IT: 403 INTERNET PROGRAMMING – 1

HTML Basic:

Introduction of HTML, HTML Elements, HTML Basic Tags, HTML Formatting, HTML Entities, HTML Links, HTML Frames, HTML Tables, HTML Lists, HTML Forms, HTML Images, HTML Background, HTML Colors, HTML Color-values, HTML Color-names, Meta-tags and search engine, HTML url-encode, Publishing HTML on web.

Cascaded Style Sheet:

CSS Introduction, Syntax, Setting Background, Text, Font, Border, Margin, Padding, List, Dimension, Classification, Positioning, Pseudo-class, Pseudo-element, CSS Media Types, External, Internal and Inline style sheet.

Java Scripts:

Variables declaration, If...Else statement, Switch statement, Operators statement, Popup Boxes, Functions, For Loop, While Loop, Break Loops, For...In, Events, Try...Catch, Throw, onerror, Java Script Objects String, Date, Array, Boolean, Math, JS Browser, JS Cookies, Validation, Animation, Image Maps, Timing, Create Object

ASP.NET:

Introduction to .net framework, visual studio IDE, ASP.NET syntax, procedures, event handling, error handling, controls, Concepts of web.config, web controls, application development using ASP.NET.

Reference Books:

1. Teach yourself HTML in 24 hours ,
By Techmedia
2. HTML4 BIBLE
By Brayn Omdex
3. ABC of Javascript
By Purcell lee BPB publication
4. Pure java Script
By Gilliam Johnson Techmedia

5. professional VB.NET 2003 Wrox Publications

HTML Basic

INTRODUCTION TO HTML

What is an HTML File?

To publish information for global distribution, one needs a universally understood language, a kind of publishing mother tongue that all computers may potentially understand. The publishing language used by the World Wide Web is HTML (from HyperText Markup Language).

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- An HTML file is a text file containing small **markup tags**
- The markup tags tell the Web browser **how to display** the page
- An HTML file must have an **htm** or **html** file extension
- An HTML file can be created using a **simple text editor**

What is the World Wide Web?

The *World Wide Web (Web)* is a network of information resources. The Web relies on three mechanisms to make these resources readily available to the widest possible audience:

- A uniform naming scheme for locating resources on the Web (e.g., URIs).
- Protocols, for access to named resources over the Web (e.g., HTTP).
- Hypertext, for easy navigation among resources (e.g., HTML).

Introduction to URIs

Every resource available on the Web -- HTML document, image, video clip, program, etc. -- has an address that may be encoded by a *Universal Resource Identifier*, or "URI".
URIs typically consist of three pieces:

- The naming scheme of the mechanism used to access the resource.
- The name of the machine hosting the resource.
- The name of the resource itself, given as a path.

HTML Elements

HTML documents are text files made up of HTML elements.
HTML elements are defined using HTML tags.

HTML Tags

- HTML tags are used to mark-up HTML elements
- HTML tags are surrounded by the two characters < and >
- The surrounding characters are called angle brackets
- HTML tags normally come in pairs like and
- The first tag in a pair is the start tag, the second tag is the end tag
- The text between the start and end tags is the element content
- HTML tags are not case sensitive, means the same as <B>

An element consists of three basic parts: an opening tag, the element's content, and finally, a closing tag.

1. ** ** - opening paragraph tag
2. **Element Content** - paragraph words
3. ** ** - closing tag

Every (web) page requires four critical elements: the *html*, *head*, *title*, and *body* elements.

Tags:

1. HTML

<html> begins and ends each and every web page. Its sole purpose is to encapsulate all the HTML code and describe the HTML document to the web browser. Remember to close your HTML documents with the corresponding </html> tag at the bottom of the document.

Code:

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

Now save your file by Selecting Menu and then Save. Click on the "Save as Type" drop down box and select the option "All Files". When asked to name your file, name it "index.html", without the quotes. Double check that you did everything correctly and then press save. Now open your file in a new web browser so that you have the ability to *refresh* your page and see your changes.
If you opened up your index.html document, you should be starring at your very first blank (white) web page!

2. HEAD

The head element can contain information about the document. The browser does not display the "head information" to the user. The following tags can be in the head section: <base>, <link>, <Meta>, <script>, <style>, and <title>.

The HTML document is divided into <HEAD> and the <BODY> sections.

Code:

```
<html>
    <head>

    </head>
<body>
...
...
...
</body>
</html>
```

3. TITLE

This element defines the title of the document. Place the <title> tag within the <head> element to title your page.

Code:

```
<html>
    <head>
        <title>Title of the document</title>
    </head>
<body>
...
...
...
</body>
</html>
```

4. BODY

The body element defines the documents' body. It contains all the contents of the document (like text, images, colors, graphics, etc.).

→ Attributes

The attributes of body tag given in below table

	Attribute	Value	Description
1.	alink	rgb(x,x,x), #xxxxxx colorname	pecifies the color of the active links in the document.
2.	background	file_name	An image to use as the background.
3.	bgcolor	rgb(x,x,x), #xxxxxx colorname	The background color of the document.
4.	link	rgb(x,x,x), #xxxxxx colorname	Specifies the color of all the links in the document.
5.	text	rgb(x,x,x), #xxxxxx colorname	Specifies the color of the text in the document.
6.	vlink	rgb(x,x,x), #xxxxxx colorname	Specifies the color of the visited links in the document.

Code:

```
<HTML>
<HEAD>
        <TITLE>U.V.Patel College of Engineering</TITLE>
</HEAD>
        <BODY bgcolor="white" text="black"  link="red" alink="fuchsia" vlink="maroon">
                        ... document body...
        </BODY>
</HTML>
```

Example:-

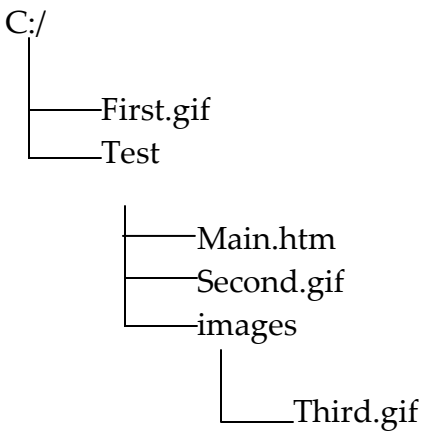
```
<BODY BACKGROUND=”webimage1.gif” TEXT=red>
```

The .gif file “webimage1.gif” should be present in the current working directory. If not ,a Relative path should be specified to where the .gif file exits.

Specify a Relative File Path:

If the file is not in the current working directory , the specified file must include the file path. The file path can be specified relative to the current directory. This is because, by default , the browser searches for the file only within a current directory.

For example, consider the following directory structure.



Consider working with file main.htm. To use all the different .gif files as background, the tag specifications will change as follows:

Use of the file First.gif

```
<BODY BACKGROUND= "../First.gif">
```

Use of the file Second.gif

```
<BODY BACKGROUND= "Second.gif">
```

Use of the file Third.gif

```
<BODY BACKGROUND= "images/Third.gif">
```

5. FOOTER Tag <ADDRESS>:

Just as a title can be placed in the title bar of the browser window, certain information is commonly placed at the foot of the web page. Copyright information, contact details of the creator of the webpage and so on are the type of information traditionally placed at the foot of the web page. The HTML tags are:

```
<ADDRESS>……..</ADDRESS>
```

Code:

```
<HTML>
<HEAD>
    <TITLE> This is Title</TITLE>
</HEAD>
<BODY><ADDRESS> This is Footer</ADDRESS></BODY>
</HTML>
```

HTML Basic Tags

The most important tags in HTML are tags that define headings, paragraphs and line breaks. The <HTML> and <BODY> tag included in HTML basic Tags.

Paragraph breaks (<P>)

A blank line always separates in textual material. The tag that provide this functionality is **<P>.** On encountering this tag the browser, moves onto new line, skipping one line between the previous line and the new line.

→ Attributes

Attribute	Value	Description
Align	Left, right, center justify	Specifies the alignment of the text within the paragraph.

Code:

```
<HTML>
<HEAD>
        <TITLE>web page for test</TITLE>
</HEAD>
<BODY>
                <P>This is some text in a very short paragraph</P>
                <P align="center">For instance, let's say you had a HUGE school or work...</P>
</BODY>
</HTML>
```

Line breaks (
)

When text needs to start from a new line and not continue on the same line (with out skipping a blank line), the **
** tag should be used. This tag simply jumps to the start of next line.

