HNDIT11062 – Web Development

Week 9: HTML Tables and Frames

Tables

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.
- Explain a table's attributes.
- Edit a table.
- Add a table header.

Tables

- The <TABLE></TABLE> element has four sub-elements:

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.

Tables

```
<table border="1">
    <tr>
        <th> Column 1 header </th>
        <th> Column 2 header </th>
    </tr>
    <tr>
        <td> Row1, Col1 </td>
        <td> Row1, Col2 </td>
    </tr>
    <tr>
        <td> Row2, Col1 </td>
        <td> Row2, Col2 </td>
    </tr>
</table>
```

Tables

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>
  <tr> <th> Column 1 Header</th> <th> Column 2 Header</th> </tr>
  <tr> <td colspan=2> Row 1 Col 1</td> </tr>
  <tr> <td rowspan=2>Row 2 Col 1</td>
  <td> Row 2 Col2</td> </tr>
  <tr> <td> Row 3 Col2</td> </tr>
</table>
```

Table Data and Table Header Attributes

Column 1 Header	Column 2 Header
Row 1 Col 1	
Row 2 Col 1	Row 2 Col 2
	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

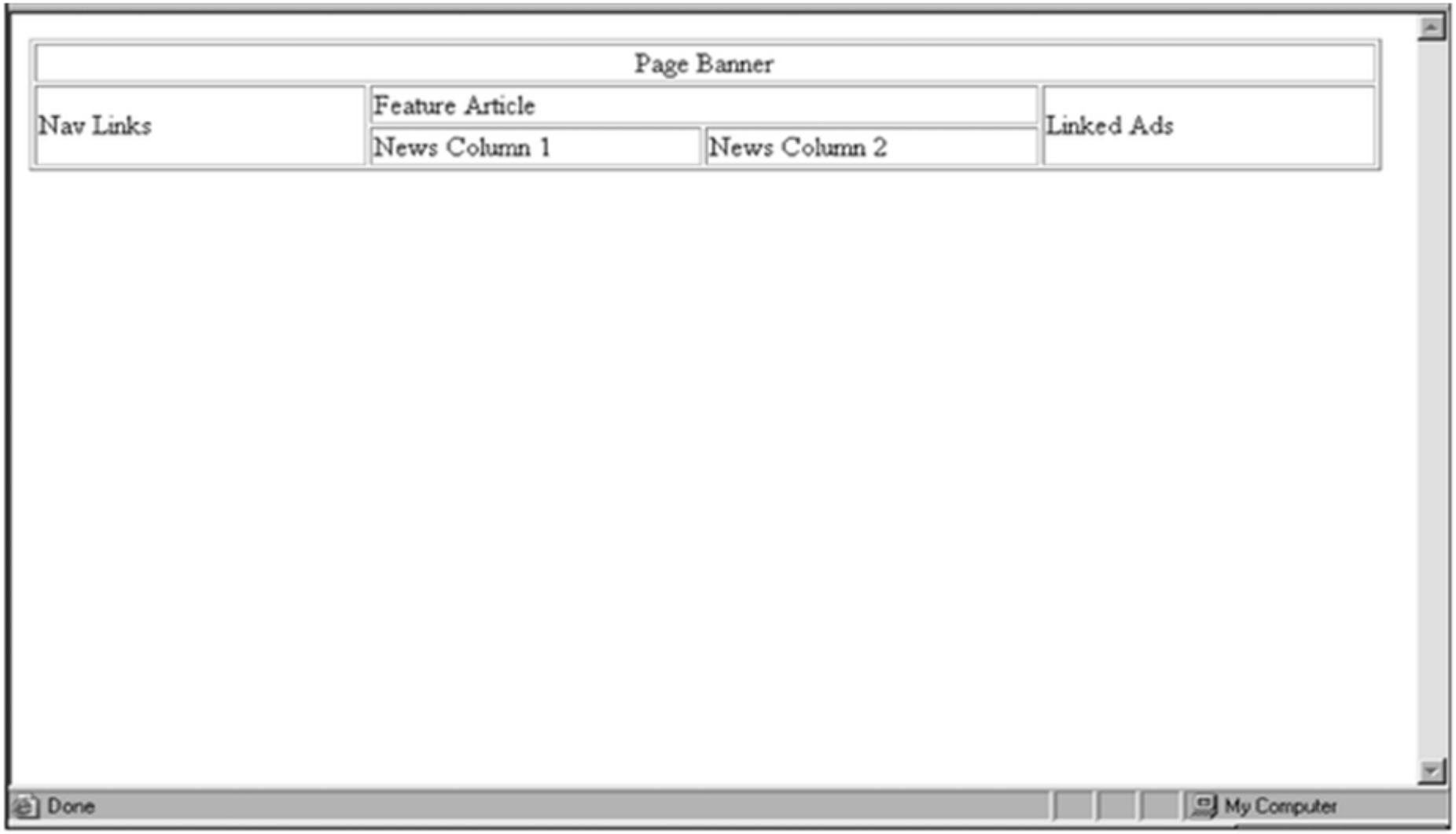
What will be the output?

