within the language are treated as objects that can be used in different scripts.
- Another advantage of objects is that they have methods and properties associated with them.
- In javascript, the syntax for using objects is:
  Object.Method.Property

Using the Navigator Object

- JavaScript has an object called navigator, which contains properties and methods that can be used to find information about the version, configuration, and features of the current browser.
- Using javascript to determine information about the browser

```
<html>

<head> <title> Navigator installed plug-ins  </title>

<h2> Navigator </h2>

<script Language="JavaScript">

        var plug_count = navigator.plugins.length;

        for(var counter=0; counter < plug_count; counter++)

        {

                var plugin_num = counter + 1;

                document.write(" Plug In Number : " + plugin_num);

                document.write(navigator.plugins[counter].name);

                document.write(navigator.plugins[counter].filename);

        }
```

```
</script>

</head>

<body>  …  </body>

</html>
```

Linking Scripts to Windows Events

- In addition to Javascripts that are executed immediately when a page loads, it might also be useful to have a scripts that executes when a specific task occurs.

Example

```
<html>

<head> <Title> Alert on Unleaving  </title>

<body onUnload = “alert(‘Leave this page at your own peril!’);”>

…….  </body>  </html>
```

Alert Boxes and Confirmations

Alert Box

- An alert box is often used if you want to make sure information comes through to the user.

Example

- ```
  <html>
  <head>
  <script type="text/javascript">
  function show_alert()
  {
  alert("I am an alert box!");
  }
  </script>
  </head>
  <body>
  <input type="button" onclick="show_alert()" value="Show alert box" />
  ```
  ```

```
</body>
</html>
```

- A confirm box is often used if you want the user to verify or accept something.

Example

```
<html>
<head>
<script type="text/javascript">
function show_confirm()
{
var r=confirm("Press a button");
if (r==true)
  {
  document.write("You pressed OK!");
  }
else
  {
  document.write("You pressed Cancel!");
  }
}
</script>
</head>

<body>

<input type="button" onclick="show_confirm()" value="Show confirm box" />

</body>
</html>
```

Altering the Status Bar

- JavaScript allows to manipulate the text that appears in the status bar.
- The JavaScript window object contains properties and methods for manipulating the text in the staus bar.
- Example

```
<html>
```

```
<head> <title>  Changing the Status Bar  </title>

<script Language = "JavaScript">

 function msg(text)

  {   window.status = text;   }

</script>

</head>

<body>

<h2> Manipulating Text in the Status Bar.  </h2>

<a href=http://www.yahoo.com

onMouseOver="msg('Click here for Yahoo!'); return true;"

onMouseOut = "msg('    '); return true;"

</a>

</body>  </html>
```

Q.6) Explain java scripts form with suitable example.

7m

Using JavaScript for Forms

CGI versus JavaScript Forms

- Creating forms with JavaScript doesn't vary that much from creating forms with CGI.
- The difference is the way in which data is entered and processed.
- JavaScript performs some preprocessing before the form is submitted.
- JavaScript can be used to partially check integrity of the data entered into forms.

The Form Object

- Form object is used to access html form tags and properties through Javascript.
- The elements of a form are stored in the Forms[] array, which is property of the Document object.

- All the form elements are stored sequentially in the Forms array and can be accessed by their index number:

  Document.Forms[0]

- Consider a simple page:

```
<html>

<body>

<form>

    <input type="checkbox" Name="ElementOne">

</form>

<form>

    <input type="radio" Name="ElementOne">

    <input type="text"  Name = "ElementTwo">

</form>

</body>

</html>
```

- In the above example Document.Forms[0] refers to the first form and Document.Forms[1] refers to the second form.
- Document.Forms[1].Elements[0] is used to access the first element in the second form.

Q.7) What are the properties of object explain four properties of object.

6m

The properties of Form object are:

- ACTION - Action is the name of the CGI script or application on the server that handles the form input.
- ENCODING - refers to any special data encoding that might be passedto the server from script.
- METHOD - refers to method used to communicate form data to the server, it can be either get or post.
- TARGET - refers to the location where the form data is submitted.

Form Elements

- Form elements have a number of associated properties, methods, and event handlers that can be used to customize the forms or to manipulate the data that is contained on the form.

Button

- The button element represents a button on the current form. The button is created using <Input type="button"> tag, and can be used to represent any action the user can execute on a page.
- The onClick() event handler can be used to execute other functions or scripts when the button is pressed.

JavaScript Properties, methods, and events associated with the button element:

- Properties : form, name, type, value
- Methods : blur(), click(), focus()
- Event Handlerrs : onblur(), onclick(), onfocus()
- Html:

  <form>

  <input type="button" value="label" name="name" onclick="handler">

  </form>

Checkbox Element

- Checkbox can be used to select a single value, and is created using <Input type="checkbox"> tag.
- The onclick() event handler provides a mechanism for linking functions to the selection of a checkbox.
- Properties : checked, defaultchecked, form, name, type, value
- Methods : blur(), click(), focus()
- Event Handlerrs : onblur(), onclick(), onfocus()
- Html:

  <form>

  <input type="checkbox" value="label" Name="name" Checked onclick="handler"> </form>

Radio

- Properties : checked, defaultchecked, form, name, type, value
- Methods : blur(), click(), focus()
- Event Handlerrs : onblur(), onclick(), onfocus()
- Html:

  <form>

  <input type="radio" value="label" Name="name" Checked onclick="handler"> Label

  </form>

Select Element

- The select element can take 2 forms: a single selection box, or, by using Multiple keyword, a multiple selection box.
- Properties : form, length, name, options, selectedindex, type
- Methods : blur(), click(), focus()
- Event Handlerrs : onblur(), onclick(), onfocus()
- Html:

  <form>

  <select name="name" size=integer Multiple onchange="handler" onblur="handler" onfocus="handlerr">

  <option value="value" Selected>option label

  <option value="value"> option label

  </select>

Text Element

- The text element is used to create a one-line text input field on the form.
- The onchange() event handler can be used to invoke methods when text is entered into the field.
- Properties : defaultValue, form, name, type, value
- Methods : blur(), focus(), select()
- Event Handlers : onblur(), onchange(), onfocus()
- Html:

  <form>

<input type="text" name="name" value="default" size=integer>

</form>

Submit Element

- This button is used to submit the form data to a server application or cgi script for processing.
- Properties : form, name, type, value
- Methods : blur(), focus(), click()
- Event Handlers : onblur(), onclick(), onfocus()
- Html:

  <form>

  <input type="submit" name="name" value="default" onclick="handler">

  </form>

Reset Element

- This element provides users with a means of clearing any data entered into a form.
- Properties : form, name, type, value
- Methods : blur(), focus(), click()
- Event Handlers : onblur(), onclick(), onfocus()
- Html:

  <form>

  <input type="reset" name="name" value="default" onclick="handler">

  </form>

Form Element Properties

- Form - The form property represents the name of the current form.
- Name - The name property represents the value of the name attribute specified in the html definition of the current form element.

  <input type=text name="address">

- Type - The type property represents the type of input element that has been defined in the current form.

- Value - for form elements that have a data value that is going to be submitted, the value property represents that data.
- Checked - the checked property is a Boolean that indicates the current status of a checkbox element.
- Defaultchecked - the defaultchecked will return a true if the checkbox has been set to automatically be checkedd by using the checked keyword.
- Options - The options property is an array that contains the values for all of the selection options that have been defined in the <select> tag.
- Length - The length property represents the number of elements that are contained in the options array.
- SelectedIndex - This property represents the array index number of the selected <option> element.
- DefaultValue - The DefaultValue can be used to access the default text in elements.

Form Element Methods

- There are 4 form element methods that can be invoked to change the status of form elements.
- Blur() - The blur() method can be used to remove focus from a current element.
- Click() - The click() method simulate a mouse click on a button or another element that generates an onclick event.
- Focus() - When called it passes the user interface focus to that element, allowing the element to accept user input.
- Select() - The select() method is used to select input elements that can be selected, such as text input fields, text areas, and so on.

Form Element Event Handlers

- The event handlers are the methods that get called when a user interface event occurs.
- For example, clicking a button generates an onclick event for that button.
- Onblur() - onblur is the event handler calledd when the focus on a particular element is lost. It could be used to validate a field before progressing to the next.
- Onclick() - The onclick event handler defines actions that should be performed when an element, such as a button, is clicked.
- Onfocus() - The onfocus event handler is called when a form element receives user interface focus, for example, when a user clicks inside a textarea.
- Onchange - The onchange event handler is used when the user enters data into a textfield or other element that contains data that can be changed.

Validating Form Fields Using JavaScript