→ Standard Attributes

Attributes
Id, class, title, style

Code:

```
<HTML>
<HEAD><TITLE>UVPCE</TITLE></HEAD>
<BODY><P>Contact:<BR>U.V.Patel College of Engineering,<BR>Ganpat University.</P>
</BODY></HTML>
```

Heading Styles

A heading in HTML is just what you might expect, a title or subtitle. By placing text inside of <h1> (heading) tags, the text displays bold and the size of the text depends on the number of heading (1-6) means h1, h2, h3, h4, h5, h6. Headings are numbered 1-6, with 1 being the largest heading and 6 being the smallest.

→ Attributes

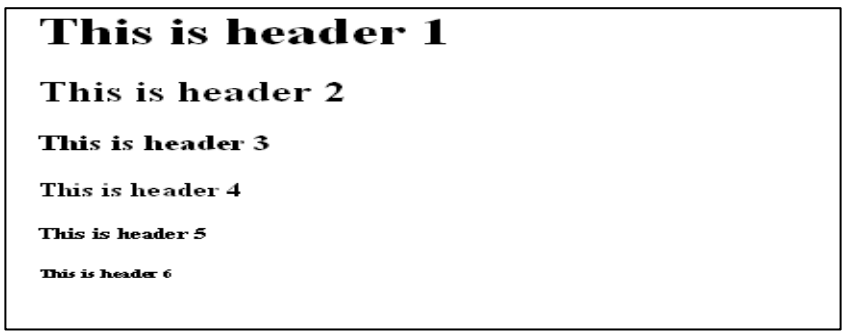
Attribute	Value	Description
Align	Left, right, center justify	Specifies the alignment of the text in the header.

Code:

```
<HTML>
<HEAD>
        <TITLE>UVPCE Web Page</TITLE>
</HEAD>
<BODY>
                <h1>This is header 1</h1>
                <h2>This is header 2</h2>
                <h3>This is header 3</h3>
                <h4>This is header 4</h4>
                <h5>This is header 5</h5>
                <h6>This is header 6</h6>

</BODY>
</HTML>
```

Output:



Drawing Lines<HR>

The Tag <HR> draws lines and horizontal rules. This tag draws a horizontal line across the whole page, wherever specified. The attributes to the <HR> tag are:

→ Attributes

Attribute	Value	Description
Align	Left, right, center	Specifies the alignment of the horizontal rule.
noshade	noshade	When set to true the rule should render in a solid color, when set to false the rule should render in a two-color "groove".
Size	Pixels %	Specifies the thickness (height) of the horizontal rule.
width	Pixels, %	Specifies the width of the horizontal rule
Color	#XXXXXX, color name	Specifies the color of the horizontal rule

Code:

```
<HTML>
<HEAD>
        <TITLE>UVPCE Web Page</TITLE>
</HEAD>
<BODY>
                <HR size=3>
                <h2>This is header 2</h2>
                <HR size=5 align=”left” noshade=”true” width=”425” color=”red”>
</BODY>
</HTML>
```

Comments in HTML<!-- -- >

The comment tag is used to insert a comment in the HTML source code. A comment will be ignored by the browser. You can use comments to explain your code, which can help you when you edit the source code at a later date.

```
<!-- This is a comment -->
```

Note that you need an exclamation point after the opening bracket, but not before the closing bracket.

HTML Formatting

- **TEXT Formatting:-**

BOLD<B>

Display text in BOLDFACE style. The tag used are **<B>……</B>**

Code:

```
<HTML>
<HEAD>
    <TITLE>UVPCE</TITLE>
</HEAD>
<BODY><P><B>Contact:</B><BR>U.V.Patel College of Engineering,<BR>Ganpat University.</P>
</BODY></HTML>
```

Italics<I>

Display text in ITALICS. The tag used are between**<I>……</I>**

Underline<U>

Display text as UNDERLINE. The tag used are between**<I>……</I>**

Code:

```
<HTML>
<HEAD>
    <TITLE>UVPCE</TITLE>
</HEAD>
<BODY><P><B><U>Contact:</U></B><BR><I>U.V.Patel College of Engineering,<BR>Ganpat University.</I></P>
</BODY></HTML>
```

Bigger Text<big>

Display text in bigger text. The tag used are between**<big>……</big>**

Small Text<big>

Display text in small text. The tag used are between**<small>……</small>**

Example:

```
<HTML>
<HEAD>
        <TITLE>UVPCE</TITLE>
</HEAD>
<BODY>
        <tt>Teletype text</tt><br />
        <i>Italic text</i><br />
        <b>Bold text</b><br />
        <big>Big text</big><br />
        <small>Small text</small><br />
</BODY></HTML>
```

Emphasized text

It is used to emphasis the text. The tag used are between**……**

Strong text

The element denotes strong emphasis. is usually display as bold . The tag used are between**……**

Subscript Text<sub>

The <sub> tag defines subscript text. The tag used are between**_{……}**

Superscript Text<sup>

The <sup> tag defines superscript text. The tag used are between **^{……}**

Inserted Text<ins>

The < ins> tag defines inserted text. The tag used are between **<ins> …… </ins>**

Deleted Text<del>

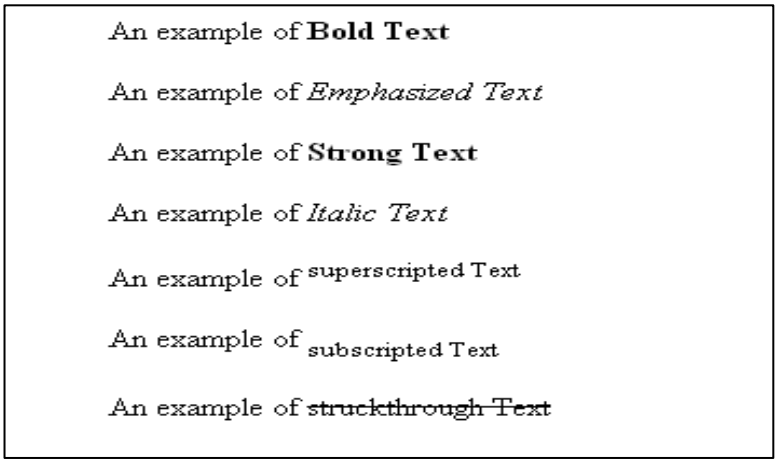
The <del> tag Defines text that has been deleted in a document. The tag used are between **<del> …… </del>**

Example:-

```
<BODY>
        <p>An example of <b>Bold Text</b></p>
        <p>An example of <em>Emphasized Text</em></p>
        <p>An example of <strong>Strong Text</strong></p>
        <p>An example of <i>Italic Text</i></p>
        <p>An example of <sup>superscripted Text</sup></p>
```

```
        <p>An example of <sub>subscripted Text</sub></p>
        <p>An example of <del>struckthrough Text</del></p>
    </BODY>
```

Output:



- **Computer Output Tags:-**

Teletype Text<TT>

Display text in teletype text. The tag used are between**<tt>……</tt>**

Computer code Text<code>

The <code> tag defines computer code text. The tag used are between **<code> …… </code>**

Keyboard text<KBD>

The <KBD> element denotes text that might be typed at the keyboard by a user. The tag used are between**<kbd>……</kbd>**

Example:

```
<html>
<body>
        enter your name<p>
        login:<kbd>unread</kbd>
        enter your password:<p>
        password:<kbd>unread</kbd>
</body></html>
```

Simple Computer code Text<samp>

The <samp> tag defines simple computer code text. The tag used are between **<samp> …… </samp>**

Variable Text<var>

The <var> tag defines a variable text. The tag used are between **<var> …… </var>**

Preformatted Text<pre>

The pre element defines preformatted text. The text enclosed in the pre element usually preserves spaces and line breaks. The text renders in a fixed-pitch font.

→ Attributes

Attribute	Value	Description
Width	Number	Defines the maximum number of characters per line (usually 40, 80 or 132)

Code:-

```
<html>
    <head>
    </head>
<body>
    <pre width=10>
        This text is
        in a fixed-pitch
        font, and it preserves
        both    spaces and
        line breaks
    </pre>
</body>
</html>
```

Example of Computer Output tags:-

```
<html>
<body>
    <code>Computer code</code>
    <br />
    <kbd>Keyboard input</kbd>
    <br />
    <tt>Teletype text</tt>
    <br />
    <samp>Sample text</samp>
```

```
        <br />
        <var>Computer variable</var>
        <br />
</body>
</html>
```

- **Citations, Quotations, and Definition Tags:-**

Abbreviations Text<abbr>

Indicates an abbreviated form, like "Inc.", "etc.". By marking up abbreviations you can give useful information to browsers. The tag used are between **<abbr> …… </abbr>**

Text Directions<bdo>(Bi-Direction override)

If your browser supports bi-directional override (bdo), the next line will be written from the right to the left (rtl): The tag used are between **<bdo> …… </bdo>**

→ Attributes

Attribute	Value	Description
Dir	Rtl ,ltr	Defines the text direction

Code:-

```
<bdo dir="rtl">U.V.Patel College of Engineering</bdo>
```

Output:-

gnireenignE fo egelloC letaP.V.U

Definition term<dfn>

Its indicates that this is the defining instance of the enclosed term. The tag used are between**<dfn>……</dfn>**

HTML Entities

Some characters like the < character, have a special meaning in HTML, and therefore cannot be used in the text .To display a less than sign (<) in HTML, we have to use a character entity.

