Practical Manual

Web Design using HTML & JavaScript

Prepared By

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</table>
PRG01.HTML

<html>
<head>
    <title>Welcome to CAET</title>
</head>
<body>
    This is My First Web Page.
</body>
</html>

NOTES:
- The HTML tag identifies a document as an HTML document.
- The HEAD tag defines an HTML document header.
- The BODY tag specifies the main content of a document.
- The TITLE tag specifies the title of the document.

Exercise:
- Display welcome message in web page.
PRG02.HTML

```html
<html>
<head>
    <title> Body Tag Attr. & BR tag</title>
</head>
<body text=BLUE bgcolor=#AAFFAA>
    COLLEGE OF AGRICULTURAL ENGINEERING & TECHNOLOGY<br>
    ANAND AGRICULTURAL UNIVERSITY <BR>
    DAHOD ROAD<br>
    <BR>GODHRA - 389001
</body>
</html>
```

NOTES:
- `BGCOLOR="color"` Sets the color of the background.
- `TEXT="color"` Sets the color of normal text in the document.
- The BR tag inserts a line break.

Exercise:
- Design a web page to display Your Name with Address
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PRG03.HTML

<html>
<head>
  <title>Heading Tags & Paragraph Tag</title>
</head>
<body>
  <h1>Heading H1 with default left align</h1>
  <h3 align=center>Heading H3 with center align</h3>
  <h6 align=right>Heading H6 with right align</h6>

  <h4>Internet History</h4>
  <p align=justify>It was conceived by USA department of defense. ARPANET was established in 1969 by ARPA (Advanced Research Project Agency) at the head quarter of USA military. Its basic purpose was to create a method for widely separated computer to transfer information efficiently. This kind of data transfer was limited for the use of USA military.</p>
</body>
</html>

NOTES:
- H1 to H6 is heading tags. A font size is increase from h6 to h1 tags.
- P tag use for paragraph.
- Align attributes has four possible values: Left, Right, Center, Justify

Exercise:
- Design a web page to display Agricultural Engineering related content in two paragraph with appropriate heading
<html>
<head>
    <title>Text Formatting Tags</title>
</head>
<body>

This Statement style is NORMAL
<br> <b>This Statement style is BOLD</b> <br>
<br> <i>This Statement style is ITALIC</i> <br>
<br> <u>This Statement style is UNDERLINE</u> <br>
<br> <b><i>This Statement style is BOLD and ITALIC</i></b> <br>
<br> <b><u><i>This Statement style is BOLD, ITALIC and UNDERLINE</i></u></b> <br>
<br> <strike>This Statement style is Strike Through</strike> <br>
<br> The chemical notation for water is \text{H}_2\text{O}. <br>
<br> If Einstein was right, then \text{E}=\text{mc}^2. <br>
<br> <font face="arial" size=3 color=red>This statement in Arial font, red color and 3 size.</font> <br>
<br> <tt>This Statement has Typewriter Effect</tt> <br>
<br> Display Text Using PRE Tag <br>
<br> <pre>
<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>City</th>
<th>Pincode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anil</td>
<td>20</td>
<td>JND</td>
<td>362001</td>
</tr>
<tr>
<td>Sunil</td>
<td>18</td>
<td>RJT</td>
<td>360005</td>
</tr>
</tbody>
</table>
</pre>

</body>
</html>
<html>
<head>
    <title>IMG & HR Tag</title>
</head>
<body>
    <CENTER>IMAGE AND HORIZONTAL RULE TAG
    EXAMPLE</CENTER>
    <IMG src=pict.jpg border=3 height=100 width=150 align=left
    hspace=20 vspace=20>
    <BR clear=left>
    <HR width=50% size=10 color=red noshade align=left>
    <IMG src=pict2.jpg border=5 height=100 width=150 align=right
    alt="AAU Logo"> <br>
    <HR width=200 size=10 noshade align=right>
    <br clear=right>
    <HR width=200 size=10 noshade color=blue align=center>
</body>
</html>

NOTES:
- The HR tag draws a horizontal line across the document frame or window.
- CLEAR attribute in BR tag prevents text from wrapping around sides of an element such as an image.
- The IMG tag specifies an image to be displayed in an Web Page.