```
<html>  <head>  <title>Form Validation Example</title>
 <script>
function ValidateContactForm()
{
   var name = document.ContactForm.Name;
   var email = document.ContactForm.Email;
   var phone = document.ContactForm.Telephone;
   var nocall = document.ContactForm.DoNotCall;
   var what = document.ContactForm.Subject;
   var comment = document.ContactForm.Comment;
    if (name.value == "")
   {
      window.alert("Please enter your name.");
      name.focus();
}
if (email.value == "")
   {
      window.alert("Please enter a valid e-mail address.");
      email.focus();
     }
 if (email.value.indexOf("@", 0) < 0)
   {
      window.alert("Please enter a valid e-mail address.");
```

```
        email.focus();


    }
    if (email.value.indexOf(".", 0) < 0)
    {
        window.alert("Please enter a valid e-mail address.");
        email.focus();
}
if ((nocall.checked == false) && (phone.value == ""))
    {
        window.alert("Please enter your telephone number.");
        phone.focus();
}


    if (what.selectedIndex < 1)
    {
        alert("Please tell us how we can help you.");
        what.focus();
      }


    if (comment.value == "")
    {
window.alert("Please provide a detailed description or comment.");
        comment.focus();
```

```
}
 }
 function EnableDisable(chkbx)
{
   if(chkbx.checked == true)
   {
      document.ContactForm.Telephone.disabled = true;
   }
   else
   {
      document.ContactForm.Telephone.disabled = false;
   }
}
</script>  </head>
<body>
 <form method="post“ name="ContactForm" onsubmit=“ValidateContactForm();">
   <p>Name: <input type="text" size="65" name="Name"></p>
   <p>E-mail Address:  <input type="text" size="65" name="Email"></p>
   <p>Telephone: <input type="text" size="65" name="Telephone"><br>
      <input type="checkbox" name="DoNotCall"
      onclick="EnableDisable(this);"> Please do not call me.</p>
   <p>What can we help you with?
      <select type="text" value="" name="Subject">
         <option>  </option>
```

```
        <option>Customer Service</option>
        <option>Question</option>
        <option>Comment</option>
        <option>Consultation</option>
        <option>Other</option>
</select></p>
   <p>Comments:  <textarea cols="55" name="Comment">  </textarea></p>
   <p><input type="submit" value="Send" name="submit">
   <input type="reset" value="Reset" name="reset"></p>
</form>


</body>
</html>
```

Q.8) Explain dynamic style sheet also give advantages of it with suitable example. 7m

Using JavaScript with Style Sheets

Dynamic Style Sheets

- Just recently, two technologies have been released for precise control of the layout and positioning of elements on a page.

Cascading Style Sheets

- CSS gave designers the ability to fully layout, position and define pages, without use of tables, and any other hacks.
- Using CSS, a designer could define the fonts each tag would use, its color, its margin, and many other properties.

Using JavaScript to Control Style Sheets

- With the release of the 4.0 browsers from Microsoft and Netscape, finally comes the capability to script style sheets using scripting language such as JavaScript and VBScript.

What are the Advantages?

These new technologies enable us to do:

- Make the text on the page adjust its size to adapt to the user's browser size
- Create text rollover effects without the need for graphics
- Create an Html based menu that can expand and collapse to show its contents
- Change text properties on-the-fly without a full page refresh
- Fade in and fade out page elements
- Unlike CGI, the script handles everything on the client side, making the web pages load quickly, thus enhancing the interactive experience.
- Creating a simple MouseOver effect

```
<html>

<head>

<title>  Simple mouseover effect  </title>

<style type="text/css">

A { text-decoration : none;color : brown;   }

</style>

<script language="javascript">

function mover()

{

        window.event.srcElement.style.backgroundColor = "Orange";

}

function mout ()

{

        window.event.srcElement.style.backgroundColor = "White";

}
```

```
</script>

</head>

<body>

<A href="http://www.site1.com" onMouseOver = "mover(); " onMouseOut = "mout();" > Site1 </A>