- **Character Entities:-**

  - Some characters have a special meaning in HTML, like the less than sign (<) that defines the start of an HTML tag. If we want the browser to actually display these characters we must insert character entities in the HTML source.
  - A character entity has three parts: an ampersand (&), an entity name or a # and an entity number, and finally a semicolon (;).
  - To display a less than sign in an HTML document we must write: < or <
  - The advantage of using a name instead of a number is that a name is easier to remember. The disadvantage is that not all browsers support the newest entity names, while the support for entity numbers is very good in almost all browsers.

- **Non –Breaking Space :-**

  - The most common character entity in HTML is the non-breaking space.
  - Normally HTML will truncate spaces in your text. If you write 10 spaces in your text HTML will remove 9 of them. To add spaces to your text, use the   character entity.

- **The Most common Character Entities:-**

Result	Description	Entity Name	Entity Number
	Non-breaking space		
<	Less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	quotation mark	"	"
'	apostrophe	' (does not work in IE)	'

- **Some other commonly Used Character Entities:-**

Result	Description	Entity Name	Entity Number
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
§	section	§	§
©	copyright	©	©
®	registered trademark	®	®
×	multiplication	×	×
÷	division	÷	÷

HTML Images

Images are a staple of any web designer, so it is very important that you understand how to use them properly. Use the <img /> tag to place an image on your web page.

The <img> tag is empty, which means that it contains attributes only and it has no closing tag.

→ Attributes

Attribute	Value	Description
src	URL	The URL of the image to display
alt	Text	Defines a short description of the image
align	Top, bottom, middle left,right	Specifies how to align the image according to surrounding text.
border	Pixels	Defines a border around an image.
height	Pixels, %	Defines the height of an image
hspace	Pixels	Defines white space on the left and right side of the image.
vspace	Pixels	Defines white space on the top and bottom of the image.
width	Pixels %	Sets the width of an image

The alt attribute is used to define an "alternate text" for an image. The value of the alt attribute is an author-defined text:

<img src="banner.gif" **alt**="Banner UVPCE">

The "alt" attribute tells the reader what he or she is missing on a page if the browser can't load images. The browser will then display the alternate text instead of the image. It is a good practice to include the "alt" attribute for each image on a page, to improve the display and usefulness of your document for people who have text-only browsers.

<img src="uvpce.gif" align="bottom" width="48" height="48">

HTML Font

The <font> tag specifies the font face, font size, and font color of text.The <font> tag is used to add style, size, and color to the text on your site. Use the size, color, and face attributes to customize your fonts. Use a <basefont> tag to set all of your text to the same size, face, and color.

→ Attributes

Attribute	Value	Description
Face	list_of_fontnames	Defines the font of the text in the font element
Size	A number from 1 to 7. If basefont is specified you can specify a number from -6 to 6	Defines the size of the text in the font element.
color	rgb(x,x,x) #xxxxxx colorname	Defines the color of the text in the font element.

Code:-

```
<p><font size="7" face="Georgia, Arial" color="maroon">C</font>Customize
                Your font to achieve a desired look. </p>
```

Basefont - Set a Solid Base<basefont>……..</basefont>

With the basefont tag you will be able to set the default font for your web page. We highly recommend specifying a basefont if you plan on using any font with HTML. Below is the correct way to set your basefont.

The attributes are Basefont as same as <font> tag.

Example:-

```
<html>
<body>
        <basefont size="2" color="green">
            <p>This paragraph has had its font...</p>
            <p>This paragraph has had its font...</p>
            <p>This paragraph has had its font...</p>
        </basefont>
</body>
</html>
```

HTML Links

HTML allows linking to other HTML documents as well as images. Clicking on a section of text or an image in one web page will open an entire web page or an image. The text or an image that provides such linkages is called *Hypertext*, a *Hyperlink*, or a *Hotspot.*

- The hyperlink text/image is underlined.
- Links are created in web page by using **anchor (<A>….**text or image…. </**A>)**
- When the mouse cursor is placed over it, the standard arrow shaped mouse cursor changes to the shape of a hand.

The blue color, which appears by default , can be over-ridden. To change these link colors, there are three attributes that can be specified with the **<BODY>** tag.

	Attribute	**Value**	**Description**
1.	link	rgb(x,x,x), #xxxxxx colorname	Change the default color of a Hyperlink to whatever color is specified with the tag. The user can specify the color name or an equivalent hexadecimal number.
2.	alink	rgb(x,x,x), #xxxxxx colorname	Change the default color of a Hyperlink that activated to whatever color is specified with the tag.
3.	vlink	rgb(x,x,x), #xxxxxx colorname	Change the default color of a Hyperlink that is already visited to whatever color is specified with the tag.

Anything written between the <A> </A> tags becomes a hyperlink/hotspot. By clicking on the hyperlink navigation to a different web page or image takes place.

→ Anchor tag Attributes (for Text Section)

Attribute	**Value**	**Description**
href	URL	The target URL of the link
name	section_name	Use this attribute to create a bookmark in a document.
target	_blank _parent _self _top	• _blank - the target URL will open in a new window • _self - the target URL will open in the same frame as it was clicked • _parent - the target URL will open in the parent frameset • _top - the target URL will open in the full body of the window
type	mime_type	Specifies the MIME (Multipurpose Internet Mail Extensions) type of the target URL

The href attribute defines reference that the link refers to. Basically this is where the user will be taken if they wish to click this link.

Hypertext references can be Internal, Local, or Global.

- **Internal - Links to anchors on the current page**

Sometimes , a jump is required to a different location in the same document. Since the jump has to be targeted to a specific location . identify a location with a name and then jump to that location using the name.

Code: <A name="location_name">
< A href="#location_name">…….</A>

Example:-

```
<html>
<body>
    <p><a name="top"></a>
      Topic:-<br>
    <a href="#html_details">HTML tage</a><br>
    <a href="#head_details">Head tage</a><br>
    <a href="#body_details">BODY tage</a><br>
    <a href="#title_details">TITLE tage</a><br>
    </p><br>
    <p>
    <h2><a name="html_details">Html tag</a></h2>
    <p>begins and ends each and every web page. Its sole purpose is to encapsulate
    all the HTML code and describe the HTML document to the web browser.
    Remember to close your HTML documents with the corresponding html tag at
    the bottom of the document.</p>
    <h2><a name="head_details">Head tag</a></h2>
    <p>The head element can contain information about the document. The
    browser does not display the "head information" to the user. </p>
    <h2><a name="body_details">BODY tag</a></h2>
    <p>The body element defines the documents' body. It contains all the contents
    of the document (like text, images, colors, graphics, etc.).</p>
    <h2><a name="title_details">Title tag</a></h2>
    <p>This element defines the title of the document. Place the <title> tag within
    the <head> element to title your page.
    </p>
    <a href="#top>Back to Index</a>
</body></html>
```

- **Local - Links to other pages within your domain**

< A href=”news.htm”> News details </A>

Here “*news details*” becomes a hyperlink , and links to another document *news.htm*, which is present in the current working directory . if the file is not present in the current directory , a relative or absolute path can be specified.

- **Global - Links to other domains outside of your site**

< A href=”http://www.uvpce.ac.in”> U.V.Patel college of Engineering </A>

Here “*U.V.Patel college of Engineering”* becomes a hyperlink , and links to another webpage of http://www.uvpce.ac.in

Send a mail using a anchor tag:

webmaster

Images As Hyperlinks

Just as text can act as a hyperlink, so also images can act as hyperlinks. As seen, anything included within **<A> ..</A>** tags becomes a Hotspot. Thus, an image can be made a Hotspot by enclosing an **<IMG>** tag within the **<A>..</A>** tags. The **<IMG>** tag places the image on the screen, and because the **<IMG>** tag is enclosed within the **<A> </A>** tags. It becomes a Hotspot.

