HTML



Definitions

- W W W World Wide Web.
- HTML HyperText Markup Language The Language of Web Pages on the World Wide Web. HTML is a text formatting language.
- URL Uniform Resource Locator.
- Browser A software program which is used to show web pages.

- HTML stands for Hypertext Markup Language, and it is the most widely used language to write Web Pages.
- Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.

• As its name suggests, HTML is a Markup Language which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

Basic HTML Document

```
<!DOCTYPE html>
<html>
<head>
<title>This is document title</title>
</head>
<body>
<h1>This is a heading</h1>
Document content goes here....
</body>
</html>
```

- "Normal text" surrounded by bracketed tags that tell browsers how to display web pages
- Pages end with ".htm" or ".html"
- HTML Editor A word processor that has been specialized to make the writing of HTML documents more effortless.

Tags

- As told earlier, HTML is a markup language and makes use of various tags to format the content.
- These tags are enclosed within angle braces
 <Tag Name>.
- Except few tags, most of the tags have their corresponding closing tags. For example, <html> has its closingtag</html> and <body> tag has its closing tag </body> tag etc.

- <!DOCTYPE...> :This tag defines the document type and HTML version.
- <html> :This tag encloses the complete HTML document and mainly comprises of document header which is represented by <head>...</head> and document body which is represented by <body>...</body> tags.

- head>:This tag represents the document's header which can keep other HTML tags like <title>, <link> etc.
- <title> :The <title> tag is used inside the <head> tag to mention the

document title.

 <body> :This tag represents the document's body which keeps other HTML tags

like <h1>, <div>, etc.

Choosing Text Editor

- There are many different programs that you can use to create web documents.
- HTML Editors enable users to create documents quickly and easily by pushing a few buttons. Instead of entering all of the HTML codes by hand.
- These programs will generate the HTML Source Code for you.

Choosing Text Editor

HTML Editors are excellent tools for experienced web developers; however; it is important that you learn and understand the HTML language so that you can edit code and fix "bugs" in your pages.

HTML Page Creation & Editing

In this chapter you will learn to create HTML pages with a standard text editor.

Objectives

Upon completing this section, you should be able to

- 1. Choose a Text Editor.
- 2. Create a Basic Starting Document.
- 3. Understand and set Document Properties.
- 4. View Your Results in a Browser.

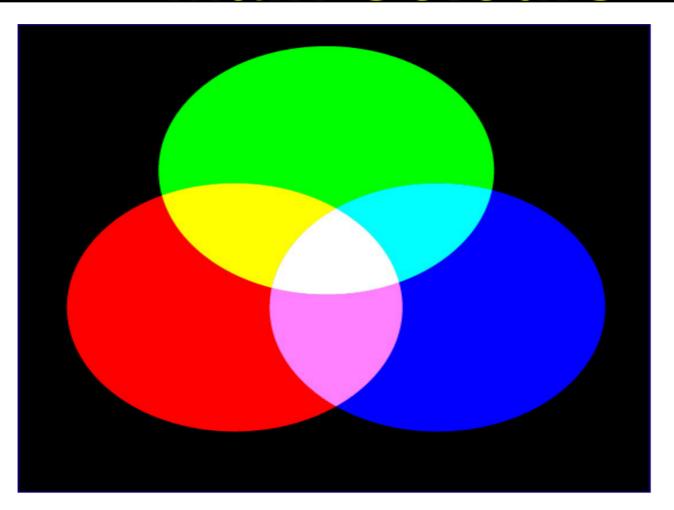
Creating a Basic Starting Document

```
<HTML>
<HFAD>
            <TITLE>RGUKT RKVALLEY</TITLE>
</HEAD>
<BODY>
 This is what is displayed.
</BODY>
</HTML>
```

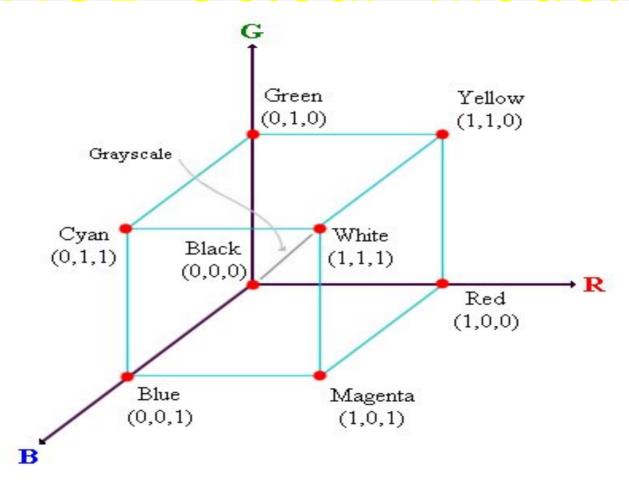
Color Codes

 Colors are set using "RGB" color codes, which are, represented as hexadecimal values. Each 2digit section of the code represents the amount, in sequence, of red, green or blue that forms the color. For example, a RGB value with 00 as the first two digits has no red in the color.

Main Colours



RGB Colour Model



16 Basic Colors

Color Name	RGB Triplet	Hexadecimal	Color Name	RGB Triplet	Hexadecimal
Aqua	(0,255,255)	00FFFF	Navy	(0,0,128)	000080
Black	(0,0,0)	000000	Olive	(128,128,0)	808000
Blue	(0,0,255)	0000FF	Purple	(128,0,128)	800080
Fuchsia	(255,0,255)	FF00FF	Red	(255,0,0)	FF0000
Gray	(128,128,128)	808080	Silver	(192,192,192)	C0C0C0
Green	(0,128,0)	008000	Teal	(0,128,128)	08080
Lime	(0,255,0)	00FF00	White	(255,255,255)	FFFFFF
Maroon	(128,0,0)	800000	Yellow	(255,255,0)	FFFF00

		Color	\mathbb{C}^{C}	des
1.	WHITE		1.	#FFFFFF
2.	BLACK			#000000
3.	RED			#FF0000
4.	GREEN		4.	#00FF00
5.	BLUE		5.	#0000FF
6.	MAGENTA		6.	#FF00FF
7.	CYAN			#00FFFF
8.	YELLOW		8.	#FFFF00

#70DB93

10. #5C3317

11. #9F5F9F

12. #B5A642

13. #B87333

14. #FF6EC7

15. #FF7F00

9. AQUAMARINE

11. VIOLET

12. BRASS

14. PINK

13. COPPER

15. ORANGE

10. BAKER'S CHOCOLATE

The Body Element

- The BODY element of a web page is an important element in regards to the page's appearance. Here are the attributes of the **BODY** tag to control all the levels:
 - TEXT="#RRGGBB" to change the color of all the text on the page (full page text color.)
- This element contains information about the page's background color, the background image, as well as the text and link colors.

Background Color

- It is very common to see web pages with their background color set to white or some other colors.
- To set your document's background color, you need to edit the <BODY> element by adding the BGCOLOR attribute. The following example will display a document with a white background color:

<BODY BGCOLOR="#FFFFFF"></BODY>

TEXT Color

The TEXT attribute is used to control the color of all the normal text in the document. The default color for text is black. The TEXT attribute would be added as follows:

<BODY BGCOLOR="#FFFFF"
TEXT="#FF0000"></BODY>

In this example the document's page color is white and the text would be red.

LINK, VLINK, and ALINK

These attributes control the colors of the different link states:

- 1. LINK initial appearance default = Blue.
- 2. VLINK visited link default = Purple.
- 3. ALINK –active link being clicked–default= Yellow.
- The Format for setting these attributes is:

```
<BODY BGCOLOR="#FFFFF" TEXT="#FF0000"
LINK="#0000FF"
VLINK="#FF00FF"
ALINK="FFFF00"> </BODY>
```

Using Image Background

- The BODY element also gives you ability of setting an image as the document's background.
- An example of a background image's HTML code is as follows:

```
<BODY BACKGROUND="hi.gif"
BGCOLOR="#FFFFFF"></BODY>
```

Headings, Paragraphs, Breaks & Horizontal Rules

In this chapter you will add headings to your page, insert paragraphs, add some breaks, and add horizontal rules.

Objectives

Upon completing this section, you should be able to

- 1. List and describe the different Heading elements.
- 2. Use Paragraphs to add text to a document.
- Insert breaks where necessary.
- Add a Horizontal Rule.

Headings, <Hx> </Hx>

- Any document starts with a heading. You can use different sizes for your headings. HTML also has six levels of headings, which use the elements <h1>, <h2>, <h3>, <h4>, <h5>, and<h6>.
- While displaying any heading, browser adds one line before and one line after that heading.
- **H1**: should be used as the highest level of heading, **H2** as the next highest, and so forth.
- You should not skip heading levels: e.g., an **H3** should not appear after an **H1**, unless there is an **H2** between them.

Headings, <Hx> </Hx>

```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<H2> Heading 2 </H2>
<H3> Heading 3 </H3>
<H4> Heading 4 </H4>
<H5> Heading 5 </H5>
<H6> Heading 6 </H6>
</BODY>
</HTML>
```

Heading 1
Heading 2
Heading 3
Heading 4
Heading 5

Heading 6

Paragraphs, <P> </P>

- The tag offers a way to structure your text into different paragraphs. Each paragraph of text should go in between an opening and a closing tag.
- Paragraphs allow you to add text to a document in such a way that it will automatically adjust the end of line to suite the window size of the browser in which it is being displayed. Each line of text will stretch the entire length of the window.

Paragraphs, <P> </P>

```
<HTML><HEAD>
<TITLE> Example Page</TITLE>
</HFAD>
<BODY></H1> Heading 1 </H1>
<P> Paragraph 1, ....</P>
<H2> Heading 2 </H2>
<P> Paragraph 2, ....</P>
<H3> Heading 3 </H3>
<P> Paragraph 3, ....</P>
<H4> Heading 4 </H4>
<P> Paragraph 4, ....</P>
<H5> Heading 5 </H5>
<P> Paragraph 5, ....</P>
<H6> Heading 6</H6>
<P> Paragraph 6, ....</P>
</BODY></HTML>
```

Heading 1

Paragraph 1,....

Heading 2

Paragraph 2,....

Heading 3

Paragraph 3,....

Heading 4

Paragraph 4,....

Heading 5

Paragraph 5,....

Heading 6

Paragraph 6,....

Break,

- Line breaks allow you to decide where the text will break on a line or continue to the end of the window.
- A
 is an empty Element, meaning that it may contain attributes but it does not contain content.
- The
 element does not have a closing tag.