Exercise:
- Design a web page to display Three Farm Equipments with photograph and contents in attractive styles & colors.
PRG06.HTML

<html>
<head>
    <title>OL Tag</title>
</head>
<body>
    <FONT COLOR=GREEN SIZE=5>AAU COLLEGE LIST</FONT>
    <OL>
        <LI> CAIT</LI>
        <LI> FPT & BE</LI>
        <LI> BACA</LI>
    </OL>

    <FONT COLOR=BLUE SIZE=5>DEGREE PROGRAMS</FONT>
    <OL TYPE=I>
        <LI> B.Sc. (Agricultural)</LI>
        <LI> B.Tech. (AIT)</LI>
        <LI> B.Tech. (Dairy Technology)</LI>
        <LI> B.Tech. (Agricultural Engineering)</LI>
    </OL>
</body>
</html>

NOTES:
- The OL tag displays an ordered, or numbered, list.
- TYPE attributes to change the numbering sequence and numbering style. Type attribute possible value is TYPE="A" | "a" | "I" | "i" | "1". 
Web Design using HTML & JavaScript

PRG07.HTML

<html>
<head>
    <title>UL Tag</title>
</head>
<body>
    <FONT COLOR=GREEN SIZE=5>AAU COLLEGE LIST</FONT>
    <UL>
        <LI> CAIT</LI>
        <LI> FPT & BE</LI>
        <LI> BACA</LI>
    </UL>
    <FONT COLOR=BLUE SIZE=5>DEGREE PROGRAMS</FONT>
    <UL TYPE=SQUARE>
        <LI> B.Sc. (Agricultural)</LI>
        <LI> B.Tech. (AIT)</LI>
        <LI> B.Tech. (Dairy Technology)</LI>
        <LI> B.Tech. (Agricultural Engineering)</LI>
    </UL>
</body>
</html>

NOTES:
- The UL tag displays a bulleted list.
- TYPE attribute to change the bullet style. Type attribute possible value is TYPE="CIRCLE"|"DISC"|"SQUARE".
PRG08.HTML

<html>
<head>
    <title>DEFINATION LIST Tags</title>
</head>
<body>
    <FONT COLOR=GREEN SIZE=5>DEFINATION LIST</FONT>
    <DL>
        <DT>HTML
            <DD>This tag marks a text file as an HTML document.</DD>
        <DT>BODY
            <DD>This tag displays the body for the HTML document.</DD>
        <DT>DL
            <DD>This tag displays a definition list in the HTML document.</DD>
        <DT>DT
            <DD>This tag displays a term in a definition list.</DD>
        <DT>DD
            <DD>This tag displays a definition description.</DD>
    </DL>
</body>
</html>
PRG09.HTML

<html>
<head>
    <title>NESTED LIST Tags</title>
</head>
<body>
<FONT COLOR=GREEN SIZE=5>COMPUTER HARDWARE LIST</FONT>
<OL>
    <LI>INPUT DEVICES</LI>
    <UL TYPE=SQUARE>
        <LI>KEY BOARD</LI>
        <LI>MOUSE</LI>
        <LI>MICROPHONE</LI>
    </UL>
    <LI>OUTPUT DEVICES</LI>
    <UL TYPE=CIRCLE>
        <LI>DESKTOP SCREEN</LI>
        <LI>PRINTER</LI>
    </UL>
    <LI>STORAGE DEVICES</LI>
    <UL TYPE=DISC>
        <LI>HARD DISK</LI>
        <LI>CD - DVD</LI>
    </UL>
</OL>
</body>
</html>

Exercise:
- Design a web page to display our college departments with staff member's name.
- Design a web page to display Agricultural Engineering equipments list category wise.
**PRG10.HTML**

```html
<HTML>
<BODY>
   <TABLE align=center border=3 width=75% bgcolor=cyan
        cellspacing=0 cellpadding=5>
   <CAPTION><B>STUDENT INFORMATION</B></CAPTION>
   <TR height=30 bgcolor=#ffff00>
      <TH>Registration No</TH>
      <TH>Student Name</TH>
      <TH>Semester</TH>
   </TR>
   <TR>
      <TD width=150>06-0001-2014</TD>
      <TD>Anil Patel</TD>
      <TD>1<sup>st</sup></TD>
   </TR>
   <TR>
      <TD width=150>06-0031-2014</TD>
      <TD>Sunil Shah</TD>
      <TD>2<sup>nd</sup></TD>
   </TR>
</TABLE>
</BODY>
</HTML>
```