→ Anchor tag Attributes (Image)

Attribute	Value	Description
shape	rect rectangle circ circle poly polygon	Defines the type of region to be defined for mapping in the current area tag. Used with the coords attribute.
coords	if shape="rect" then coords="*left,top,right,bottom*" if shape="circ" then coords="*centerx,centery,radius*" if shape="poly" then coords="*x1,y1,x2,y2,..,xn,yn*"	Specifies the coordinates appropriate to the shape attribute to define a region of an image for image maps
href	*URL*	The target URL of the link

Code:

```
<a href="http://www.uvpce.ac.in" target="_blank> <img src="logo.gif" border="0"> </a>
```

When a hyperlink a created on an image. Clicking on any part of the image will lead to opening of the document specified in the <A HREF…> tag. If the image is a large is a large image and there is a need to link multiple documents to the same image, there has to be a technique that divides the image into multiple sections and allows linking of each section to a different document.

The technique that is implemented to achieve this is an *Image Map.* Image map can be created and applied to an image so specific portions of the image can be linked to a different file/image.

HTML Lists

There are three types of lists:

Unordered List(Bullets)
Ordered List(Numbering)
Definition Lists(Dictionary)

- **Unordered List(Bullets):**

An unordered list starts with the tag **<UL>**and ends with **</UL> .** Each list item starts with the tag **<LI>**. The attributes that can be specified with **<LI>** are

Attribute	Value	Description
TYPE	Fillround square	Specifies the type of the bullet. If TYPE=Fillround will give a solid round black bullet If TYPE=square will give a solid square black bullet

Example:-

```
<P>Departments of UVPCE<br>
<UL TYPE=FILLROUND>
        <LI>Computer Engineering.
        <LI>Information Technology.
        <LI>Mechanical Engineering.
</UL>
</P>
```

Output:-

Departments of UVPCE

- Computer Engineering.
- Information Technology.
- Mechanical Engineering.

- **Ordered List (Numbering):**

An ordered list starts with the tag **<OL>**and ends with **</OL> .** Each list items starts with the tag **<LI>**. The attributes that can be specified with **<LI>** are

Attribute	Value	Description
TYPE	1 A a I i	Controls the numbering schemes to be used If TYPE="1" will give counting numbers (1, 2 …..) If TYPE="A" will give Uppercase letters (A, B..…) If TYPE="a" will give Lowercase letters (a, b..…) If TYPE="I" will give Uppercase Roman Numerals (I, II..…) If TYPE="i" will give Lowercase Roman Numerals (i, ii..…)

Example:-

```
<P>Departments of UVPCE<br>
<OL TYPE= "1"  START= 6 >
        <LI>Computer Engineering.
        <LI>Information Technology.
        <LI>Mechanical Engineering.
</OL>
</P>
```

Output:-

Departments of UVPCE

6. Computer Engineering.
7. Information Technology.
8. Mechanical Engineering.

- **Definition List (Dictionary):**

Definition list values appear within tags **<DL>**and ends with **</DL> .** Definition lists consists of two parts:

Definition term appears after the tag <DT>
Definition description appears after the tag <DD>

Example:-

```
<P>Departments of UVPCE<br>
<DL>
        <DT> Computer Engineering.
        <DD>Description of Computer Engineering.
        <DT>Information Technology.
        <DD> Description of Information Technology.
.
</DL>
</P>
```

Output:-

Departments of UVPCE

Computer Engineering.
    Description of Computer Engineering.
Information Technology.
    Description of Information Technology. .

HTML Tables

A table is a two dimensional matrix, consisting of rows and columns. Tables are intended for displaying data in columns on a web page. All table related tags are included between the **<TABLE> </TABLE>** tags. Each row of a table is described between the **<TR></TR>** tags. Each row of a table is described between the <TD></TD> tags.

Table rows can be of two types.

- Header Rows
- Data Rows

- **Header rows**(A row that spans across columns of a table)

A table header row is defined using <TH> </TH> tags. The content of a table header row is automatically centered and appears in boldface.

- **Data rows**(Individual Data cells placed in the horizontal plane creates a data row)

There could be a single data cell (i.e. a single column table) or multiple data cells(i.e. a multi column table)

Data cells hold data that must be displayed in the table. A data row is defined using **<TR></TR>** tags. Text matter displayed in a data row is left justified by default. Any special formatting like boldface or italics is done by including appropriate formatting tags inside the **<TR></TR>** tags. An image can also be displayed in a data cell.

→ Attributes of <TABLE> tag.

Attribute	Value	Description
Align	Left, center, right	Aligns the table.
bgcolor	rgb(x,x,x) ,#xxxxxx colorname	Specifies the background color of the table.
border	Pixels	Specifies the border width. Set border="0" to display tables with no borders!
cellpadding	pixels , %	Specifies the space between the cell walls and contents
cellspacing	Pixels ,%	Specifies the space between cells
frame	Void, above, below hsides , lhs, rhs,vsides	Specifies which sides of the border surrounding a table

	box, border	will be visible
width	% ,pixels	Specifies the width of the table
background	Image path	Specifies the image path to display image as background of table.

Example:- Using the border cell padding and cell spacing attribute

```
<html>
<body>
<table border="1" cellpadding="2" cellspacing="1">
        <tr align="left">
                <th >Branch Name</th>
                <th>Branch Code</th>
                <th>Seat</th>
        </tr>
        <tr>
                <td>Computer Engineering</td>
                <td align="center">CE</td>
                <td>60</td>
        </tr>
        <tr>
                <td>Information technolgy</td>
                <td align="center">IT</td>
                <td>60</td>
                </tr>
        <tr>
                <td>Bio-Medical Engineering</td>
                <td align="center">BM</td>
                <td>60</td>
        </tr>
        </table>
```

Output:-

Branch Name	Branch Code	Seat
Computer Engineering	CE	60
Information technolgy	IT	60
Bio-Medical Engineering	BM	60

→ Attributes of <TH> and <TD> tag.

Attribute	Value	Description
Align	Left, right ,center justify, char	Specifies the horizontal alignment of cell content
bgcolor	rgb(x,x,x) ,#xxxxxx colorname	Specifies the background color of the table cell.
colspan	number	Indicates the number of columns this cell should span
rowspan	number	Indicates the number of rows this cell should span
width	Pixels ,%	Specifies the width of the table cell.

Example:- Using the cellspan and rowspan attribute

```
<html>
<body>
<table border="1" cellpadding="1" cellspacing="1" align="center">
<tr align="left">
        <th rowspan="2">Name</th>
        <th colspan ="3">Subjectwise Marks</th>
        <th rowspan="2">Total</th>
 </tr>
<tr>
        <th>IP-1</th>
        <th>OS</th>
        <th>DBMS-II</th>
</tr>
<tr>
        <td>Dipu</td>
        <td>85</td>
        <td>73</td>
        <td>70</td>
        <td>228</td>
</tr>
<tr>
        <td>Dev</td>
        <td>82</td>
        <td>90</td>
        <td>80</td>
        <td>252</td>
</tr>
```

```
<tr>
        <td>Niketan</td>
        <td>79</td>
        <td>60</td>
        <td>75</td>
        <td>214</td>
</tr>
</table>
</body>
</html>
```

Output:-

Name	Subjectwise Marks			Total
	IP-1	OS	DBMS-II	
Dipu	85	73	70	228
Dev	82	90	80	252
Niketan	79	60	75	214

The <CAPTION> tag

Often tables need to be given a heading, which gives the reader a context for the information in the tables. Table Heading are called Captions. Captions can be provided to a table by using **<CAPTION></CAPTION>** tags. This paired tag Appears within the **<TABLE></TABLE>** tags.

→ Attributes

Attribute	Value	Description
Align	Bottom ,Top	It controls placing of the caption with respect to the table. IF **ALIGN=BOTTOM** will place the caption immediately below the table. IF **ALIGN=TOP** will place the caption immediately above the table.

To Set Background Image and Background Color

Code

```
<table border="1"  background="uvpcebanner.jpg">
        .
        ..
</table>
```

Example: Table within a table

```
<html>
<body>
<table border="1">
<tr> <td>Department Code and Name
     <table border="1" bgcolor="Red">
          <tr><td>Dept Code</td>   <td>Name</td> </tr>
          <tr><td>CE</td><td>Computer Engineering</td> </tr>
          <tr><td>IT</td><td>Information Technology</td> </tr>
          <tr><td>BM</td><td>Bio-Medical Engineering</td> </tr>
     </table>
   </td>
</tr>
<tr>
 <td>Other Department Code
     <UL type=fillround>
          <li>ME</li>
          <li>EC</li>
          <li>MC</li>
     </ul>
 </td>
 </tr>
</table>
</body>
</html>
```

Output:

Department code and Name

Dept Code	Name
CE	Computer Engineering
IT	Information Technology
BM	Bio-Medical Engieering

Other Department Code

- ME
- EC
- MC

HTML Frames

INTRODUCTION TO FRAMES

Until now each web page when opened takes over the entire browser screen. The browser screen could not be split into separate sections, showing different but related information.