Break,


```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<P>Paragraph 1, <BR>
Line 2 <BR> Line 3 <BR>....
</P>
</BODY>
</HTML>
```

Heading 1

Paragraph 1,....

Line 2

Line 3

. . . .

Horizontal Rule, <HR>

- The <HR> element causes the browser to display a horizontal line (rule) in your document.
- <HR> does not use a closing tag,

Horizontal Rule, <HR>

Attribute	Description	Default Value
SIZE	Height of the rule in pixels	2 pixels
WIDTH	Width of the rule in pixels or percentage of screen width	100%
NOSHADE	Draw the rule with a flat look instead of a 3D look	Not set (3D look)
ALIGN	Aligns the line (Left, Center, Right)	Center
COLOR	Sets a color for the rule (IE 3.0 or later)	Not set

Horizontal Rule, <HR>

```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<P>Paragraph 1, <BR>
Line 2 <BR>
<HR>Line 3 <BR>
</P>
</BODY>
</HTML>
```

Heading 1

Paragraph 1,....

Line 2

Line 3

Character Formatting

In this chapter you will learn how to enhance your page with Bold, Italics, and other character formatting options.

Objectives

Upon completing this section, you should be able to

- 1. Change the color and size of your text.
- Use Common Character Formatting Elements.
- Align your text.
- 4. Add special characters.
- Use other character formatting elements.

Bold, Italic and other Character Formatting Elements

- Two sizes bigger//FONT>
- The size attribute can be set as an absolute value from 1 to 7 or as a relative value using the "+" or "-" sign. Normal text size is 3 (from -2 to +4).
- Bold
- <|> | <|> | talic <||>
- <U><u>Underline</u> </U>
- Color = "#RRGGBB" The COLOR attribute of the FONT element. E.g., this text has color
- <PRE> Preformatted
 /PRE> Text enclosed by PRE tags is displayed in a mono-spaced font. Spaces and line breaks are supported without additional elements or special characters.

Bold, Italic and other Character Formatting Elements

- **EM>** Emphasis **EM>** Browsers usually display this as italics.
- **STRONG> STRONG ** Browsers display this as bold.
- <CITE> Citation </CITE> represents a document citation (italics). For titles of books, films, etc. Typically displayed in italics. (A Beginner's Guide to HTML)

Bold, Italic and other Character Formatting Elements

```
<P> <FONT SIZE="+1"> One Size
  Larger </FONT> - Normal -
<FONT SIZE="-1"> One Size Smaller
  </FONT> <BR>
<B> Bold</B> - <I> italics</I> - <U>
  Underlined </U> -
<FONT COLOR="#FF0000">
  Colored </FONT> <BR>
<EM> Emphasized</EM> -
  <STRONG> Strong </STRONG> -
  <TT> Tele Type </TT> <BR>
```

```
One Size Larger - Normal – One Size Smaller

Bold - italics - <u>Underlined</u> - Colored

Emphasized - Strong - Tele Type
```

Alignment

- Some elements have attributes for alignment (ALIGN) e.g. Headings, Paragraphs and Horizontal Rules.
- The Three alignment values are: LEFT, RIGHT, CENTER.
- CENTER></CENTER> Will center elements.

Alignment

- **IV ALIGN="value"></DIV>** Represents a division in the document and can contain most other element type. The alignment attribute of the DIV element is well supported.
- <TABLE></TABLE> Inside a TABLE, alignment can be set for each individual cell.

Special Characters & Symbols

- These Characters are recognized in HTML as they begin with an ampersand and end with with a semi-colon e.g. &value; The value will either be an entity name or a standard ASCII character number. They are called escape sequences.
- The next table represents some of the more commonly used special characters. For a comprehensive listing, visit the W3C's section on special characters at:

http://www.w3.org/MarkUp/HTMLPlus/htmlplus_13.html

Special Characters & Symbols

Special Character	Entity Name	Special Character	Entity Name
Ampersand	& &	Greater-than sign	> >
Asterisk	∗	Less-than sign	< <
Cent sign	¢ ¢	Non-breaking space	
Copyright	© ©	Quotation mark	" "
Fraction one qtr	¼ ¹ / ₄	Registration mark	® ®
Fraction one half	½ ½	Trademark sign	™ ™

Special Characters & Symbols

- Additional escape sequences support accented characters, such as:
- ö
 - a lowercase o with an umlaut: ö
- ñ
 - a lowercase n with a tilde: ñ
- È
 - an uppercase E with a grave accent: È
- NOTE: Unlike the rest of HTML, the escape sequences are case sensitive. You cannot, for instance, use < instead of &It;.

Additional Character Formatting Elements

- <STRIKE> strike-through text//STRIKE>
 - **DEL** is used for STRIKE at the latest browsers
- <BIG> places text in a big font</BIG>
- <SMALL> places text in a small font
- _{places text in subscript position}
- **SUP>** places text in superscript style position

Example

```
<P><STRIKE> strike-through text </STRIKE></BR>
```

<BIG>places text in a big font </BIG>

<SMALL> places text in a small font</SMALL>

_{places text in subscript position}

Normal

^{places text in superscript style position}
 </P>

Lists

In this chapter you will learn how to create a variety of lists.

Objectives

Upon completing this section, you should be able to

- Create an unordered list.
- Create an ordered list.
- Create a defined list.
- Nest Lists.

- HTML supplies several list elements. Most list elements are composed of one or more (List Item) elements.
- UL: Unordered List. Items in this list start with a list mark such as a bullet. Browsers will usually change the list mark in nested lists.

 List item ... List item ...

- List item ...
- List item ...

- You have the choice of three bullet types: **disc(default)**, **circle**, **square**.
- These are controlled in Netscape Navigator by the "TYPE" attribute for the element.

```
<UL TYPE="square">
```

```
<LI> List item ...</LI>
```

- List item ...
-
- List item ...
- List item ...
- List item ...

OL: Ordered List. Items in this list are numbered automatically by the browser.

```
<OL>
<LI> List item ...</LI>
<LI> List item ...</LI>
<LI> List item ...</LI>
</OL>
1 List item ...
2 List item ...
```

- LIST ITEIII ...
- 3. List item
- You have the choice of setting the TYPE Attribute to one of five numbering styles.

• TYPE	NumberingStyles		
• 1	Arabic numbers	1,2,3,	
• a	Lower alpha	a, b, c,	
• A	Upper alpha	A, B, C,	
• j	Lower roman	i, ii, iii,	
•	Upper roman	I, II, III,	

You can specify a starting number for an ordered list.

```
<OL TYPE ="i">
<LI> List item ...</LI>
<LI> List item ...</LI>
</OL>
<P> text ....</P>
<OL TYPE="i" START="3">
<LI> List item ...</LI>
</OL>
```

```
i. List item ...
```

Text

List item ...

DL: Definition List. This kind of list is different from the others. Each item in a DL consists of one or more Definition Terms (DT elements), followed by one or more Definition Description (DD elements).

```
<DI>
<DT> HTMI </DT>
<DD> Hyper Text Markup Language </DD>
<DT> DOG </DT>
<DD> A human's best friend!</DD>
</DL>
HTML
   Hyper Text Markup Language
DOG
  A human's best friend!
```

Nesting Lists

You can nest lists by inserting a UL, OL, etc., inside a list item (LI).

```
EXample
<UL TYPE = "square">
<LI> List item ...</LI>
<LI> List item ...
<OL TYPE="i" START="3">
<LI> List item ...</LI>
</OL>
</LI>
<LI> List item ...</LI>
```


List item ... ■ List item iii. List item ... iv. List item ... v. List item vi. List item ... vii. List item ...

■ List item ...

What will be the output?

```
<HI ALIGN="CENTER">SAFETY TIPS FOR CANOEISTS</HT>
 <OL TYPE="a" START="2">
 <LI>Be able to swim </LI>
 <LI>Wear a life jacket at all times </LI>
 <LI>Don't stand up or move around. If canoe tips,
   \langle III \rangle
   <LI>Hang on to the canoe </LI>
   <LI>Use the canoe for support and </LI>
    <LI>Swim to shore
   </UL> </LI>

    <LI>Don't overexert yourself </LI>

 <LI>Use a bow light at night </LI>
```

The output....

SAFETY TIPS FOR CANOEISTS

- b. Be able to swim
- c. Wear a life jacket at all times
- d. Don't stand up or move around. If canoe tips,
 - o Hang on to the canoe
 - o Use the canoe for support and
 - o Swim to shore
- e. Don't overexert yourself
- f. Use a bow light at night

- <H1 ALIGN="CENTER">SAFETY TIPS FOR CANOEISTS</H1> <OL TYPE="a" START="2">
- Be able to swim
- Wear a life jacket at all times Don't stand up or move around. If canoe tips,
-
- Hang on to the canoe Use the canoe for support
- <OL type="I" start="4">
- Be careful
- Do not look around •
- Swim to shore

•

What will be the

output?

The output....

SAFETY TIPS FOR CANOEISTS

- b. Be able to swim
- c. Wear a life jacket at all times
- d. Don't stand up or move around. If canoe tips,
 - o Hang on to the canoe
 - o Use the canoe for support
 - IV. Be careful
 - V. Do not look around
 - o Swim to shore
- e. Don't overexert yourself
- f. Use a bow light at night

Images

In this chapter you will learn about images and how to place images in your pages.

Objectives

Upon completing this section, you should be able to

Add images to your pages.

Images

- This element defines a graphic image on the page.
- Image File (SRC:source): This value will be a URL (location of the image) E.g. http://www.domain.com/dir/file.ext or /dir/file.txt.
- Alternate Text (ALT): This is a text field that describes an image or acts as a label. It is displayed when they position the cursor over a graphic image.
- Alignment (ALIGN): This allows you to align the image on your page.

Images

- Width (WIDTH): is the width of the image in pixels.
- Height (HEIGHT): is the height of the image in pixels.
- **Border (BORDER):** is for a border around the image, specified in pixels.
- **HSPACE:** is for Horizontal Space on both sides of the image specified in pixels. A setting of 5 will put 5 pixels of invisible space on both sides of the image.
- VSPACE: is for Vertical Space on top and bottom of the image specified in pixels. A setting of 5 will put 5 pixels of invisible space above and bellow the image.

Some Examples on images

- 1)
- 2)
- 3)
- 4)
- 5) < IMG SRC =" jordan.gif" align="left"> blast blast blast blast blast

In this chapter you will learn that tables have many uses in HTML.

Objectives:

Upon completing this section, you should be able to:

- Insert a table.
- 2. Explain a table's attributes.
- Edit a table.
- 4. Add a table header.