**NOTES:**
- The TABLE tag defines a table.
- The CAPTION tag defines a caption for a table.
- The TR tag specifies a table row.
- The TD tag specifies cell in a table.
- The TH tag specifies a table cell whose contents are usually displayed in a bold style and center align.
PRG011.HTML

```html
<HTML>
<BODY>
  <TABLE align=CENTER border=1 bgcolor=#ddffee cellspacing=0>
    <TR><TH COLSPAN=4 bgcolor=#aa0000>
      <font color=white>CAET RESULT INFORMATION</font></TH></TR>
    <TR height=30 bgcolor=#ffff00>
      <TH>Semester</TH>
      <TH>Registration No</TH>
      <TH width=150>Student Name</TH>
      <TH>OGPA</TH>
    </TR>
    <TR><TD ROWSPAN=3>1<sup>st</sup></TD>
      <TD>06-0001-2014</TD>
      <TD>Anil Patel</TD>
      <TD>8.7</TD>
    </TR>
    <TR><TD>06-0002-2014</TD>
      <TD>Jayesh Patel</TD>
      <TD>8.9</TD>
    </TR>
    <TR><TD>06-0003-2014</TD>
      <TD>Sanjay Shah</TD>
      <TD>8.9</TD>
    </TR>
    <TR><TD ROWSPAN=2>2<sup>nd</sup></TD>
      <TD>06-0031-2013</TD>
      <TD>Sunil Shah</TD>
      <TD>6.7</TD>
    </TR>
    <TR><TD>06-0032-2013</TD>
      <TD>Jayesh Zala</TD>
      <TD>9.2</TD>
    </TR>
  </TABLE>
</BODY>
</HTML>
```
<HTML>
<HEAD>
<TITLE>RESULT TABLE</TITLE>
</HEAD>
<BODY>
<TABLE align=CENTER border=1 bgcolor=#ddffee cellspacing=0>
<TR><TH COLSPAN=6 bgcolor=#aa0000>
<font color=white>RESULT INFORMATION</font></TH>
</TR>
<TR height=30 bgcolor=#ffff00>
<TH rowspan=2>Seat No</TH>
<TH width=150 rowspan=2>Student Name</TH>
<th colspan=3>Subject</th>
<TH rowspan=2>Total</TH>
</TR>
<TR>
<TH width=80>Maths</TH>
<TH width=80>Science</TH>
<TH width=80>Computer</TH>
</TR>
<TR>
<TD>1</TD>
<TD>Jayesh Patel</TD>
<TD>80</TD>
<TD>70</TD>
<TD>60</TD>
<TD>210</TD>
</TR>
</TABLE>
</BODY>
</HTML>
<TR>
  <TD>2</TD>
  <TD>Mayank Sharma</TD>
  <TD>80</TD>
  <TD>90</TD>
  <TD>80</TD>
  <TD>250</TD>
</TR>
</TABLE>
</BODY>
</HTML>

NOTES:
- BORDER: Indicates the thickness, in pixels, of the border to draw around the table.
- CELLPADDING: Determines the amount of space, in pixels, between the border of a cell and the contents of the cell.
- CELLSPACING: Determines the amount of space, in pixels, between individual cells in a table.
- ALIGN: Specifies the horizontal placement of the table.
- BGCOLOR: Sets the color of the background.
- COLSPAN: Indicates the number of columns the cell spans.
- ROWSPAN: Indicates the number of rows the cell spans.
- HEIGHT: Specifies the suggested height of the table cell, in pixels.
<HTML>
<BODY>
    <TABLE align=CENTER border=0 width=500 bgcolor=#ddffee cellspacing=0 cellpadding=3>
        <TR>
            <TD width=80><b>Bill No:</b></TD>
            <TD width=60>981</TD>
            <TD>&nbsp;</TD>
            <TD width=70><b>Bill Date:</b></TD>
            <TD width=80>20-Oct-2014</TD>
        </TR>
        <TR>
            <TD valign=top><b>Customer Details</b></td>
            <TD colspan=4>
                Patel Rajesh K.<br>
                Ram Park <br>
                Anand<br>
                (M)9898658768
            </TD>
        </TR>
        <TR>
            <TD colspan=5>
                <TABLE border=1 width=500 bgcolor=#ddffee cellspacing=0 cellpadding=3>
                    <TR>
                        <TH width=50>Sr.No.</TH>
                        <TH>Item Name</TH>
                        <TH>Price</TH>
                        <TH>Qty</TH>
                        <TH>Total</TH>
                    </TR>
                </TABLE>
            </TD>
        </TR>
    </TABLE>
</BODY>
</HTML>
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Pencil Box</th>
<th>100</th>
<th>2</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>Pen Box</td>
<td>250</td>
<td>2</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Net Payable Amount:** 700
Exercise:

- Design a web page to display crops (wheat, rice, maize) production details year and season wise.
- Design a web page to display your resume in table format with photograph and various styles & colors.
PRG14.HTML

<HTML>
<HEAD>
    <TITLE> A Linking Tag </TITLE>
</HEAD>

<BODY link=red vlink=cyan alink=blue>
    <A name=top></a>
    <A href=prg11.html target="_self">Simple Table</A><br>
    <A href=prg12.html target="_blank">Result Table</A><br>
    <A href=prg13.html target="F2">Bill Table</A><br>
    <A href=#lession1>Lession 1</A><br>
    <A href=#lession2>Lession 2</A><br>
    <A name=lession1><h3>LESSION 1</h3></a>
    A<br>B<br>C<br>A<br>B<br>C<br>A<br>B<br>C<br>
    <A name=lession2><h3>LESSION 2</h3></a>
    X<br>Y<br>Z<br>X<br>Y<br>Z<br>X<br>Y<br>Z
</BODY>
</HTML>
A hypertext link is a piece of content that the user can click to invoke an action.