<A href="http://www.site2.com" onMouseOver = "mover(); " onMouseOut = "mout();" > Site2 </A>

<A href="http://www.site3.com" onMouseOver = "mover(); " onMouseOut = "mout();" > Site3 </A>

</body>

</html>
```

The all Collection

- The all collection can be used to access any of the valid html tags on the page.
- It returns an array of elements that has been specified.
- The code to access <B> tags :
  document.all.tags("B")
- Then follow it by the property that need to be accessed:
  document.all.tags("B").style.fontStyle="italic";

Using the item() method for More Control

- The all collection returns a collection of the tags that has been chosen, the item() method is used to select an individual element in the array.
- Example

```
<html>

<head>

<title> Some title </title>
```

```
<script language="JavaScript">
function mclick()
{
        var b1 = document.all.tags("B").item(0);
        b1.style.cursor = "hand";
        var b2 = document.all.tags("B").item(1);
        b1.style.color = "green";
}
</script>
</head>
<body onclick="mclick();">
<B> Here is some bold text  </B>  <br>
<B> Here is another line of bold text  </B>
</body>
</html>
```

The styleSheets Collection

- The styleSheets collection is used to work with style sheets contained in the document. The styleSheets collection can be used to:
  - Find out how many style sheets are in the document
  - Add a style sheet
  - Replace a style sheet
  - Delete a style sheet
  - Disable a style sheet
  - Add a rule to the style sheet

Finding the number of style sheets in the document

- The styleSheets collection has a property called length, which is used to find out how many style sheets are in the document.
- Using the length property to find the number of style sheets in the document:

```
<html>

<head>

<title>  To find the number of style sheets   </title>

<style type=”text/css”>

H1   { font-size: 30 }

</style>

<script language=”javascript”>

Function count()

{

        Alert( document.styleSheets.length );

}

</script>

</head>

<body onLoad=”count();”>

<h1> A very simple document   </h1>

</body>

</html>
```

Adding a Style Sheet

- The style sheet can be added to the document by using:
  document.styleSheets(index).addImport(“filename”);
- Index is the index of the style sheet to which a new style sheet is added.

- For embedded style sheet only, new style sheet can be added.
- Code to check this:

```
if(document.styleSheets(0).href == "NULL")

{           document.styleSheets(0).addImport("stylesheet.css");

}
```

Replacing one Style Sheet with Another

- Using the styleSheets collection, an existing style sheet can be replaced with another.
- The only limitation is that the style sheet being replaced must be either be linked or imported into the document.
- Example

```
<html>

<head>  <title>  Replacing a Style Sheet  </title>

<LINK rel="stylesheet" href="stylesheet.css">

<script language="javascript">

function replacesheet()

{

        If(document.stylesheets.href != NULL)

        {    document.styleSheets(0).href = "new.css";  }

}

</script>

</head>

<body>

<div onClick="replacesheet();"> Click me to replace my style sheet  </div>

</body>
```

```
</html>
```

Disabling and Enabling a Style Sheet

- Style Sheets can be disabled by setting the disabled property to true.
- Example

```
<html>

<head>  <title>  Enabling and Disabling a Style Sheet   </title>

<style>

Body   { background-color : white }

H1 { font-size: 30pt; font-weight: bold; color: blue;  }

H2  { font-size: 18 pt; color: green; background-color:  yellow;  }

P   { font-size: 12 pt; color: purple; text-indent:30px  }

</style>

<script language=”javascript”>

function on()

{

        if(document.styleSheets(0).disabled)

                document.styleSheets(0).disabled = false;

        else

                document.styleSheets(0).disabled = true;

}

</script>

</head>

<Body>

        <H1> Title  </H1>
```

```
<H2>  first paragraph  </H2>

<P>  This is the first paragraph  .  </P>

<H2>  Second Paragraph  </H2>

<P>  This is the second paragraph.  </P>

<div id=”state”>

<input type=”button” onclick=”on();”>

</div>

</body>  </html>
```

Adding a new rule to a Style Sheet

- New rules can be added to the embedded style sheet by using the addRule() method.
- Syntax

  document.styleSheets.addRule(“H1”, “Font-Color: green”);