- The <TABLE></TABLE> element has four subelements:
- 1. Table Row<TR></TR>.
- 2. Table Header <TH></TH>.
- 3. Table Data <TD></TD>.
- 4. Caption <CAPTION></CAPTION>.
- The table row elements usually contain table header elements or table data elements.

```
 Column 1 header 
 Column 2 header 
Row1, Col1 
 Row1, Col2 
 Row2, Col1 
 Row2, Col2
```

Column 1 Header	Column 2 Header
Row1, Col1	Row1, Col2
Row2, Col1	Row2, Col2

Tables Attributes

- **BGColor:** Some browsers support background colors in a table.
- Width: you can specify the table width as an absolute number of pixels or a percentage of the document width. You can set the width for the table cells as well.
- **Border:** You can choose a numerical value for the border width, which specifies the border in pixels.
- CellSpacing: Cell Spacing represents the space between cells and is specified in pixels.

Table Attributes

- CellPadding: Cell Padding is the space between the cell border and the cell contents and is specified in pixels.
- Align: tables can have left, right, or center alignment.
- **Background:** Background Image, will be titled in IE3.0 and above.
- BorderColor, BorderColorDark.

Table Caption

A table caption allows you to specify a line of text that will appear centered above or bellow the table.

<TABLE BORDER=1 CELLPADDING=2>

<CAPTION ALIGN="BOTTOM"> Label For My Table </CAPTION>

The Caption element has one attribute ALIGN that can be either TOP (Above the table) or BOTTOM (below the table).

Table Header

Table Data cells are represented by the TD element. Cells can also be TH (Table Header) elements which results in the contents of the table header cells appearing centered and in bold text.

Table Data and Table Header Attributes

- Colspan: Specifies how many cell columns of the table this cell should span.
- Rowspan: Specifies how many cell rows of the table this cell should span.
- Align: cell data can have left, right, or center alignment.
- Valign: cell data can have top, middle, or bottom alignment.
- Width: you can specify the width as an absolute number of pixels or a percentage of the document width.
- Height: You can specify the height as an absolute number of pixels or a percentage of the document height.

Basic Table Code

```
<TABLE BORDER=1 width=50%>
<CAPTION> <h1>Spare Parts <h1> </Caption>
<TR><TH>Stock Number</TH><TH>Description</TH><TH>List Price</TH></TR>
<TR><TD bgcolor=red>3476-AB</TD><TD>76mm Socket</TD><TD>45.00</TD></TR>
<TR><TD >3478-AB</TD><TD><font color=blue>78mm Socket</font>
</TD><TD><47.50</TD></TR>
<TR><TD>3480-AB</TD><TD>80mm Socket</TD><TD>50.00</TD></TR>
</TABLE>
```

Spare Parts

Stock Number	Description	List Price
3476-AB	76mm Socket	45.00
3478-AB	78mm Socket	47.50
3480-AB	80mm Socket	50.00

Table Data and Table Header Attributes

```
<Table border=1 cellpadding =2>
  Column 1 Header  Column 2
Header
  Row 1 Col 1 
 Row 2 Col 1
 Row 2 Col2 
  Row 3 Col2
```

Table Data and Table Header Attributes

• Column 1 Header	 Column 2 Header
• Row 1 Col 1	
	Row 2 Col 2
Row 2 Col 1	
	• Row 3 Col 2

Special Things to Note

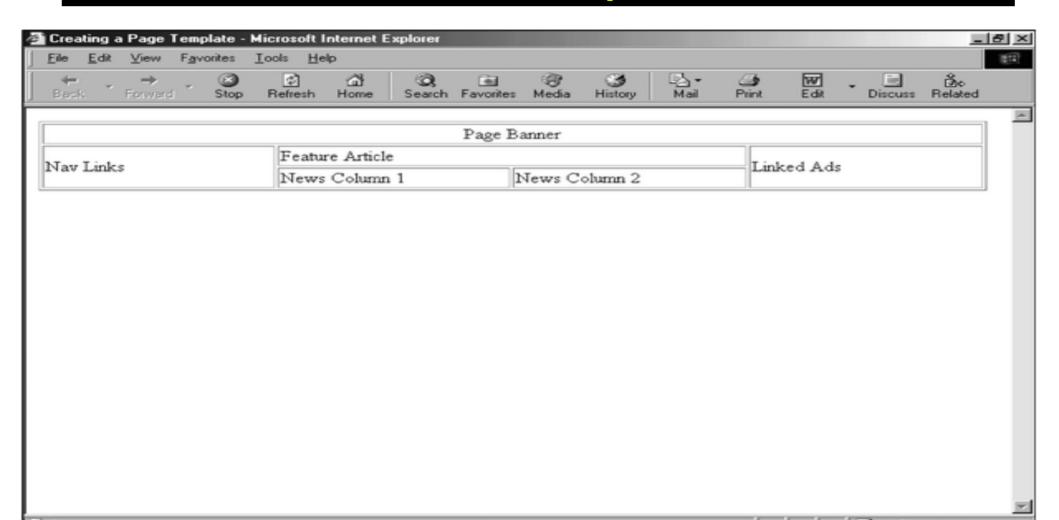
- TH, TD and TR should always have end tags.
 Although the end tags are formally optional, many browsers will mess up the formatting of the table if you omit the end tags. In particular, you should always use end tags if you have a TABLE within a TABLE -- in this situation, the table parser gets hopelessly confused if you don't close your TH, TD and TR elements.
- A default TABLE has no borders
 By default, tables are drawn without border lines. You need the BORDER attribute to draw the lines.
- By default, a table is flush with the left margin
 TABLEs are plopped over on the left margin. If you want centered tables,
 You can either: place the table inside a DIV element with attribute
 ALIGN="center".

Most current browsers also supports table alignment, using the ALIGN attribute. Allowed values are "left", "right", or "center", for example: <TABLE ALIGN="left">. The values "left" and "right" float the table to the left or right of the page, with text flow allowed around the table. This is entirely equivalent to IMG alignment

What will be the output?

```
<TABLE BORDER width="750">
<TR> <TD colspan="4" align="center">Page
 Banner</TD></TR>
<TR> <TD rowspan="2" width="25%">Nav Links</TD><TD
 colspan="2">Feature Article</TD> <TD rowspan="2"
 width="25%">Linked Ads</TD></TR>
 <TR><TD width="25%">News Column 1 </TD> <TD
 width="25%"><News Column 2 </TD></TR>
</TABLE>
```

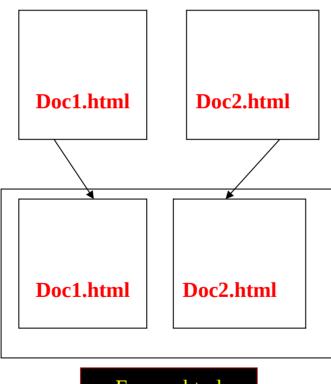
The Output



Frames

- A framed page is actually made up of multiple HTML pages. There is one HTML document that describes how to break up the single browser window into multiple windowpanes. Each windowpane is filled with an HTML document.
- For Example to make a framed page with a windowpane on the left and one on the right requires three HTML pages. *Doc1.html* and *Doc2.html* are the pages that contain content. *Frames.html* is the page that describes the division of the single browser window into two windowpanes.

Frames



Frames.html

Frame Page Architecture

- A <FRAMESET> element is placed in the html document before the <BODY> element. The <FRAMESET> describes the amount of screen real estate given to each windowpane by dividing the screen into ROWS or COLS.
- The <FRAMESET> will then contain <FRAME> elements, one per division of the browser window.
- Note: Because there is no BODY container, FRAMESET pages can't have background images and background colors associated with them.

Frame Page Architecture

```
<HTML>
<HEAD>
<TITLE> Framed Page </TITLE>
<FRAMeSET COLS="23%,77%">
<FRAME SRC="Doc1.html">
<FRAME SRC="Doc2.html">
</FRAMeSET >
</HEAD>
</HTML>
```

The Diagram below is a graphical view of the document described above

FRAMESET COLS="23%, 77%"

FRAME

NAME=
left_pane
SRC=Doc1.ht
ml

FRAME

NAME=right_pane SRC= Doc2.html

<FRAMESET> Container

- **<FRAMESET>**: The FRAMESET element creates divisions in the browser window in a single direction. This allows you to define divisions as either rows or columns.
- **ROWS**: Determines the size and number of rectangular rows within a <FRAMESET>. They are set from top of the display area to the bottom.

Possible values are:

- Absolute pixel units, I.e. "360,120".
- A percentage of screen height, e.g. "75%,25%".
- Proportional values using the asterisk (*). This is often combined with a value in pixels, e.g. "360,*".
- <Frameset cols="200,20%,*,2*">

Creating a Frames Page

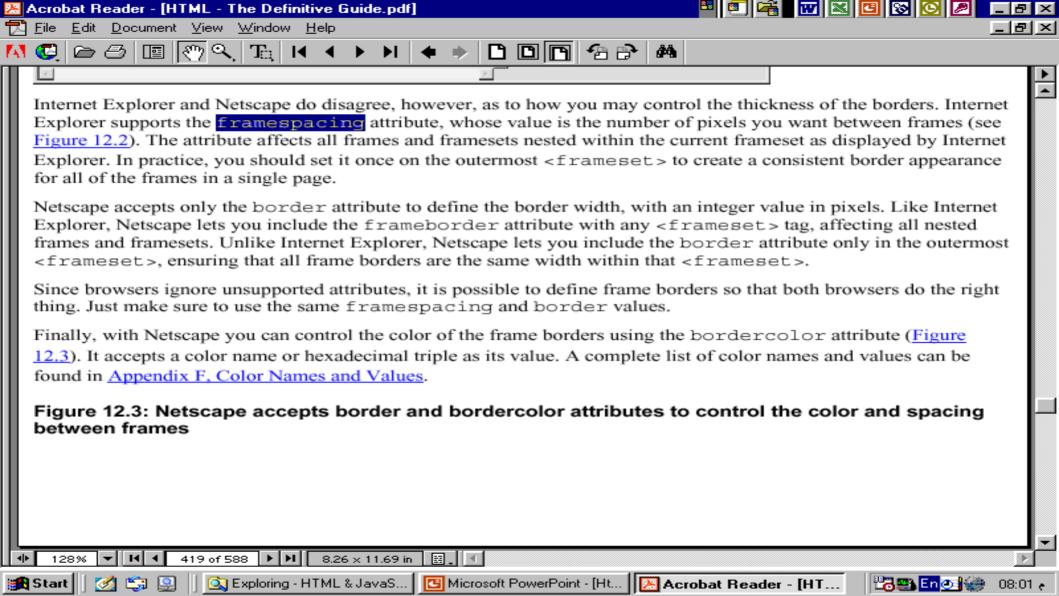
COLS: Determines the size and number of rectangular columns within a <FRAMESET>. They are set from left to right of the display area.