Most browsers display hypertext links in a color different from that of the rest of the document so that users can easily identify them.

To scroll the current document to an anchor, give the name of the anchor preceded by the pound (#) sign. For example: HREF="#lesson1"

Specifies a window in which to show the destination document (if the link's action is to scroll or open a document).

**Exercise:**
- Design a web page to display links for previously design all web pages.
PRG15.HTML

<HTML>
<HEAD>
   <TITLE> Image Mapping </TITLE>
</HEAD>
<BODY>
   <img src ="IMGMAP.JPG" usemap="#design">

<MAP name="design">
   <area shape="rect" coords="0,0,122,96" href="prg01.html">
   <area shape="circle" coords="160,167,50" href="prg02.html">
   <area shape="poly" coords="36,124,71,208,3,207" href="prg03.html">
</MAP>
</BODY>
</HTML>
PRG16.HTML

<FRAMESET ROWS="20%,*">
  <FRAME SRC="prg02.HTML">
  <FRAMESET COLS="15%,85%">
    <FRAME SRC="LINK.HTML">
    <FRAME NAME="main">
  </FRAMESET>
</FRAMESET>
Exercise:

- Design Agricultural related website. A web page contains attractive content, photos, listing, tables, links etc...
Adobe Dreamweaver

- Dreamweaver is a proprietary web development tool first created by Macromedia in 1997.
- Adobe purchased Macromedia (which included the rights to Dreamweaver) in 2005 and continued the development of the program.
- Adobe Dreamweaver is a software program for designing web pages, essentially a more fully featured HTML web and programming editor.
- The program provides a WYSIWYG (what you see is what you get) interface to create and edit web pages.
- Dreamweaver supports many markup languages, including HTML, XML, CSS, JavaScript, PHP, ASP VBScript etc...
You are under CCTV surveillance

- Group A Courses
  1. B.Tech (Agri. Engg.)
  2. B.Tech (FPT)
  3. B.Tech (IT)
- Group B Courses
  1. B.Sc (Agrl.)
  2. B.Sc (Horti.)
FTP (Uploading & Downloading)

- Uploading means local computer file store on live web server.
- Downloading means live web server files store in local computer.
- FTP (File Transfer Protocol) is used to transfer data from one computer (local computer) to another computer (web server).
- FileZilla - The free FTP solution. Download and Install the FileZilla in computer.

How to Use FileZilla?

- Run FileZilla Client.
- First, you must add your website information: Go to File - Site Manager:
- Click on New Site button and add required information in General folder:
  - Host - hostname of your website
  - ServerType - mostly FTP - File Transfer Protocol
  - LogonType - Normal
  - User - your username
  - Password - your password.
- Click on OK button to save the changes.
- Now, you can connect your website (server).
- Click on File - Site Manager, Select your site and click on Connect button.

**Uploading or downloading files:**
- On the left side of client, there are files which are saved on your personal computer.
- On the right side of client, there are files which are saved on the web server.
- Click the right mouse button on file(s) on the left side of client and select Upload. Your file(s) will be uploaded to the server.
- Click the right mouse button on file(s) on the right side of client and select Download. Your file(s) will be downloaded to your computer.
JavaScript

What is JavaScript?

- JavaScript is a client side scripting language. (A scripting language is a lightweight programming language).
- JavaScript was developed by Netscape. Everyone can use JavaScript without purchasing a license. All most web browsers are support the JavaScript.
- JavaScript is an interpreted language (means that scripts execute without preliminary compilation).
- JavaScript is a case sensitive language.

What Can JavaScript do?

- JavaScript gives HTML designers a programming tool
- JavaScript can react to events
- JavaScript can manipulate HTML elements
- JavaScript can be used to validate data
- JavaScript can be used to detect the visitor's browser
- JavaScript can be used to create cookies

How to Write Code:

- The HTML <script> tag is used to insert a JavaScript into an HTML document. Inside the <script> tag use the type attribute to define the scripting language.
- The lines between the <script> and </script> contain the JavaScript and are executed by the browser.
- JavaScript’s can be put in the <body> and in the <head> sections of an HTML page.

SYNTAX of Script Tag:

```html
<SCRIPT TYPE="content type" SRC="url" LANGUAGE="scripting language">
-----------------------------------------------
-----------------------------------------------
-----------------------------------------------

</SCRIPT>
```
PRG001.html (JavaScript Code in Body Section)

```html
<html>
<body>
  <h1>My Web Page</h1>
  <p id="demo">Anand Agricultural University</p>
  
  <script type="text/javascript">
    document.write("My First JavaScript");
  </script>
</body>
</html>
```

In above JavaScript code use `document.write("…..")` statement. `document` is an Object and `write` is a Method of document object. It is use to display content on web browser.