The HTML tags that divide a browser screen into two or more HTML recognizable unique regions is the **<FRAMESET></FRAMESET>** tags. Each unique region is called a frame. Each frame can be loaded with a different document and hence, allow multiple HTML documents to be seen concurrently .

The HTML frame is a powerful feature that enables a web page to be broken into different unique sections that, although related, operate independently of each other.

Whenever we use **<FRAMESET>** tag that time do not need to write **<BODY>** tag in html doc.

The disadvantages of using frames are:

- The web developer must keep track of more HTML documents
- It is difficult to print the entire page

The <FRAMESET>

The splitting of a browser screen into frames is accomplished with the **<FRAMESET>** and **</FRAMESET>** tags embedded into the HTML document. The **<FRAMESET></FRAMESET>** tags require one of the following two attributes depending on whether the screen has to be divided into rows or columns.

You cannot use the **<body></body>** tags together with the **<frameset></frameset>** tags! However, if you add a **<noframes>** tag containing some text for browsers that do not support frames, you will have to enclose the text in **<body></body>** tags.

→ Attributes

Attribute	Value	Description
cols	Pixels , % ,*	Defines the number and size of columns in a frameset
rows	Pixels ,% ,*	Defines the number and size of rows in a frameset

Example:

```
<html>
<frameset rows="33%,33%,33%"> -Divide the browser screen into 3 equal horizontal sections.
<frameset cols="50%,50%"> --- Splits the 1st Horizontal section into 2 equal vertical Sections.
</frameset>
<frameset cols="50%,50%">--- Splits the 2st Horizontal section into 2 equal vertical Sections.
</frameset>
</frameset>
</html>
```

<FRAME> tag

Once the browser screen is divided into rows(Horizontal Sections) and columns (Vertical Sections), each unique section defined can be loaded with different HTML documents. This is achieved by using the <FRAME> tag, which take in the following attributes.

→ Attributes

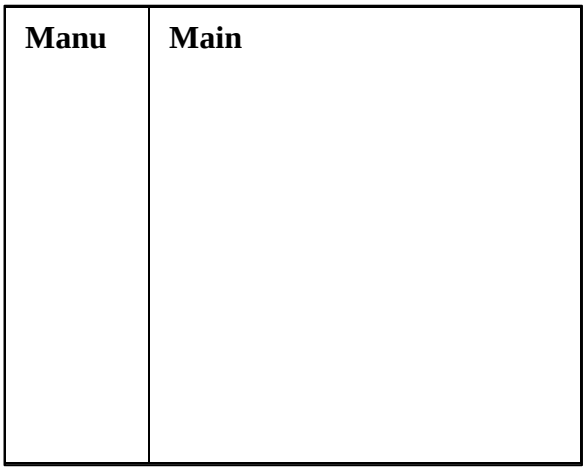
Attribute	Value	Description
frameborder	0 ,1	Specifies whether or not to display border around the frame
src	URL	Defines the URL of the file to show in the frame
Name	frame_name	Defines a unique name for the frame
marginheight	pixels	Defines the top and bottom margins in the frame
marginwidth	pixels	Defines the left and right margins in the frame
scrolling	yes, no ,auto	Determines scrollbar action
noresize	noresize	When set to noresize the user cannot resize the frame

Example:1 :The <frame> tag defines what HTML document to put into each frame

```
<frameset cols="25%,75%">
  <frame src="manu.htm">
  <frame src="main.htm">
</frameset>
```

In the example below we have a frameset with two columns. The first column is set to 25% of the width of the browser window. The second column is set to 75% of the width of the browser window. The HTML document "manu.htm" is put into the first column, and the HTML document "main.htm" is put into the second column:

Output

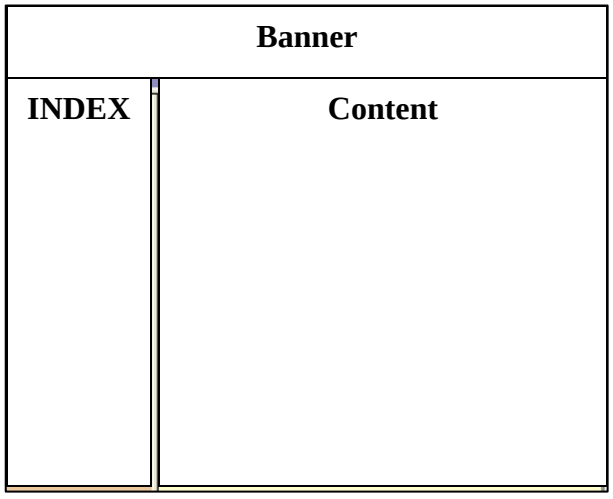


Example:2 : Mixed frameset

How to make a frameset with three documents, and how to mix them in rows and columns. The <frame> tag defines what HTML document to put into each frame

```
<html>
<frameset rows="12%,88%">
  <frame src="banner.htm">
  <frameset cols="25%,75%">
    <frame src="manu.htm">
    <frame src="content.htm">
  </frameset>
</frameset>
</html>
```

Output



Example:1 : Navigation frame

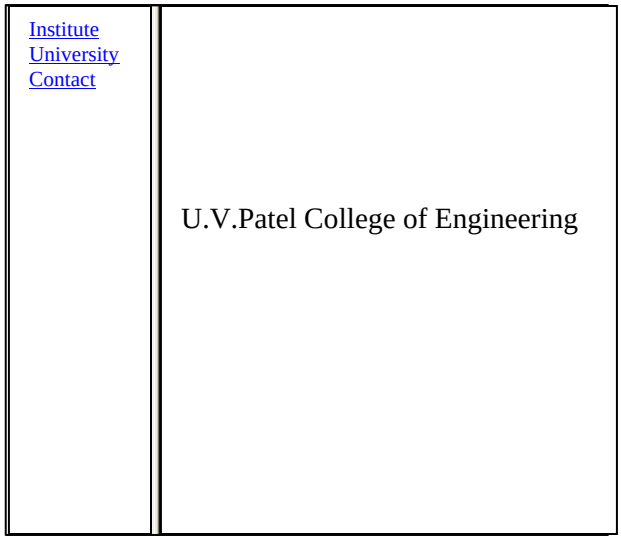
This example demonstrates how to make a navigation frame. The navigation frame contains a list of links with the second frame as the target. The file called "manu.htm" contains three links. The source code of the links:

```
<a href ="institute.htm" target ="showframe">Institute</a><br>
<a href ="university.htm" target ="showframe">University</a><br>
<a href ="contact.htm" target ="showframe">Contact</a>
```

The second frame will show the linked document.

```
<html>
<frameset cols="120,*">
    <frame src="manu.htm">
    <frame src=" institute.htm " name="showframe">
</frameset>
</html>
```

Output



Inline Frame<IFRAME> tag

The iframe element creates an inline frame that contains another document.

→ Attributes

Attribute	Value	Description
Align	Left, , right top ,middle bottom	Specifies how to align the iframe according to the surrounding text
frameborder	1, 0	Specifies whether or not to display a frame border
height	Pixels, %	Defines the height of the iframe
Width	Pixels,%	Defines the width of the iframe
marginheight	Pixels	Defines the top and bottom margins in the frame
marginwidth	Pixels	Defines the left and right margins in the frame
scrolling	yes, no ,auto	Determines scrollbar action
Name	Frame_name	Specifies a unique name of the iframe (to use in scripts)
Src	URL	The URL of the document to show in the iframe

Example:1

```
<html>
<body>
        <iframe  src =”http://uvpce.ac.in “   width=”100%” height=”100%”>
        </iframe>
</body>
</html>
```

Output:

HTML Forms

A form is an area that can contain form elements.

Form elements are elements that allow the user to enter information (like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.) in a form.

HTML forms provide a full range of GUI controls. Additionally , HTML , forms can automatically submit data collected in its controls to a web server.

When creating an interactive web site for the internet it is necessary to capture user input and process this input. Based on the result of this processing , appropriate information from a web site can be dispatched to be viewed

<FORM> tag

Each form object in the HTML page will be described between its own <FORM></FORM> tags. Should there be multiple forms (multiple occurrences of the form tag) described in the HTML page. The <FORM></FORM> tags are encountered that time browser create a 'forms array' in memory. This tracks the number of form objects described in the HTML page.