Possible values are:

- Absolute pixel units, I.e. "480,160".
- A percentage of screen width, e.g. "75%,25%".
- Proportional values using the asterisk (*). This is often combined with a value in pixels, e.g. "480,*".

Creating a Frames Page

- **FRAMEBORDER**: Possible values **0**, **1**, **YES**, **NO**. A setting of zero will create a borderless frame.
- **FRAMESPACING:** This attribute is specified in **pixels**. If you go to borderless frames you will need to set this value to zero as well, or you will have a gap between your frames where the border used to be.
- BORDER(thickness of the Frame): This attribute specified in pixels. A setting of zero will create a borderless frame. Default value is 5.
- BORDERCOLOR: This attribute is allows you choose a color for your border. This attribute is rarely used.



<FRAME>

- **<FRAME>:** This element defines a single frame within a frameset. There will be a FRAME element for each division created by the FRAMESET element. This tag has the following attributes:
- SRC: Required, as it provides the URL for the page that will be displayed in the frame.
- NAME: Required for frames that will allow targeting by other HTML documents. Works in conjunction with the target attribute of the <A>, <AREA>, <BASE>, and <FORM> tags.

<FRAME>

- MARGINWIDTH: Optional attribute stated in pixels. Determines horizontal space between the <FRAME> contents and the frame's borders.
- MARGINHEIGHT: Optional attribute stated in pixels. Determines vertical space between the <FRAME> contents and the frame's borders.
- SCROLLING: Displays a scroll bar(s) in the frame. Possible values are:
- Yes always display scroll bar(s).
- No never display scroll bar(s).
- 3. Auto browser will decide based on frame contents.

By default: scrolling is auto.

<FRAME>

NORESIZE: Optional – prevents viewers from resizing the frame. By default the user can stretch or shrink the frame's display by selecting the frame's border and moving it up, down, left, or right.

<NOFRAMES>

NOFRAMES>: Frame – capable browsers ignore all HTML within this tag including the contents of the BODY element. This element does not have any attributes.

```
<HTML>
```

<HEAD>

<TITLE> Framed Page </TITLE>

</HEAD>

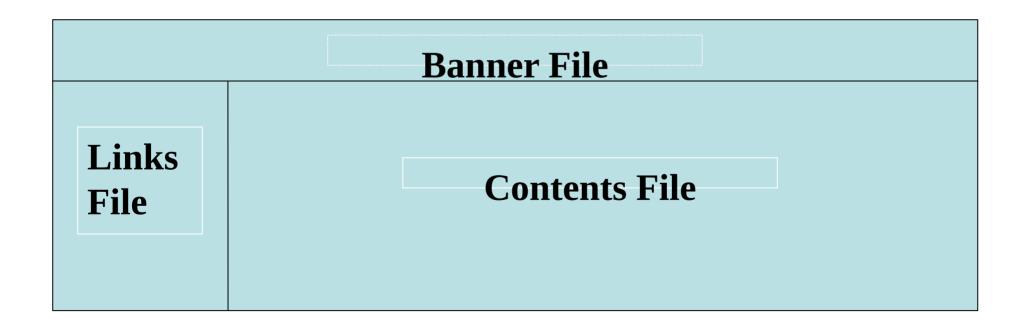
<NOFRAMES>

```
<FRAMESET COLS="23%,77%">
<FRAME SRC="" NAME="left pane">
<FRAME SRC="" NAME="right pane">
<NOFRAMES>
<P> This is a Framed Page. Upgrade your browser
 to support frames.</P>
</NOFRAMES></FRAMESET>
```

- In this case a second FRAMESET element will be inserted in the place of the FRAME element that would describe the second row.
- The second FRAMESET element will divide the remaining screen real estate into 2 columns.
- This nested FRAMESET will then be followed by 2 FRAME elements to describe each of the subsequent frame divisions created.

```
<html>
                                            <noframes>
<head>
                                            >
<title> Compound Frames Page</title>
                                            Default message
</head>
                                            <frameset rows="120,*">
                                            </noframes>
<frame src="banner file.html" name"banner">
                                            </frameset>
<frameset cols="120,*">
<frame src="links" file.html" name="links">
                                            </frameset>
<frame src="content file.html"</pre>
                                            </head>
  name="content">
```

You may want to create a frames design with a combination of rows and columns.



Example

```
<HEAD>
<FRAMESET ROWS="25%,50%,25%"
 <FRAME SRC="">
<FRAMESET COLS="25%,*">
 <FRAME SRC="">
 <FRAME SRC="">
 </FRAMESET>
 <FRAME SRC="">
</FRAMESET>
</HEAD>
```

Output



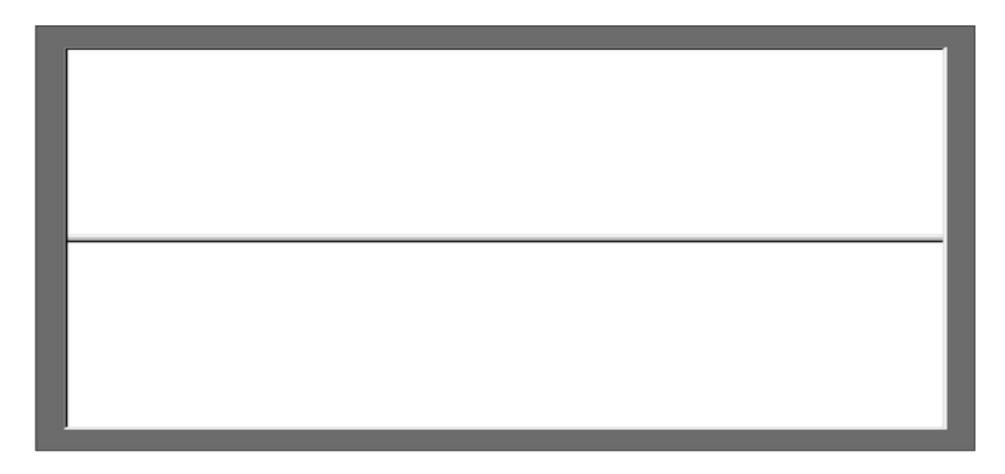


Figure 5-14: Frames created with <FRAMESET ROWS="50%, 50%">

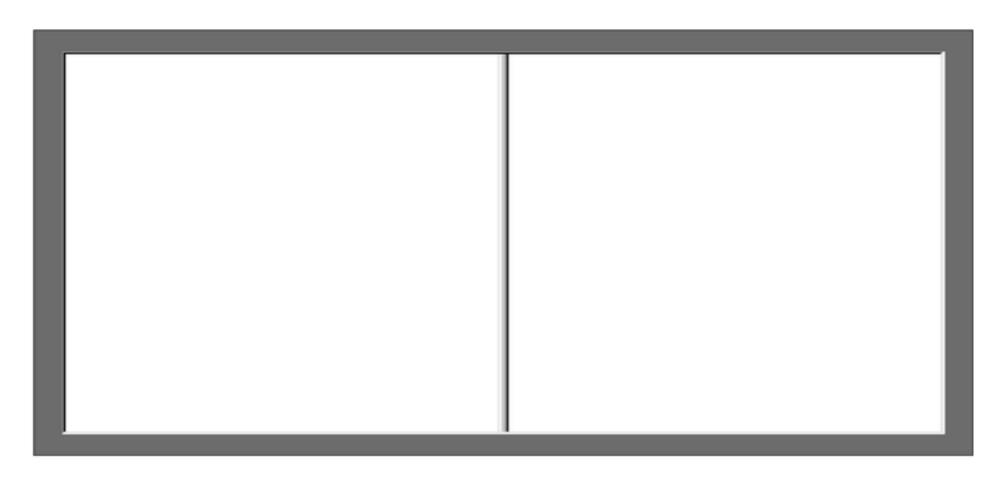


Figure 5-15: Frames created with <FRAMESET COLS="50%, 50%">

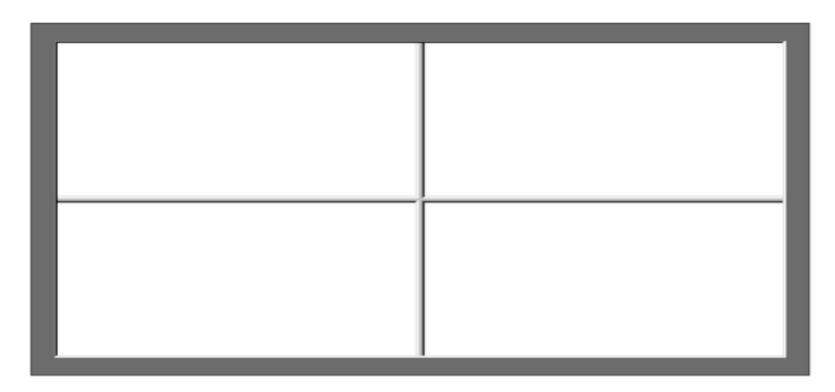


Figure 5-13: Frames created with <FRAMESET ROWS="50%, 50%" COLS="50%, 50%">

Frame Formatting

Example:

```
<frameset rows="20%, *, 20%">
 <frame src="header.html" noresize scrolling=no>
 <frame src="body.html">
 <frame src="navigationbar.html" noresize</pre>
 scrolling=no>
</frameset>
```