**Alert Dialog box**

- An alert box is often used if you want to make sure information comes through to the user. Alert box has only one Button “OK”
- The alert dialog box can be used to display a message or display some information. For instance:
  - A message is display when user input invalid information
  - An invalid result is the output of a calculation.
  - A warning that a service is not available.

**PRG002.HTML: Write code to display message “Welcome to AIT” in alert dialog box when user click on “ALERT” Button.**

```html
<HTML>
<HEAD>
<script type="text/javascript">
    function alertMsg()
    {
        alert("Welcome To AIT");
    }
</script>
</HEAD>
```
Sometimes we want to execute a JavaScript when an event occurs, such as when a user clicks a button then we put the script inside a function and call function at appropriate HTML element (BUTTON) event (CLICK).

- In code `onclick` attribute in input tag is set the mouse click event for `Button` element.
- Normally User define functions are used in combination with events. In code `alertMsg()` is write and call at Button onclick attribute.

### Confirm Dialog box

- A confirm box is often used if you want the user to verify or accept something. A confirm box display the predefine message And OK & Cancel Button.
- When a confirm box pops up, the user will have to click either "OK" or "Cancel" to proceed. If the user clicks "OK", the box returns true. If the user clicks "Cancel", the box returns false.

### PRG003.HTML: Write code to display alert message “Are You Sure?” when user click on “DELETE” Button and display pressed button message.

```html
<HTML>
<HEAD>
<script type="text/javascript">
  function confirmMsg()
  {
    var objdisp=document.getElementById("msg");
    var r=confirm("Are You Sure?");
    if (r==true)
    {
      objdisp.innerHTML="You pressed OK!";
    }
  }
</script>
</HEAD>
<BODY>
  <input type="button" onclick="confirmMsg()" value="ALERT" />
</BODY>
</HTML>
```
else
{
    objdisp.innerHTML="You pressed Cancell";
}
</script>
</HEAD>
<BODY>
    <span id=msg>Message</span> <br>
    <input type="button" onclick="confirmMsg()" value="Delete" >
</BODY>
</HTML>

**Prompt Dialog box**

- A prompt box is often used if you want the user to input a value before entering a page.
- A prompt box display a predefined message, a textbox for user input and display OK & Cancel Button.
- If the user clicks "OK" the box returns the input value. If the user clicks "Cancel" the box returns null.

**PRG004.HTML: Write code to display prompt box for “Enter a Name” with “Anil” default value when page is load and display enter name on the webpage.**

```html
<html>
<body>
<script language=javascript>
    document.write(“WelCome To RPBC <br>”)
    document.write( prompt(“Enter Name :”,”Anil” )
</script>
</body>
</html>
```
PRG005.HTML: (Write code to read a value from textbox and display square when users click on CALCULATE button)

<HTML>
<HEAD>
<script type="text/javascript">
function sqrCalc() {
  var numObj, dispObj, num;
  numObj = document.getElementById("txtnum");
  dispObj = document.getElementById("txtdisp");
  num = numObj.value;
  dispObj.value = num * num;
}
</script>
</HEAD>
<body>
<table border=0>
<tr>
  <td>Enter Number:</td>
  <td><input type="text" name="txtnum" id="txtnum"> </td>
</tr>
<tr>
  <td>Square</td>
  <td><input type="text" name="txtdisp" id="txtdisp" readonly> </td>
</tr>
<tr>
  <td align=center colspan=2><input type="button" name="btn1" id="btn1" value="CALCULATE" onclick="sqrCalc()"></td>
</tr>
</table>
</body>
</HTML>
- We take two textbox; one for enter a number and second for display a square value. But square text box is set read only using readonly attribute because square is calculated.
- We take one Button and set Click event for button using onclick attribute and set that value is sqrCalc(). It is JavaScript function and call when users click on button.
- sqrCalc() function write in HTML head section. It contain three variables numObj, dispObj, num.
- numObj for HTML TextBox Object “txtnum”, dispObj for HTML TextBox Object “txtdisp”.
  - numObj=document.getElementById("txtnum");
  - dispObj=document.getElementById("txtdisp");
- num variable for value of “txtnum”, value get using value property of TextBox object.
  - num=numObj.value
- square value set in display textbox using
  - dispObj.value=num*num;