→ Attributes

Attribute	Value	Description
Action	URL	A URL that defines where to send the data when the submit button is pushed
Method	get post	The HTTP method for sending data to the action URL. Default is get. method="get": This method sends the form contents in the URL: URL?name=value&name=value. Note: If the form values contains non-ASCII characters or exceeds 100 characters you MUST use method="post". method="post": This method sends the form contents in the body of the request. Note: Most browsers are unable to bookmark post requests.
Name	form_name	Defines a unique name for the form
target	blank _self _parent _top	Where to open the target URL. • _blank - the target URL will open in a new window • _self - the target URL will open in the same frame as it was clicked

		• _parent - the target URL will open in the parent frameset • _top - the target URL will open in the full body of the window
enctype	mimetype	The mime type used to encode the content of the form

Example:1

```
<html>
	<body>
		<form name="form1" action="next.htm" method="get">
		…….
		</form>

	</body>
</html>
```

Whenever the page submit that time the next.htm display

<LABLE>

The label tag is an HTML forms tag that allows Web developers to tell the browser or user-agent that text appearing on the page is actually a label for a form element. The label tag says "this text isn't just text, it's describing this textarea and should be associated with it." The label tag also provides a larger clickable area for items like radio buttons, as you can click on the text that the label tag encloses as well as the radio button itself. The **<LABLE>..</LABLE>** tags used to display text on form.

Example:1

```
<html>
	<body>
		<form name="form1" action="next.htm" method="get">
		<lable>Hi Welcome to UVPCE</lable>
		</form>

	</body>
</html>
```

<INPUT>

The <input> tag defines the start of an input field where the user can enter data.

→ Attributes

Attribute	Value	Description
Type	button checkbox file hidden image password radio reset submit text	Indicates the type of the input element. The default value is "text"
Align	left right top texttop middle absmiddle baseline bottom absbottom	Defines the alignment of text following the image.
Alt	Text	Defines an alternate text for the image.
Checked	Checked	Indicates that the input element should be checked when it first loads .Note: Used with type="checkbox" and type="radio"
Disabled	Disabled	Disables the input element when it first loads so that the user can not write text in it, or select it. Note: Cannot be used with type="hidden"
maxlength	Number	Defines the maximum number of characters allowed in a text field. Note: Only used with type="text"
Name	field_name	Defines a unique name for the input element. Note: This attribute is required with type="button", type="checkbox", type="file", type="hidden", type="image", type="password", type="text", and

		type="radio"
Readonly	readonly	Indicates that the value of this field cannot be modified. Note: Only used with type="text"
Size	Number_of_char	Defines the size of the input element. Note: Cannot be used with type="hidden"
Src	URL	Defines the URL of the image to display. Note: Only used with type="image"
Value	Value	For buttons, reset buttons and submit buttons: Defines the text on the button. For image buttons: Defines the symbolic result of the field passed to a script. For checkboxes and radio buttons: Defines the result of the input element when clicked. The result is sent to the form's action URL. For hidden, password, and text fields: Defines the default value of the element. Note: Cannot be used with type="file" Note: This attribute is required with type="checkbox" and type="radio"

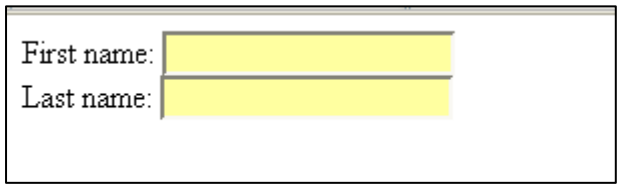
INPUT TYPE=TEXT

Text fields are used when you want the user to type letters, numbers, etc. in a form.

Example:

```
<html>
<body>
    <form>
        First name:
        <input type="text" name="firstname">
        <br>
        Last name:
        <input type="text" name="lastname">
    </form>
</body>
</html>
```

Output



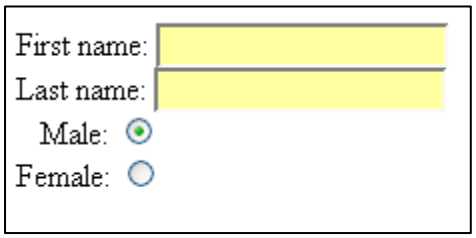
INPUT TYPE=Redio (Redio Buttons)

Radio Buttons are used when you want the user to select one of a limited number of choices.

Example:

```
<html>
<body>
    <form>
        First name:
        <input type="text" name="firstname">
        <br>
        Last name:
        <input type="text" name="lastname">
        <br>   Male:
        <input type="radio" checked="checked" name="Sex" value="male">
        <br>
        Female:
        <input type="radio" name="Sex" value="female">
    </form>
</body>
</html>
```

Output



INPUT TYPE=CheckBox

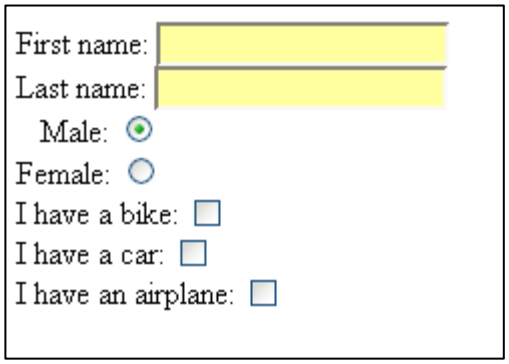
Checkboxes are used when you want the user to select one or more options of a limited number of choices.

Example:

```
<html>
<body>
    <form>
    First name:
```

```
                <input type="text" name="firstname">
                <br>
                Last name:
                <input type="text" name="lastname">
                <br>   Male:
                <input type="radio" checked="checked" name="Sex" value="male">
                <br>Female:
                <input type="radio" name="Sex" value="female">
                <br>I have a bike:
                <input type="checkbox" name="vehicle" value="Bike">
                <br>I have a car:
                <input type="checkbox" name="vehicle" value="Car" >
                <br>I have an airplane: <input type="checkbox" name="vehicle"
                value="Airplane" >
                </form>
        </body>
        </html>
```

Output



INPUT Type = button

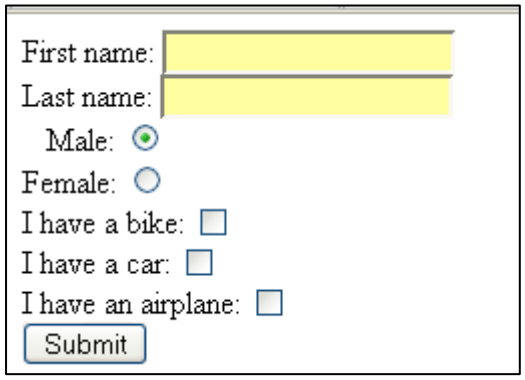
BUTTON defines a button which causes a script to run. Use the onClick attribute to give the script command(s). BUTTON is used *only* with scripting.

Example

```
        <html>
        <body>
                <form>
                First name:
                <input type="text" name="firstname">
                <br>
```

```
        Last name:
        <input type="text" name="lastname">
        <br>   Male:
        <input type="radio" checked="checked" name="Sex" value="male">
        <br>
        Female:
        <input type="radio" name="Sex" value="female">
        <br>
        I have a bike:
        <input type="checkbox" name="vehicle" value="Bike">
        <br />
        I have a car:
        <input type="checkbox" name="vehicle" value="Car">
        <br />
        I have an airplane:
        <input type="checkbox" name="vehicle" value="Airplane">
        <br>
        <input type="button" name="Submit" value="Submit">
        </form>
</body>
</html>
```

Output



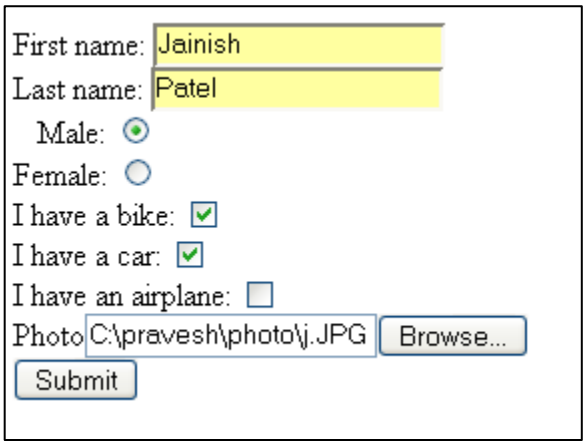
INPUT Type = File

FILE is used for doing file uploads in a form. File uploads are a relatively new and still not well-standardized type of form input, but they show great promise once the bugs are ironed out. File uploads allow you to send an entire file from your computer to the web server as part of your form input.