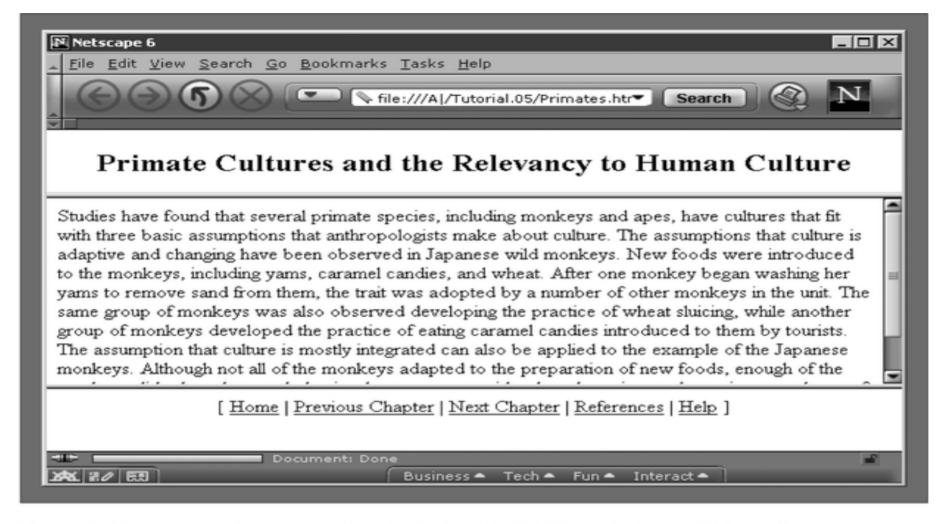


Figure 5-24: Output of program that includes NORESIZE and SCROLLING attributes

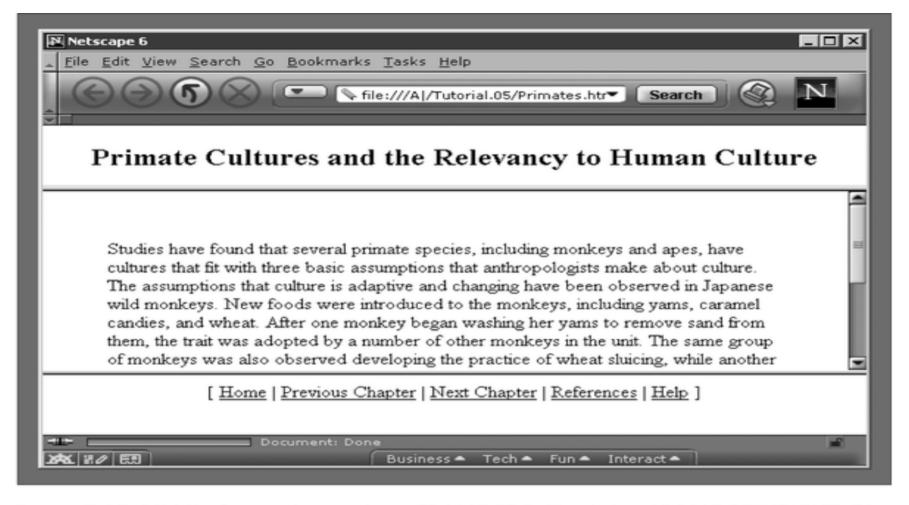


Figure 5-25: Middle frame changed to <FRAME SRC="body.html" MARGINHEIGHT=50

MARGINWIDTH=50>

What do the following mean?

- 1) <FRAMESET COLS="2*, 3*, 5*">
- 2) <FRAMESET COLS="150, 20%, *, 3*">

So what are the space-allocation priorities?

Absolute pixel values are always assigned space first, in order from left to right. These are followed by percentage values of the total space. Finally, proportional values are divided based upon what space is left.

Generic Frame Formula

- The <FRAME> tag has six associated attributes: SRC, NAME, MARGINWIDTH, MARGINHEIGHT, SCROLLING, and NORESIZE. Here's a complete generic FRAME:
- <FRAME SRC="url" NAME="window_name" SCROLLING=YES|NO|AUTO MARGINWIDTH="value" MARGINHEIGHT="value" NORESIZE>

What will be the Output?

```
<FRAMESET ROWS="*, 2*, *" COLS="2*, *">
<FRAME SRC="">
<FRAME SRC="">
<FRAME SRC="">
<FRAME SRC="">
<FRAME SRC="">
<FRAME SRC="">
</FRAMESET>
```

Targets

- When you use links for use in a frames environment you will need to specify an additional attribute called TARGET.
- The TARGET attribute uses the NAME attribute of the FRAME element.
- If we were to place a link in doc1.html that linked to doc3.html and we wanted doc3.html to be displayed in the right windowpane; the HTML code would appear in doc1.html as follows:

Link
to Document 3

Special Targets

- There are **4** special target names that cannot be assigned by the NAME attribute of the FRAME tag.
- **1. TARGET="_top"**: This loads the linked document into the full browser window with the URL specified by the HREF attribute. All frames disappear, leaving the new linked page to occupy the entire window. The back is turned on.
- **TARGET=**"_blank": Opens an unnamed new browser window and loads the document specified in the URL attribute into the new window (and your old window stays open). The back is turned off. Other windows remains on.
- **3. TARGET=**"_self": Loads the document in the same window where the anchor was {Clicked}. This is the default setting for linking elements.
- **4. TARGET="_parent"**: the _parent frame is a prior frameset that the current frameset was "spawned" from. If there isn't one it is the browser window. The document is loaded into the area occupied by the columns or rows frameset containing the frame that contains the link. The back is turned on. All windows disappear.

If a frame contains the following link, then clicking the link launches a new, unnamed browser display window that contains the content defined in stuff.HTM. This can be a simple HTML document, or an entirely new FRAMESET definition.

1.

- If a frame contains the following link, then clicking the link will simply cause the frame which contains the link to clear, and its content will be replaced with whatever is in stuff.htm.
- 2.
 If a frame contains the following link, the frameset that contains the frame that contains this link will be replaced by stuff.HTM.
- 3.
 Finally, if a frame contains the following link, clicking the link replaces the
- entire browser window with the contents of stuff.HTM.

 4.

Targeting links to frames

The TARGET attribute allows you to specify the frame into which a page is to be loaded into in a frames setting.



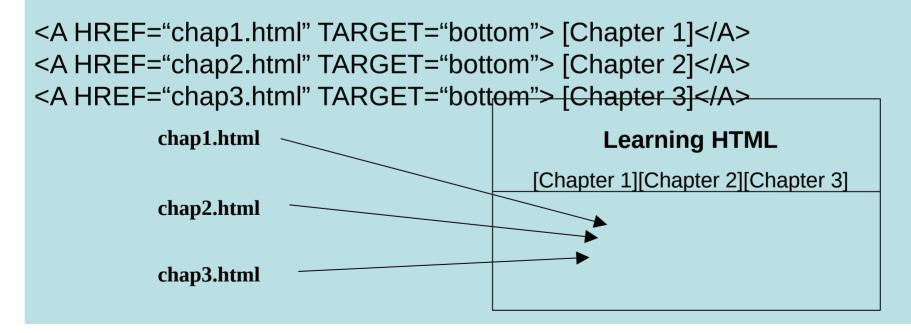
chap2.html

Parent window

[Chapter 1][Chapter 2][Chapter 3]

Targeting links to frames

The TARGET attribute allows you to specify the frame into which a page is to be loaded into in a frames setting.



Forms

Forms add the ability to web pages to not only provide the person viewing the document with dynamic information but also to obtain information from the person viewing it, and process the information.

Objectives:

Upon completing this section, you should be able to

- Create a FORM.
- 2. Add elements to a FORM.
- 3. Define CGI (Common Gateway Interface).
- Describe the purpose of a CGI Application.
- 5. Specify an action for the FORM.
- Forms work in all browsers.
- Forms are Platform Independent.

Forms

 To insert a form we use the <FORM></FORM> tags. The rest of the form elements must be inserted in between the form tags.

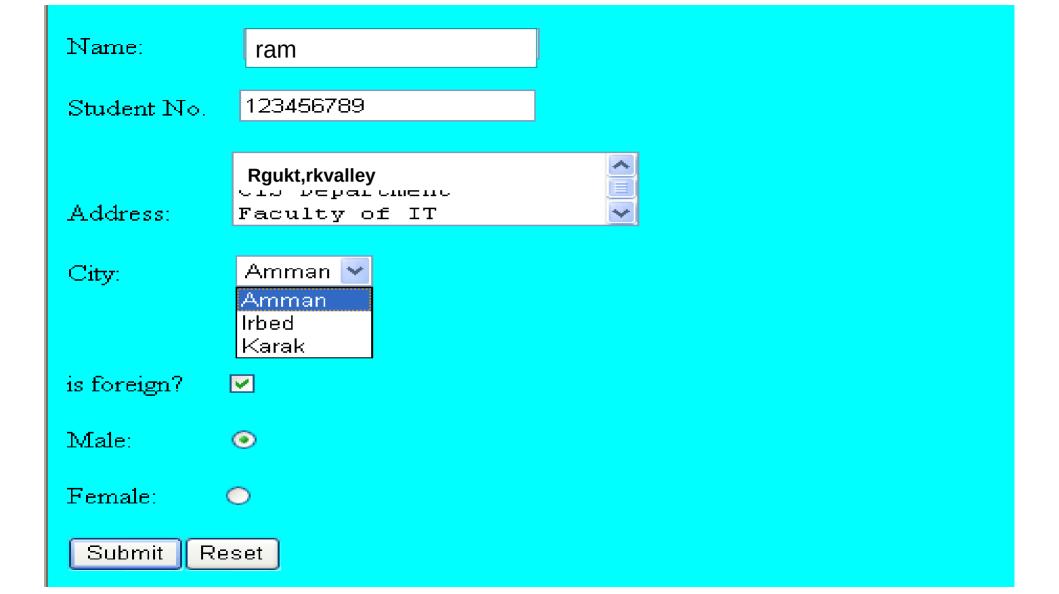
```
<HTMI > <HFAD>
<TITLE> Sample Form</TITLE>
</HEAD>
<BODY BGCOLOR="FFFFFF">
<FORM ACTION = <a href="http://www.xnu.com/formtest.asp">http://www.xnu.com/formtest.asp</a>>
<P> First Name: <INPUT TYPE="TEXT" NAME="fname" MAXLENGTH="50"> </P>
<P> <INPUT TYPE="SUBMIT" NAME="fsubmit1" VALUE="Send Info"> 
</FORM>
</BODY> </HTML>
```

<FORM> element attributes

- ACTION: is the URL of the CGI (Common Gateway Interface) program that is going to accept the data from the form, process it, and send a response back to the browser.
- METHOD: GET (default) or POST specifies which HTTP method will be used to send the form's contents to the web server. The CGI application should be written to accept the data from either method.
- NAME: is a form name used by VBScript or JavaScripts.
- **TARGET:** is the target frame where the response page will show up.

Form Elements

- Form elements have properties: Text boxes, Password boxes, Checkboxes, Option(Radio) buttons, Submit, Reset, File, Hidden and Image.
- The properties are specified in the TYPE Attribute of the HTML element <INPUT></INPUT>.



Form Elements

<INPUT> Element's Properties

TYPE= Type of INPUT entry field.

NAME = Variable name passed to CGI application

VALUE= The data associated with the variable name to be passed to the CGI application

CHECKED= Button/box checked

SIZE= Number of visible characters in text field

MAXLENGHT= Maximum number of characters accepted.

Text Box

■ **Text boxes**: Used to provide input fields for text, phone numbers, dates, etc.