**ASSIGNMENT:**
- Write code to read a Meter value than convert and display into centimeter when users click on CONVERT button.
- Write code to read a Principal Amount, Interest rate and Time Period in Year than calculate and display Simple Interest when users click on CALCULATE button.
- Write code to read a two number value and display addition, multiplication, subtraction and division when users click on CALCULATE button.
PRG006.HTML: (Write code to read a number than display number is even or odd when users click on CHECK button)

```
<HTML>
<HEAD>
    <TITLE>If...Else Statement Example</TITLE>
    <script type="text/javascript">
        function checkNumber()
        {
            var numObj, dispObj, num;
            numObj = document.getElementById("txtnum");
            dispObj = document.getElementById("msg");
            num = numObj.value;
            if (num%2==0)
            {
                dispObj.innerHTML = num + " is Even Number";
            }
            else
            {
                dispObj.innerHTML = num + " is Odd Number";
            }
        }
    </script>
</HEAD>
<Body>
<table border=0>
<tr>
    <td>Enter Number:</td>
    <td><input type="text" name="txtnum" id="txtnum"></td>
</tr>
<tr>
    <th colspan=2><span id="msg">Message</span></th>
</tr>
</table>
<input type="button" value="CHECK" onclick="checkNumber()"/>
```

Enter Number : 8

8 is Even Number

CHECK
<tr><td align=center colspan=2>&lt;input type="button" name="btn1" id="btn1" value="CHECK" onclick="checkNumber()"&gt;</td></tr>
</table>
</BODY>
</HTML>

Explanation:
- We take one textbox for enter a number, one span area to display message and one CHECK button
- `innerHTML` is a property that can use to set HTML code for SPAN element to display.
- SPAN element put between `<TH>` and `</TH>` tags because TH tag display content in BOLD style and CENTER align by default.

PRG007.HTML: (Write code to give color choice for red, green & blue using Radio Button. When user click on Display button then Message display in selected color)

```html
<HTML>
<HEAD>
<script type="text/javascript">
    function dispColor()
    {
        var optObj,dispObj;
        dispObj=document.getElementById("msg");
        optObj=document.getElementById("optred");
```
if (optObj.checked)
{
    dispObj.style.color="red";
}

optObj=document.getElementById("optgreen");
if (optObj.checked)
    dispObj.style.color="Green";

optObj=document.getElementById("optblue");
if (optObj.checked)
    dispObj.style.color="Blue";

</script>
</HEAD>
<BODY>
<table border=0>
<tr>
<td>
<input type="radio" name="optcolor" id="optred">Red
<input type="radio" name="optcolor" id="optgreen"> Green
<input type="radio" name="optcolor" id="optblue">Blue
</td>
</tr>
<tr>
<th><span id="msg">Welcome To AIT</span></th>
</tr>
<tr>
<td align=center><input type="button" name="btn1" id="btn1" value="DISPLAY" onclick="dispColor()"/></td>
</tr>
</table>
</BODY>
</HTML>
Explanation:
- We take three radio buttons for Red, Green and Blue colors, one span area to display message and one DISPLAY button.
- Radio button is checked or not checked; it is identify using checked property of RADIO Button Object.
- STYLE object color property are use for set element fore color. STYLE object easily apply with HTML elements. So dispObj.style.color="color|color code"; set the fore color for dispObj.

ASSIGNMENT:
- Write code to read a year than display year is Leap year or Not a Leap Year when users click on CHECK button.
- Write code to read two number, give choice for addition, subtraction, multiplication and division using Radio Button. When user click on CALCULATE button then Apply selected arithmetic operation on inputted numbers and display answer.

PRG008.HTML: (Write code to give choice for Bold, Italic & Underline styles using CheckBox. When user click on STYLE button then Message display in selected styles)

```html
<html>
<head>
<script type="text/javascript">
function dispStyle()
{
    dispObj=document.getElementById("msg");
    if (document.getElementById("chkbold").checked)
        dispObj.style.fontWeight="bold";
    else
        dispObj.style.fontWeight="normal";
</script>
</head>
<body>

Welcome To AIT

<style>
input[type="checkbox"] { display: inline-block; margin-right: 5px; }
</style>
<input type="checkbox" id="chkbold" checked/>Bold
<input type="checkbox" id="chkitalic" unchecked/>Italic
<input type="checkbox" id="chkunderline" checked/>Underline

</body>
</html>
```
if (document.getElementById("chkitalic").checked) {
    dispObj.style.fontStyle="italic";
} else {
    dispObj.style.fontStyle="normal";
}

if (document.getElementById("chkuline").checked) {
    dispObj.style.textDecoration="underline";
} else {
    dispObj.style.textDecoration="none";
}
</script>
</HEAD>
<BODY>
<table border="0">
<tr>
<td>
    <input type="checkbox" name="chkbold" id="chkbold">Bold
    <input type="checkbox" name="chkitalic" id="chkitalic">Italic
    <input type="checkbox" name="chkuline" id="chkuline">Underline
</td>
</tr>
<tr>
    <td align="center"><span id="msg">Welcome To AIT</span></td>
</tr>
<tr>
    <td align="center"><input type="button" name="btn1" id="btn1" value="STYLE" onclick="dispStyle()"></td>
</tr>
</table>
</BODY>
</HTML>
**Explanation:**

- We take three checkbox for Bold, Italic and Underline Styles, one span area to display message and one STYLE button.
- Checkbox is checked or not checked; it is identifying using checked property of Checkbox Object.
- STYLE object fontWeight property use for BOLD style, fontStyle property use for ITALIC style and textDecoration property use for UNDERLINE style.
- Set “normal” value of respective property for remove the effects of BOLD and ITALIC style and “none” for remove UNDERLINE style effect.