Example

```
<html>
<body>
<form>
        First name:
        <input type="text" name="firstname">
        <br>
        Last name:
        <input type="text" name="lastname">
        <br>   Male:
        <input type="radio" checked="checked" name="Sex" value="male">
        <br>
        Female:
        <input type="radio" name="Sex" value="female">
        <br>
        I have a bike:
        <input type="checkbox" name="vehicle" value="Bike">
        <br />
        I have a car:
        <input type="checkbox" name="vehicle" value="Car">
        <br />
        I have an airplane:
        <input type="checkbox" name="vehicle" value="Airplane">
        <br>
        Photo<input type=file value="filepath" >
        <br>
        <input type="button" name="Submit" value="Submit">
</form>
</body>
</html>
```

Output



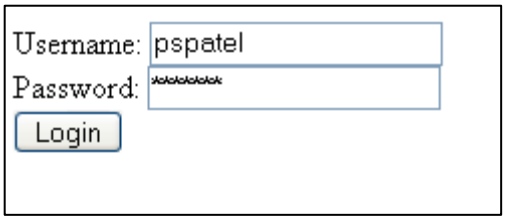
INPUT Type = Password (Password Fields)

The browser displays asterisks or bullets instead of characters in a password field.

Example

```
<html>
<body>
        <form action="">
        Username:
        <input type="text" name="user" size="20">
        <br>
        Password:
        <input type="password" name="password" size="20">
        <br>
        <input type="button" name="submit" value="Login">
        </form>
</body>
</html>
```

Output



INPUT Type=Hidden (Hidden Field):

HIDDEN indicates that the field is invisible and the user never interacts with it.

Example

```
<H2>Your Reply</H2>
<FORM METHOD=POST ACTION="mailreply.asp">
        <INPUT TYPE=HIDDEN NAME="postingID" value="98765">
        name:   <INPUT NAME="realname" SIZE=30><BR>
        email:  <INPUT NAME="email"><BR>
        subject: <INPUT NAME="subject" VALUE="Re: Mail Subject" SIZE=30>
```

```
<P>
comments:<BR>
<TEXTAREA NAME="comments" COLS=50 ROWS=10 WRAP=VIRTUAL>
hi How r u?:
: UVPCE site Uploaded Sucessfully.....

From:-
Pravesh.S Patel
</TEXTAREA>
<P><INPUT TYPE=SUBMIT VALUE="Send!">
</FORM>
```

Output

INPUT Type =Image:

IMAGE creates an image that is also a "submit" button. When the user clicks on the image, the form is submitted.

Example

```
<html>
        <FORM ACTION="next.htm">
```

```
        name: <INPUT NAME="realname">
        <INPUT  TYPE=IMAGE  SRC="submit.gif"  HEIGHT=50
        WIDTH=100  ALT="Submit!" ALIGN=ABSMIDDLE  >
        </FORM>
</HTML>
```

Output

TEXTAREA Tag(<Textarea>..</Textarea>)

Defines a text-area (a multi-line text input control). A user can write text in the text-area. In a text-area you can write an unlimited number of characters. The default font in the text-area is fixed pitch.

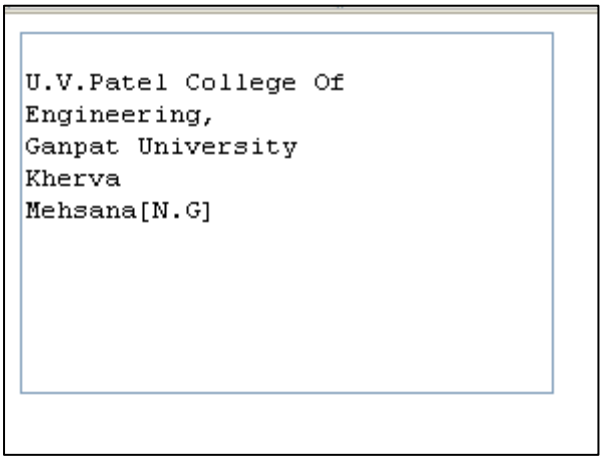
→ Attributes

Attribute	Value	Description
name	name_of_textarea	Specifies a name for the text-area
cols	number	Specifies the number of columns visible in the text-area
rows	number	Specifies the number of rows visible in the text-area
disabled	disabled	Disables the text-area when it is first displayed
readonly	readonly	Indicates that the user cannot modify the content in the text-area

Example

```
<html>
<body>
        <textarea rows="10" cols="30">
        U.V.Patel College Of Engineering,
        Ganpat University
        Kherva
        Mehsana[N.G]
        </textarea>
</body>
</html>
```

Output



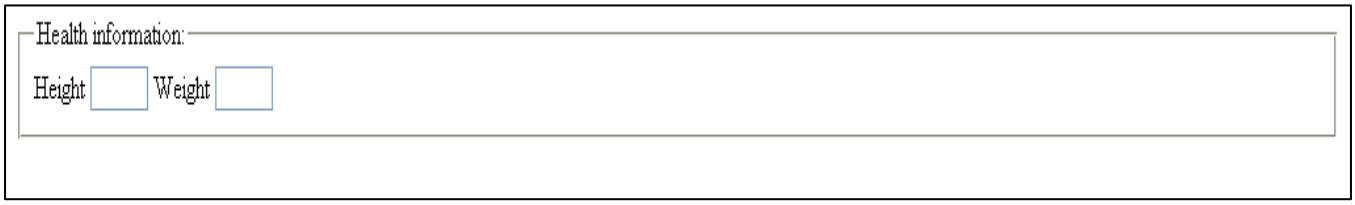
FIELDSET Tag(<Fieldset>..</Fieldset>)

The fieldset element draws a box around its containing elements.

Example

```
<html>
<body>
    <fieldset>
        <legend>Health information:</legend>
        <form action="">
        Height <input type="text" size="3" />
        Weight <input type="text" size="3" />
        </form>
    </fieldset>
</body>
</html>
```

Output



Drop-Dwon List(<Select>..</Select>)

A drop down menu is a popular way to cram a lot of links into a small space. A drop down menu (also simply called a "dropdown") is a <SELECT> list of web pages.

→ Attributes(<SELECT>)

Attribute	Value	Description
name	unique_name	Defines a unique name for the drop-down list
disabled	disabled	When set, it disables the drop-down list
multiple	multiple	When set, it specifies that multiple items can be selected at a time
size	number	Defines the number of visible items in the drop-down list

Drop down lists have several options a user can select.
The **<option>** tag defines an option in the drop-down list.

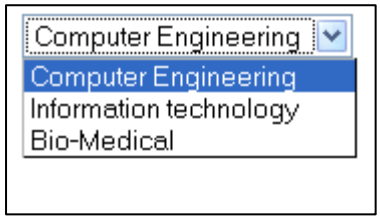
→ Attributes(<OPTION>)

Attribute	Value	Description
selected	selected	Specifies that the option should appear selected (will be displayed first in the list)
disabled	disabled	Specifies that the option should be disabled when it first loads
label	text	Defines a label to use when using <optgroup>
value	text	Defines the value of the option to be sent to the server

Code

```
<select>
    <option>Computer Engineering</option>
    <option>Information technology</option>
    <option>Bio-Medical</option>
</select>
```

Ouput



By default the first coded <option> will be displayed or selected as the default. We can change this using the selected attribute.
In previous example the "computer engineering" option is first that's why that display first in list , but suppose we want to set "Information technology" is default that time code is given below..

```
<select>
<option value=ce>Computer Engineering</option>
<option selected="selected">Information technology</option>
<option>Bio-Medical</option>
</select>
```

Output

Option Group(<optgroup>..</optgroup>)

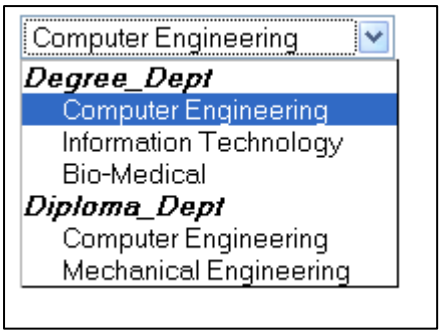
Defines an option group. This element allows you to group choices. When you have a long list of options, groups of related choices are easier to handle. For example institute wise departments .in Departments of Degree College and Department of Diploma College.

Example

```
<html>
<body>
    <form action="">
    <select>
    <optgroup label="Degree_Dept">
        <option value ="CE">Computer Engineering</option>
        <option value ="IT">Information Technology</option>
        <option value ="BM">Bio-Medical</option>
    </optgroup>
    <optgroup label="Diploma_Dept">
        <option value ="CE_d">Computer Engineering</option>
        <option value ="ME">Mechanical Engineering</option>
    </optgroup>
    </select>
```

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

Output



HEAD tags

The head element contains general information, also called meta-information, about a document. Meta means "information about".