<INPUT TYPE= " TEXT " >

Browser will display

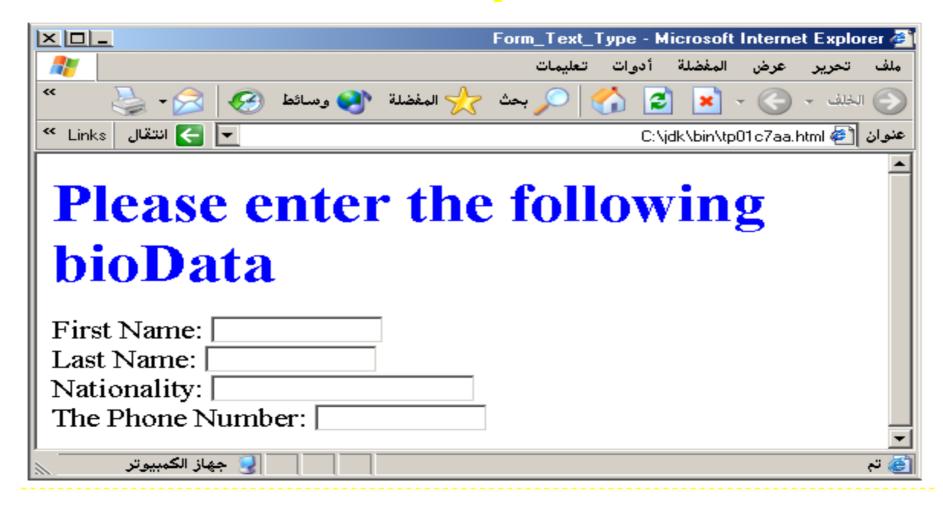
Textboxes use the following attributes:

- TYPE: text.
- SIZE: determines the size of the textbox in characters. Default=20 characters.
- MAXLENGHT: determines the maximum number of characters that the field will accept.
- **NAME:** is the name of the variable to be sent to the CGI application.
- VALUE: will display its contents as the default value.

Example on Text Box

```
<TITLE>Form_Text_Type</TITLE>
</HEAD> <BODY>
<h1> <font color=blue>Please enter the following bioData</font></h1>
<FORM name="fome1" Method= " get " Action= " URL " >
First Name: <INPUT TYPE="TEXT" NAME="FName"
SIZE="15" MAXLENGTH="25"><BR>
Last Name: <INPUT TYPE="TEXT" NAME="LName"
SIZE="15" MAXLENGTH="25"><BR>
Nationality: <INPUT TYPE="TEXT" NAME="Country"
SIZE="25" MAXLENGTH="25"><BR>
The Phone Number: <INPUT TYPE="TEXT" NAME="Phone"
SIZE="15" MAXLENGTH="12"><BR>
</FORM> </BODY> </HTML>
```

Output



Password

Password: Used to allow entry of passwords.

<INPUT TYPE= " PASSWORD " >

Browser will display

Text typed in a password box is starred out in the browser display.

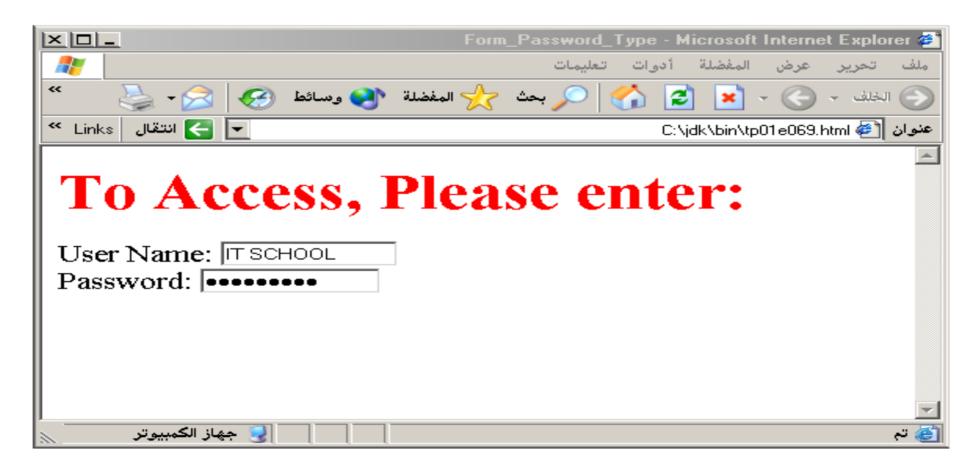
Password boxes use the following attributes:

- TYPE: password.
- SIZE: determines the size of the textbox in characters.
- MAXLENGHT: determines the maximum size of the password in characters.
- **NAME:** is the name of the variable to be sent to the CGI application.
- VALUE: is usually blank.

Example on Password Box

```
<HTML><HEAD>
<TITLE>Form Password Type</TITLE></HEAD>
<BODY>
<h1> <font color=red>To Access, Please
enter:</font></h1>
<FORM name="fome2" Action="url" method="get">
User Name: <INPUT TYPE="TEXT" Name="FName"
SIZE="15" MAXLENGTH="25"><BR>
Password: <INPUT TYPE="PASSWORD"
NAME="PWord" value="" SIZE="15"
MAXLENGTH="25"><BR>
</FORM></BODY> </HTML>
```

Output



Hidden

Hidden: Used to send data to the CGI application that you don't want the web surfer to see, change or have to enter but is necessary for the application to process the form correctly.

<INPUT TYPE="HIDDEN">

Nothing is displayed in the browser.

Hidden inputs have the following attributes:

- TYPE: hidden.
- NAME: is the name of the variable to be sent to the CGI application.
- VALUE: is usually set a value expected by the CGI application.

Check Box

Check Box: Check boxes allow the users to select more than one option.

<INPUT TYPE="CHECKBOX">

Browser will display

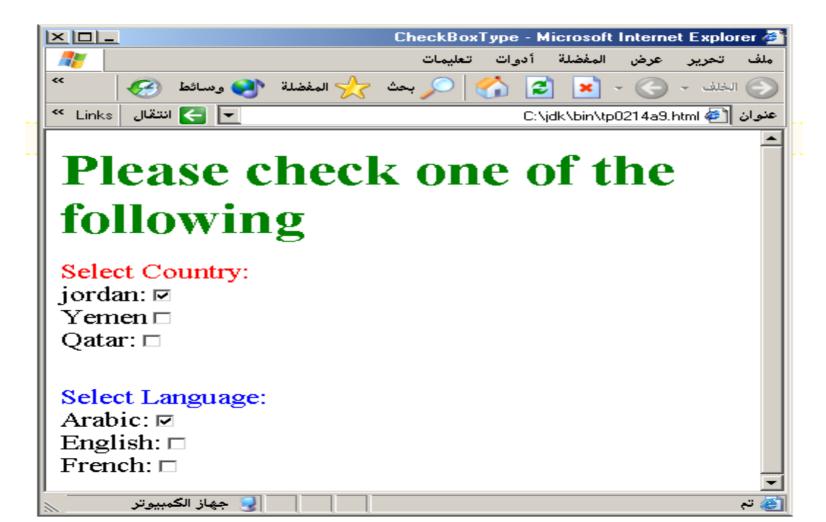


Checkboxes have the following attributes:

- TYPE: checkbox.
- CHECKED: is blank or CHECKED as the initial status.
- NAME: is the name of the variable to be sent to the CGI application.
- VALUE: is usually set to a value.

```
<BODY>
<h1> <font color=green>Please check one of the following</font></
h1>
<FORM name="fome3" Action="url" method="get">
<font color=red> Select Country: </font><BR>
jordan:<INPUT TYPE="CheckBox" Name="country"
CHECKED><BR>
Yemen<INPUT TYPE="CheckBox" Name="country"><BR>
Qatar:<INPUT TYPE="CheckBox" Name="country"><BR> <BR>
<font color=blue>Select Language:</font><BR>
Arabic:<INPUT TYPE="CheckBox" Name="language"
CHECKED><BR> English:<INPUT TYPE="CheckBox"
Name="language"><BR>
French:<INPUT TYPE="CheckBox" Name="language">
```

Output



Radio Button

Radio Button: Radio buttons allow the users to select only one option.

<INPUT TYPE="RADIO">

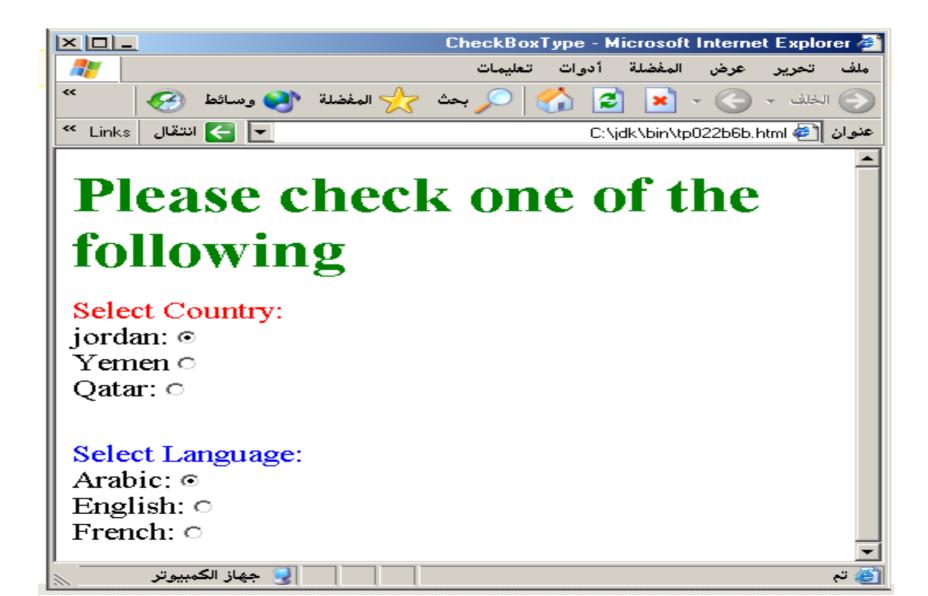
Browser will display



Radio buttons have the following attributes:

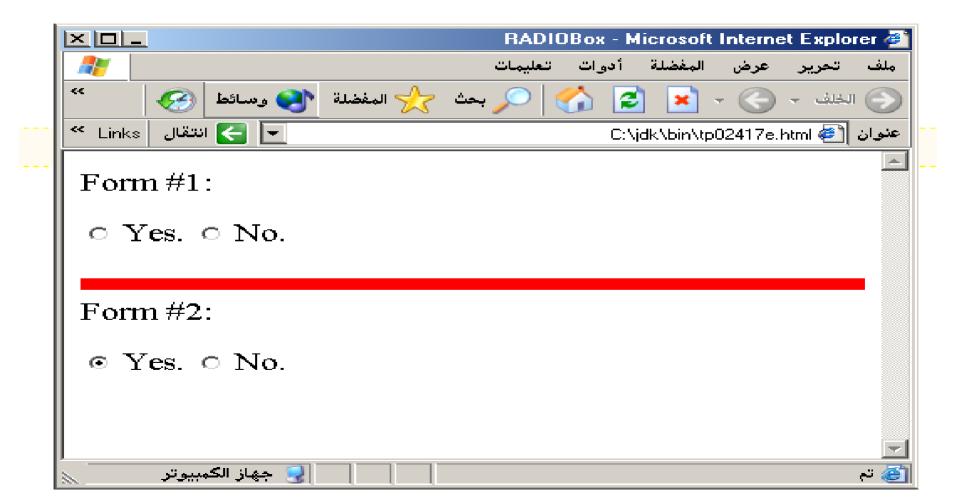
- TYPE: radio.
- CHECKED: is blank or CHECKED as the initial status. Only one radio button can be checked
- NAME: is the name of the variable to be sent to the CGI application.
- VALUE: usually has a set value.

```
<BODY>
<h1> <font color=green>Please check one of the
following</font></h1>
<FORM name="fome3" Action="url" method="get">
<font color=red> Select Country: </font><BR>
jordan:<INPUT TYPE= "RADIO" Name="country"
CHECKED><BR>
Yemen<INPUT TYPE="RADIO" Name="country"><BR>
Qatar:<INPUT TYPE="RADIO" Name="country"><BR> <BR>
<font color=blue>Select Language:</font><BR>
Arabic:<INPUT TYPE="RADIO" Name="language"
CHECKED><BR> English:<INPUT TYPE=" RADIO "
Name="language"><BR>
French:<INPUT TYPE=" RADIO " Name="language">
```



```
<HTML><HEAD>
<TITLE>RADIOBox</TITLE> </HEAD>
<BODY>
Form #1:
<FORM>
 <INPUT TYPE="radio" NAME="choice" VALUE="one"> Yes.
 <INPUT TYPE="radio" NAME="choice" VALUE="two"> No.
</FORM>
<HR color=red size="10" >
Form #2:
<FORM>
   <INPUT TYPE="radio" NAME="choice" VALUE="three"</pre>
CHECKED> Yes.
 <INPUT TYPE="radio" NAME="choice" VALUE="four"> No.
</FORM>
```

Output



Push Button

Push Button: This element would be used with

JavaScript to cause an action to take place.

<INPUT TYPE="BUTTON">

Browser will display

BUTTON

Push Button has the following attributes:

- TYPE: button.
- NAME: is the name of the button to be used in scripting.
- VALUE: determines the text label on the button.

```
<DIV align=center><BR><BR>
<FORM>
<FONT Color=red>
<h1>Press Here to see a baby crying:<BR>
<INPUT TYPE="button" VALUE="PressMe"><BR><BR>
<FONT Color=blue>
Click Here to see a baby shouting:<BR>
<INPUT TYPE="button" VALUE="ClickMe" > <BR><BR>
<FONT Color=green>
Hit Here to see a baby eating:<BR>
<INPUT TYPE="button" VALUE="HitME" > <BR><BR>
<FONT Color=yellow>
</FORM></DIV>
```



Submit Button

Submit: Every set of Form tags requires a Submit button. This is the element causes the browser to send the names and values of the other elements to the CGI Application specified by the ACTION attribute of the FORM element.

<INPUT TYPE="SUBMIT">

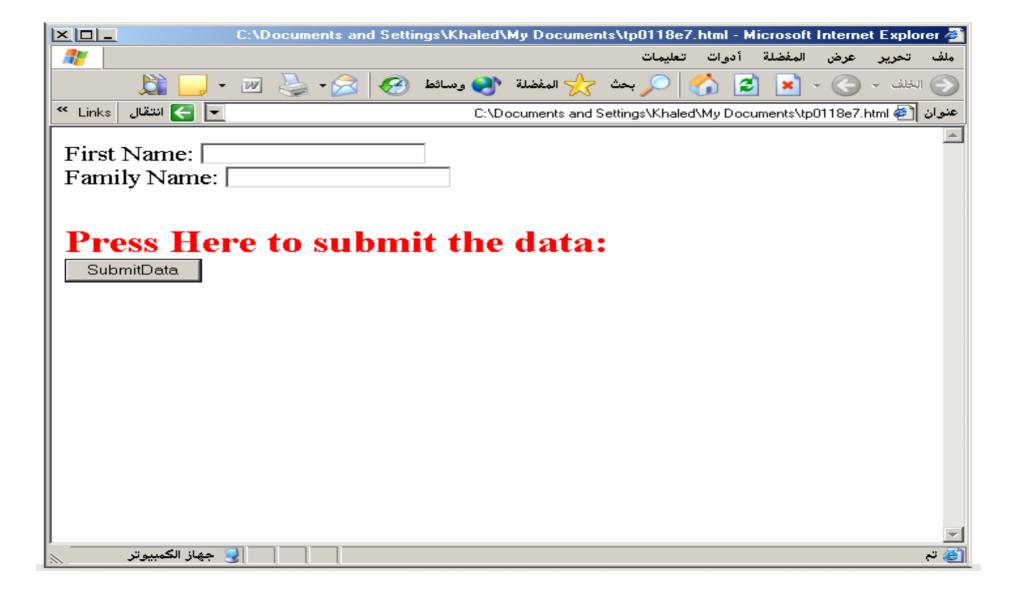
The browser will display

Submit has the following attributes:

- TYPE: submit.
- NAME: value used by the CGI script for processing.
- VALUE: determines the text label on the button, usually Submit Query.

Submit Query

```
<FORM Action="URL"
                         method="get">
First Name: <INPUT TYPE="TEXT" Size=25
name="firstName"><BR>
Family Name: <INPUT TYPE="TEXT" Size=25
name="LastName"><BR>
<BR>
<FONT Color=red>
Press Here to submit the data:<BR>
<INPUT TYPE="submit" VALUE="SubmitData" >
</FORM>
```



Reset Button

 Reset: It is a good idea to include one of these for each form where users are entering data. It allows the surfer to clear all the input in the form.

- <INPUT TYPE="RESET">
- Browser will display

Reset

- Reset buttons have the following attributes:
- TYPE: reset.
- VALUE: determines the text label on the button, usually Reset.

```
<FORM Action="URL"
                         method="get">
First Name: <INPUT TYPE="TEXT" Size=25
name="firstName"> <BR>
Family Name: <INPUT TYPE="TEXT" Size=25
name="LastName"><BR>
<BR>
<FONT Color = red>
<STRONG><font size=5>Press Here to submit the
data:</font></STRONG><BR>
<INPUT TYPE="submit" VALUE="SubmitData">
<INPUT TYPE="RESET" VALUE="Reset">
</FORM>
```

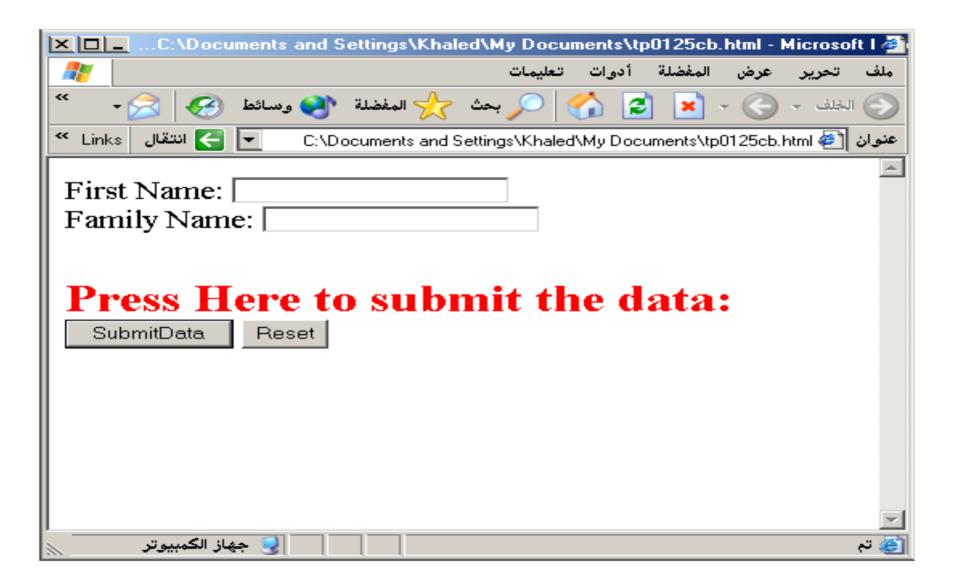


Image Submit Button

Image Submit Button: Allows you to substitute an image for the standard submit button.

<INPUT TYPE="IMAGE" SRC="jordan.gif">

Image submit button has the following attributes:

- TYPE: Image.
- NAME: is the name of the button to be used in scripting.
- SRC: URL of the Image file.

```
<form>
<H1><font color=blue>
Click to go Jordan's Map:
<INPUT TYPE="IMAGE" SRC="jordan.gif">
</form>
```



File

• **File Upload:** You can use a file upload to allow surfers to upload files to your web server.

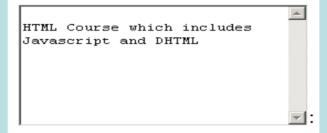
Browse

- <INPUT TYPE="FILE">
- Browser will display
- File Upload has the following attributes:
- TYPE: file.
- **SIZE:** is the size of the text box in characters.
- **NAME:** is the name of the variable to be sent to the CGI application.
- **MAXLENGHT:** is the maximum size of the input in the textbox in characters.

```
<BODY bgcolor=lightblue>
<form>
<H3><font color=forestgreen>
Please attach your file here to for uploading to
My <font color =red>SERVER...<BR>
<INPUT TYPE="File" name="myFile" size="30">
<INPUT TYPE="Submit" value="SubmitFile">
</form>
</BODY>
```

TEXTAREA></TEXTAREA>: is an element that allows for free form text entry.