**ASSIGNMENT:**

Write code for following design and when user click on Bill button then calculate and display total Bill amount.

```
Pen Rs.20  ✓Book Rs.30  ✓Pencil Rs.10
Total : 40
Bill
```

**PRG009.HTML: Write code to display the current Day**

```html
<html>
<body>
<script type="text/javascript">
    var day = new Date().getDay();
    switch (day) {
        case 0:
            x = "Today it's Sunday";
            break;
        case 1:
            x = "Today it's Monday";
            break;
    }
</script>
</body>
</html>
```
case 2:
x="Today it's Tuesday";
break;
case 3:
x="Today it's Wednesday";
break;
case 4:
x="Today it's Thursday";
break;
case 5:
x="Today it's Friday";
break;
case 6:
x="Today it's Saturday";
break;
}
</script>
</BODY>
</HTML>

Explanation:

- `getDay()` is function of Date Object. It is return the value from 0 to 6; 0-Sunday, 1-Monday, ..., 6-Saturday.
- In JavaScript object created using new keyword.
- The following statement create a day variable and assign a current day number (0 to 6). var day=new Date().getDay();
PRG010.HTML: Write code for provide an interface for enter birth date using combo box and looping structure.

```html
<HTML>
<HEAD>
    <TITLE>Looping Structure Example</TITLE>
</HEAD>
<BODY>
<table border=0>
<tr>
    <td>Enter Birth Date:</td>
    <td>
        <select name=cmbday id=cmbday> </select>
        <select name=cmbmonth id=cmbmonth> </select>
        <select name=cmbyear id=cmbyear> </select>
    </td>
</tr>
<script type=text/JavaScript>
    objday=document.getElementById("cmbday");
    for(i=1;i<=31;i++)
    {
        objday.add(new Option(i,i));
    }
    objmonth=document.getElementById("cmbmonth");
    i=1;
    while(i<=12)
    {
        objmonth.add(new Option(i,i));
        i++;
    }
</script>
</table>
</BODY>
</HTML>
```
objyear=document.getElementById("cmbyear");
i=1970;
do
{
    objyear.add(new Option(i,i));
    i++;
}while(i<=2020);
</script>
</BODY>
</HTML>

Explanation:

- In HTML combo box control created using `SELECT` tag and items are added using `OPTION tags` or `Option Object in JavaScript`.
- JavaScript SELECT Object has `add` method to add elements or items in Combo box control ad it require a Option object as an argument. Option object created using `new` keyword and it `require two arguments` one for `text` and other for `value`.

`SELECTOBJECT.add(OPTION Object);
OPTIONOBJECT = new Option (text, value)

PRG011.HTML: Write JavaScript code for display a confirmation message for form submission when users click on submit button. If user click on confirmation dialog box OK button then form is submitted else not submitted (rejected).

<HTML>
<HEAD>
<script type=text/javascript>
    function chkform()
    {
        var r= confirm(" Form is Submitted ");
        return r;
    }
</script>
</HEAD>
</HTML>
<HEAD>
</HEAD>

<BODY>
<form action="formsSubmit.html" onsubmit="return chkform()">
<table border=0>
<tr>
<td>Enter Name</td>
<td> <input type=text name=txtName id=txtName></td>
</tr>
<tr>
<td colspan=2 align=center><input type=submit name=btnSubmit id=btnSubmit value="Submit"></td>
</tr>
</table>
</form>
</BODY>
</HTML>