You can say that meta-data means information about data, or meta-information means information about information.

Information Inside the Head Element

The elements inside the head element should not be displayed by a browser.

According to the HTML standard, only a few tags are legal inside the head section. These are: <base>, <link>, <meta>, <title>, <style>, and <script>.

<BASE> Tag

The base element specifies a base URL for all the links in a page.

In HTML the <base> tag has no end tag.

The <base> tag must go inside the head element.

→ Attributes

Attribute	Value	Description
Href	URL	Specifies the URL to use as the base URL for links in the page
Target	_blank _parent _self _top	Where to open all the links on the page. This attribute can be overridden by using the target attribute in each link. • _blank - all the links will open in new windows • _self - all the links will open in the same frame they where clicked • _parent - all the links will open in the parent frameset • _top - all the links will open in the full body of the window

Example

Assume that the absolute address for an image is:

Now we insert the <base> tag, which specifies a base URL for all of the links in a page, in the head section of a page:

```
<head>
    <base href="http://www.w3schools.com/images/" />
</head>
```

When inserting images on the page in the example above, we just have to specify the relative address, and the browser will look for that file using the full URL, "http://www.w3schools.com/images/smile.gif":

<LINK> Tag

This element defines the relationship between two linked documents.

In HTML the <link> tag has no end tag.

The link element is an empty element, it contains attributes only.

→ Attributes

Attribute	Value	Description
href	URL	The target URL of the resource
rel	alternate appendix bookmark chapter contents copyright glossary help home index	Defines the relationship between the current document and the targeted document

	next prev section start stylesheet subsection	
type	MIME_type like: text/css text/javascript image/gif	Specifies the MIME type of the target URL

This element goes only in the head section, but it can appear any number of times.

Example

```
<head>
    <link rel="stylesheet" type="text/css" href="mainstyle.css" />
</head>
```

<META> Tag

The <meta> element provides meta-information about your page, such as descriptions and keywords for search engines and refresh rates.

In HTML the <meta> tag has no end tag.

Metadata is always passed as name/value pairs.

→ Attributes

Attribute	**Value**	**Description**
name	author description keywords generator revised others	Connects the content attribute to a name
content	some_text	Defines meta information to be associated with http-equiv or name
http-equiv	content-type expires refresh set-cookie	Connects the content attribute to an HTTP header

Example

Define keywords for search engines:

<meta name="keywords" content="HTML, CSS, JavaScript, ASP.net" />

Define a description of your web page:

<meta name="description" content="Free Web tutorials on HTML, CSS, and javascript" />

<!DOCTYPE> Tag

The <!DOCTYPE> declaration is the very first thing in your document, before the <html> tag. This tag tells the browser which HTML or XHTML specification the document uses.

The <!DOCTYPE> tag does not have an end tag!

HTML 4.01 specifies three document types: Strict, Transitional, and Frameset.

HTML Background

A good background can make a Web site look really great.

GOOD BACKGOUND

An example of a background color and a text color that makes the text on the page easy to read.

Example:-

```
<html>
<body bgcolor="#d0d0d0">
<p>
    This is a paragraph. This is a paragraph. This is a paragraph. This is a paragraph. This is a paragraph.
</p>
<p>
    This is another paragraph. This is another paragraph. This is another paragraph. This is another paragraph.
</p>
</body>
</html>
```

Output

This is a paragraph. This is a paragraph. This is a paragraph. This is a paragraph. This is a paragraph.

This is another paragraph. This is another paragraph. This is another paragraph. This is another paragraph.

BAD BACKGOUND

An example of a background color and a text color that makes the text on the page difficult to read.

This is a paragraph. This is a paragraph. This is a paragraph. This is a paragraph. This is a paragraph.

This is another paragraph. This is another paragraph. This is another paragraph. This is another paragraph.

Backgrounds

The <body> tag has two attributes where you can specify backgrounds. The background can be a color or an image.

Bgcolor

The bgcolor attribute specifies a background-color for an HTML page. The value of this attribute can be a hexadecimal number, an RGB value, or a color name:

```
<body bgcolor="#000000">
<body bgcolor="rgb(0,0,0)">
<body bgcolor="black">
```

The lines above all set the background-color to black.

Background

The background attribute specifies a background-image for an HTML page. The value of this attribute is the URL of the image you want to use. If the image is smaller than the browser window, the image will repeat itself until it fills the entire browser window.

```
<body background="clouds.gif">
```

If you want to use a background image, you should keep in mind:

- Will the background image increase the loading time too much?
- Will the background image look good with other images on the page?
- Will the background image look good with the text colors on the page?
- Will the background image look good when it is repeated on the page?
- Will the background image take away the focus from the text?

HTML Colors

Colors are displayed combining RED, GREEN, and BLUE light sources.

Color Values

HTML colors can be defined as a hexadecimal notation for the combination of Red, Green, and Blue color values (RGB).

The lowest value that can be given to one light source is 0 (hex #00) and the highest value is 255 (hex #FF).

The table below shows the result of combining Red, Green, and Blue light sources:.

Color	Color HEX	Color RGB
	#000000	rgb(0,0,0)
	#FF0000	rgb(255,0,0)
	#00FF00	rgb(0,255,0)
	#0000FF	rgb(0,0,255)
	#FFFF00	rgb(255,255,0)
	#00FFFF	rgb(0,255,255)
	#FF00FF	rgb(255,0,255)
	#C0C0C0	rgb(192,192,192)
	#FFFFFF	rgb(255,255,255)

Standard Color Names

The color names are: aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.

Cross-browser Color Values

Some years ago, when most computers only supported 256 different colors, a list of 216 Web Safe Colors was suggested as a Web standard. The reason for this was that the Microsoft and Mac operating system used 40 different "reserved" fixed system colors (about 20 each).

We are not sure how important this is now, since most computers today have the ability to display millions of different colors, but the choice is left to you.

The 216 cross-browser color palette was created to ensure that all computers would display the colors correctly when running a 256 color palette:

000000	000033	000066	000099	0000CC	0000FF
003300	003333	003366	003399	0033CC	0033FF
006600	006633	006666	006699	0066CC	0066FF
009900	009933	009966	009999	0099CC	0099FF
00CC00	00CC33	00CC66	00CC99	00CCCC	00CCFF
00FF00	00FF33	00FF66	00FF99	00FFCC	00FFFF
330000	330033	330066	330099	3300CC	3300FF
333300	333333	333366	333399	3333CC	3333FF
336600	336633	336666	336699	3366CC	3366FF
339900	339933	339966	339999	3399CC	3399FF
33CC00	33CC33	33CC66	33CC99	33CCCC	33CCFF
33FF00	33FF33	33FF66	33FF99	33FFCC	33FFFF
660000	660033	660066	660099	6600CC	6600FF
663300	663333	663366	663399	6633CC	6633FF
666600	666633	666666	666699	6666CC	6666FF
669900	669933	669966	669999	6699CC	6699FF
66CC00	66CC33	66CC66	66CC99	66CCCC	66CCFF
66FF00	66FF33	66FF66	66FF99	66FFCC	66FFFF
990000	990033	990066	990099	9900CC	9900FF
993300	993333	993366	993399	9933CC	9933FF
996600	996633	996666	996699	9966CC	9966FF
999900	999933	999966	999999	9999CC	9999FF
99CC00	99CC33	99CC66	99CC99	99CCCC	99CCFF
99FF00	99FF33	99FF66	99FF99	99FFCC	99FFFF
CC0000	CC0033	CC0066	CC0099	CC00CC	CC00FF
CC3300	CC3333	CC3366	CC3399	CC33CC	CC33FF
CC6600	CC6633	CC6666	CC6699	CC66CC	CC66FF
CC9900	CC9933	CC9966	CC9999	CC99CC	CC99FF
CCCC00	CCCC33	CCCC66	CCCC99	CCCCCC	CCCCFF
CCFF00	CCFF33	CCFF66	CCFF99	CCFFCC	CCFFFF
FF0000	FF0033	FF0066	FF0099	FF00CC	FF00FF
FF3300	FF3333	FF3366	FF3399	FF33CC	FF33FF
FF6600	FF6633	FF6666	FF6699	FF66CC	FF66FF
FF9900	FF9933	FF9966	FF9999	FF99CC	FF99FF
FFCC00	FFCC33	FFCC66	FFCC99	FFCCCC	FFCCFF
FFFF00	FFFF33	FFFF66	FFFF99	FFFFCC	FFFFFF