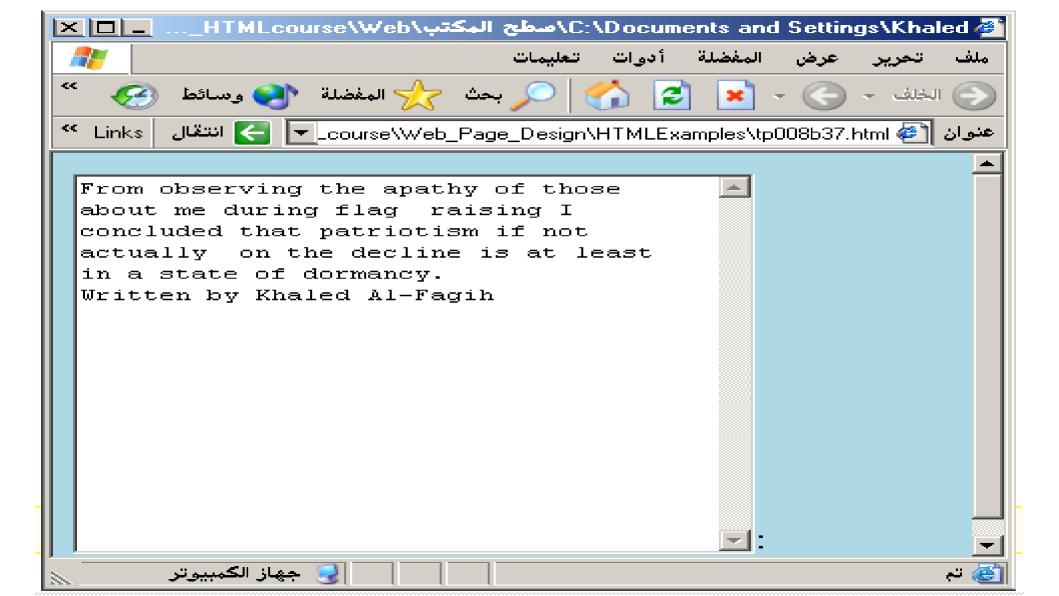
Browser will display



Textarea has the following attributes:

- NAME: is the name of the variable to be sent to the CGI application.
- ROWS: the number of rows to the textbox.
- COLS: the number of columns to the textbox.

```
<BODY bgcolor=lightblue>
<form>
<TEXTAREA COLS=40 ROWS=20 Name="comments" >
From observing the apathy of those
about me during flag raising I
concluded that patriotism if not
actually on the decline is at least
in a state of dormancy.
Written by Khaled Al-Fagih
</TEXTAREA>:
</form>
</BODY>
```

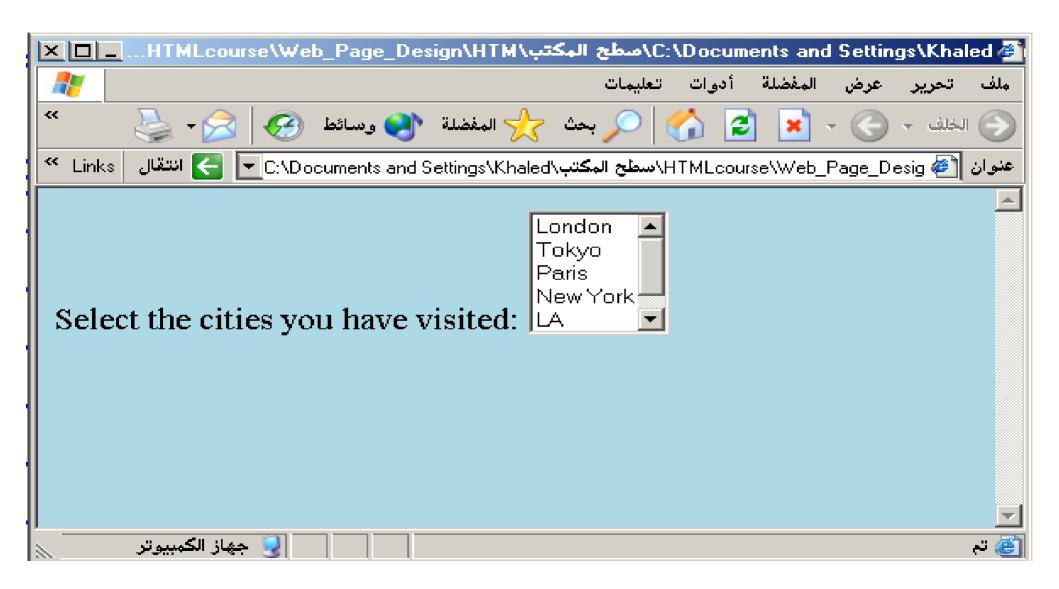


The two following examples are <SELECT></SELECT> elements, where the attributes are set differently.

The Select elements attributes are:

- NAME: is the name of the variable to be sent to the CGI application.
- SIZE: this sets the number of visible choices.
- MULTIPLE: the presence of this attribute signifies that the user can make multiple selections. By default only one selection is allowed.

```
<BODY bgcolor=lightblue>
<form>
Select the cities you have visited:
<SELECT name="list" size=5>
<option> London
<option> Tokyo
<option> Paris
<option> New York
<option> LA</option>
<option> KL</option>
</SELECT>
</form>
```



Drop Down List:



- Name: is the name of the variable to be sent to the CGI application.
- Size: 1.

List Box:



- Name: is the name of the variable to be sent to the CGI application.
- SIZE: is greater than one.

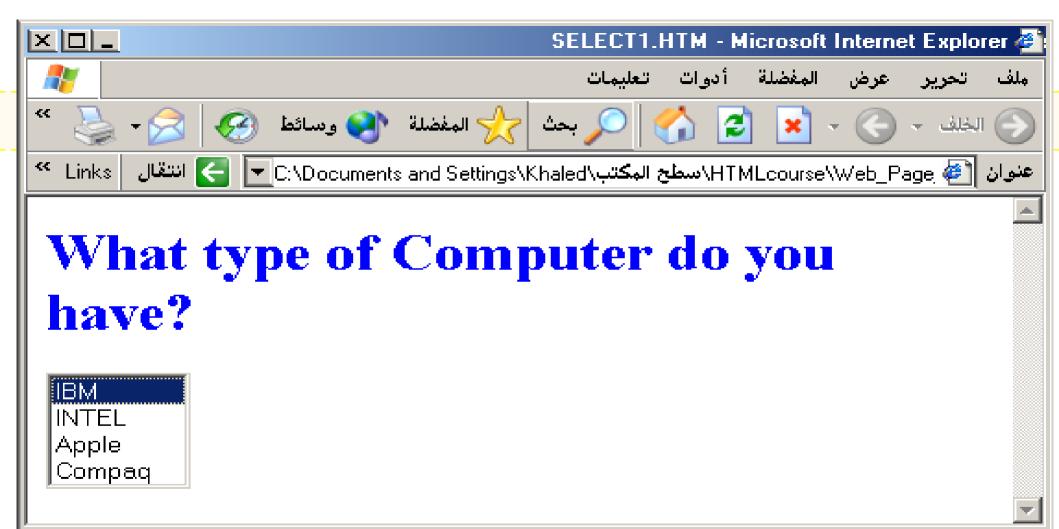
Option

The list items are added to the **SELECT**> element by inserting **OPTION**><**IOPTION**> elements.

The Option Element's attributes are:

- SELECTED: When this attribute is present, the option is selected when the document is initially loaded. It is an error for more than one option to be selected.
- VALUE: Specifies the value the variable named in the select element.

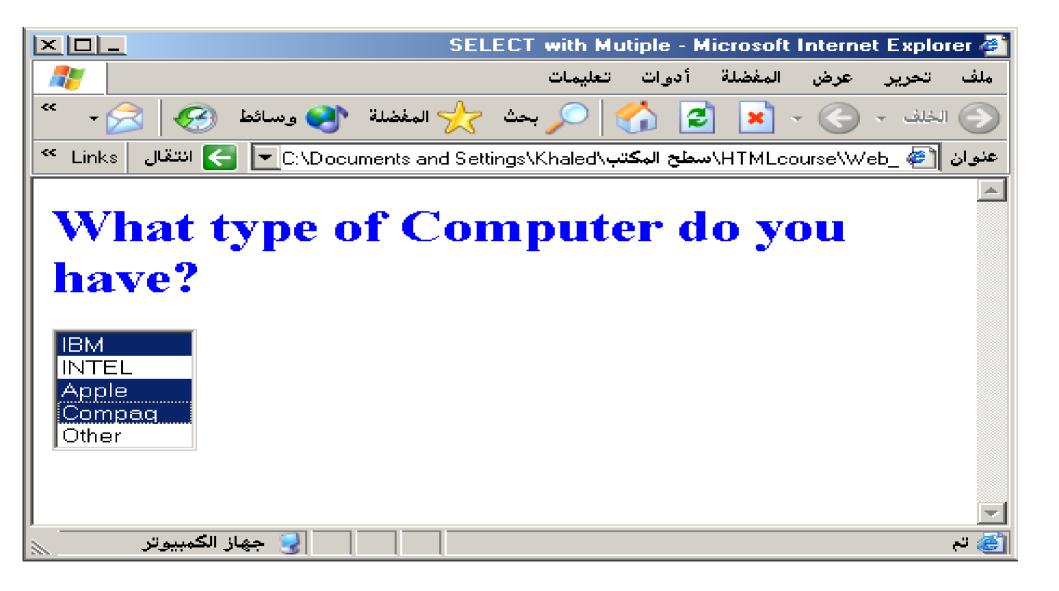
```
</HEAD>
<BODY>
<h2><font color=blue>What type of Computer do you
  have?</font><h2>
<FORM>
<SELECT NAME="ComputerType" size=4>
  <OPTION value="IBM" SELECTED> IBM</OPTION>
  <OPTION value="INTEL"> INTEL</OPTION>
  <OPTION value=" Apple"> Apple</OPTION>
  <OPTION value="Compaq"> Compaq</OPTION>
</SELECT>
</FORM></BODY></HTML>
```



جهاز الكمبيوتر



```
<HEAD> <TITLE>SELECT with Mutiple </TITLE> </HEAD>
<BODY>
<h2><font color=blue>What type of Computer do you
 have?</font><h2>
<FORM>
<SELECT NAME="ComputerType" size=5 multiple>
 <OPTION value="IBM" > IBM</OPTION>
 <OPTION value="INTEL"> INTEL</OPTION>
 <OPTION value=" Apple"> Apple</OPTION>
 <OPTION value="Compaq" SELECTED> Compaq</OPTION>
 <OPTION value=" other"> Other</OPTION>
</SELECT>
</FORM></BODY></HTML>
```



There are eleven different types of form elements:	
Button	Button
Checkbox	
FileUpload	
Hidden	
Password	Salalalalalala
Radio	0
Reset object	Reset
Select object	
Submit object	Submit Query
Text	
Textarea	