**PRG012.HTML: Write JavaScript code for mouse events with image.**

```html
<html>
<head>
<script type=text/javascript>
function funmove(event)
{
    objImg=document.getElementById("imgdisp");
    objDisp=document.getElementById("dispmsg");
    objDisp.innerHTML="Coordinate  X="+ event.clientX +"  Y="+ event.clientY;
}
function fundown()
{
    objDisp.innerHTML="Mouse Down";
}
</script>
</head>
<body>
</body>
</html>
```
```javascript
function funup()
{
    objDisp.innerHTML="Mouse Up";
}
function funover()
{
    objDisp.innerHTML="Mouse Over";
    objImg.src="2.jpg";
}
function funout()
{
    objDisp.innerHTML="Mouse Out";
    objImg.src="1.jpg";
}
</script>
</HEAD>
<BODY>
<span id="dispmsg">Message</span><br>
<img src="1.jpg" height=200 width=200 id="imgdisp"
    onmousedown="fundown()" onmouseup="funup()"
    onmousemove="funmove(event)" onmouseover="funover()"
    onmouseout="funout()">
</BODY>
</HTML>

Explanation:

- In above program we can demonstrate the mouse events such as move, over, out, up and down with image object.

- For mousemove event, we declared a parameterized function. An event object pass as argument in funmove() function. event object clientX and clientY property return the X and Y coordinate of screen respectively. Those coordinate value display in span area.
• For *mouseup and mousedown events*; we are simply corresponding display the message in span area.

• For *mouseover and mouseout events*; we are change the image and also display the message in span area. *Image* object *src* property is used for set a image.

**PRG013.HTML:** Write JavaScript code for add inputted name in multi choice combo box (List box) when click on ADD button and remove the selected item from List box when double click on it.

```html
<HTML>
<HEAD>
<script type=text/javascript>
    var objcmb;
    function funAddItem()
    {
        objcmb=document.getElementById("cmbList");
        objtxt=document.getElementById("txtname");
        flg=0;
        for (i=0;i<objcmb.length;i++)
        {
            if (objcmb.options[i].text==objtxt.value)
            {
                flg=1;
                alert('Name Already Exist');
                break;
            }
        }
        if (flg==0)
        {
            objcmb.add(new Option(objtxt.value, objtxt.value));
        }
    }
</script>
</HEAD>
</HTML>
```
function funRemoveItem()
{
    selItem = objcmb.selectedIndex;
    objcmb.remove(selItem);
}

</script>
</HEAD>
<BODY>
Enter Name: <input type=text name=txtname id=txtname>
<input type=button name=btn1 value="Add" id=btn1
onclick="funAddItem()">
<br> <select name=cmbList id="cmbList" multiple
ondblclick="funRemoveItem()">
</select>
</BODY>
</HTML>

**Explanation:**

- SELECT object length property return the number of items in combo box/list box.
- SELECT object has **options collection/array** variable. It is used to access the elements of combo box. **options** collection return the **option object. Option object text** property returns the text value of element.
- SELECT object **selectedIndex** property return the selected item index number.
- SELECT object **add** method use to add element in combo box control. But it require a **option object** as an argument so it is created using **new Option(text,value)**.
- SELECT object **remove** method use to remove element from combo box but it require **index** number of deleted item.
PRG014.HTML: Write JavaScript code for validation. Only alphabets allowed in name text box and only numbers allowed in pincode text box.

```html
<HTML>
<HEAD>
<script type=text/javascript>
function funAlpha(e)
{
  if(window.event) // IE8 and earlier
  {
    keynum = e.keyCode;
  }
  else if(e.which) // IE9/Firefox/Chrome/Opera/Safari
  {
    keynum = e.which;
  }

  if ((keynum>=97) && (keynum<=122))
    return true;
  else
    return false;
}

function funDigit(e)
{
  if(window.event) // IE8 and earlier
  {
    keynum = e.keyCode;
  }
  else if(e.which) // IE9/Firefox/Chrome/Opera/Safari
  {
    keynum = e.which;
  }

  if ((keynum>=48) && (keynum<=57))
    return true;
  else
    return false;
}
</script>
</HEAD>
</HTML>
```
```javascript
if ((keynum>=48) && (keynum<=57))
    return true;
else
    return false;
}
</script>
</HEAD>
<BODY>

Enter Name: <input type=text name=txtname id=txtname onkeypress="return funAlpha(event)">
<br>
Enter PinCode: <input type=text name=txtpin id=txtpin onkeypress="return funDigit(event)"
</BODY>
</HTML>

Explanation:

- In above code, we declared function with argument & return value (true and false) and call in `keypress` event.

- Event object `keyCode` property returns the ASCII code of press key for IE8 or earlier version. `Which` property returns the ASCII code of press key for IE9/Firefox/Chrome/Opera/Safari etc...
JavaScript Timing Events

- With JavaScript, it is possible to execute some code NOT immediately after a function is called, but after a specified time interval. This is called timing events.
  - `setTimeout()` - executes a code some time in the future
  - `clearTimeout()` - cancels the `setTimeout()`

```html
<html>
<head>
<script language=javascript>
    var c=0,t
    function timedCount()
    {
        document.getElementById('txt').value=c
c=c+1
t=setTimeout("timedCount()",1000)
    }
    function stopCount()
    {
        clearTimeout(t)
    }
</script>
</head>
<body>
<form>
    <input type="button" value="Start" onClick="timedCount()">
    <input type="text" id="txt">
    <input type="button" value="Stop" onClick="stopCount()">
</form>
</body>
</html>
```