```
<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



Column widths set to 25%

Frames

- Frames are a relatively new addition to the HTML standard. First introduced in Netscape Navigator 2.0.

Objectives:

Upon completing this section, you should be able to:

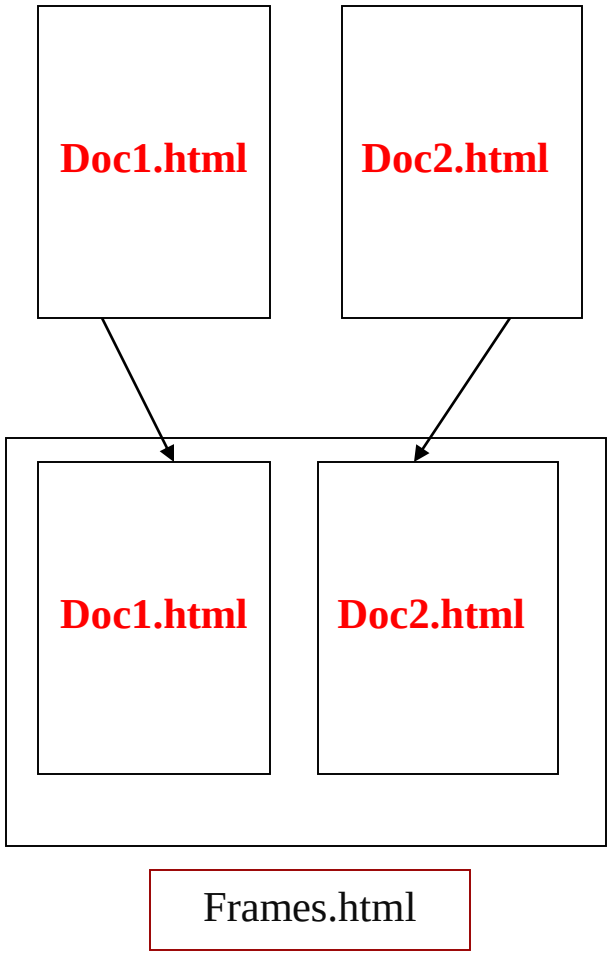
- Create a Frame based page.
- Work with the Frameset, Frame, and Noframes elements.
- Use the attributes of the Frames elements to control the display.
- Set Targets appropriately.

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



Frame Page Architecture

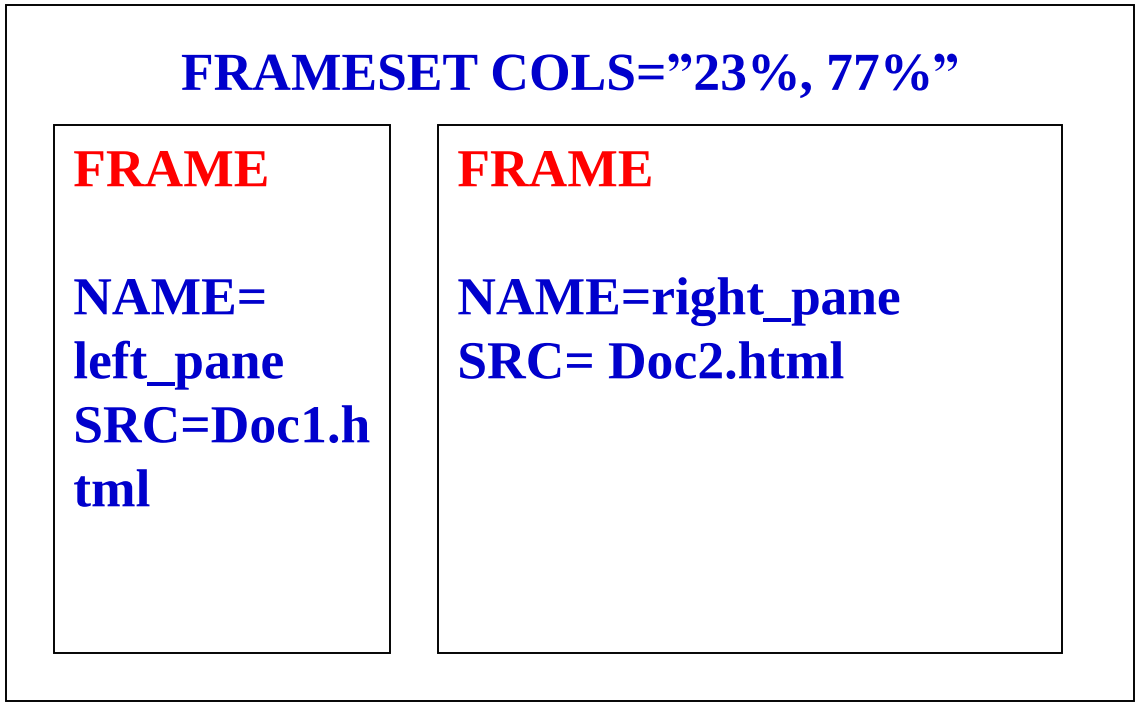
- A **<FRAMESET>** element is placed in the html document before the **<BODY>** element. The **<FRAMESET>** describes the amount of screen real estate given to each windowpane by dividing the screen into **ROWS** or **COLS**.
- The **<FRAMESET>** will then contain **<FRAME>** elements, **one per division** 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> **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:

1. **Yes** – always display scroll bar(s).
2. **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>
```

Compound FRAMESET Divisions

- 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.

Compound FRAMESET Divisions

```
<html>
<head>
<title> Compound Frames Page</title>
</head>
<frameset rows="120,*">
<frame src="banner_file.html"
    name"banner">
<frameset cols="120,*">
<frame src="links_file.html"
    name="links">
<frame src="content_file.html"
    name="content">
```

```
<noframes>
<p>
Default message
</p>
</noframes>
</frameset>
</frameset>
</head>
```

Compound FRAMESET Divisions

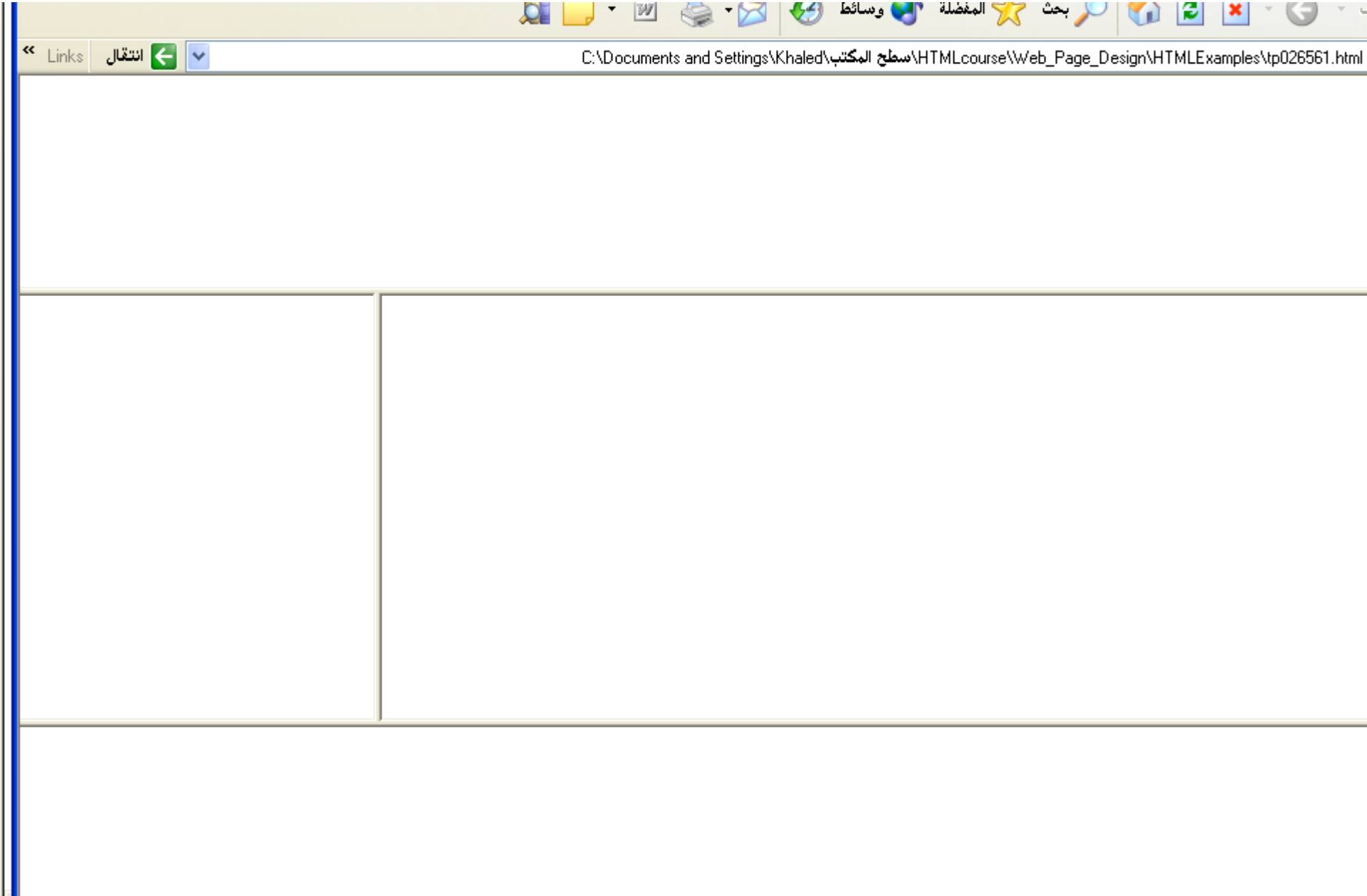
You may want to create a frames design with a combination of rows and columns.

<table>
<tr><td colspan="2">Banner File</td></tr>
<tr><td>Links File</td><td>Contents File</td></tr>
</table>

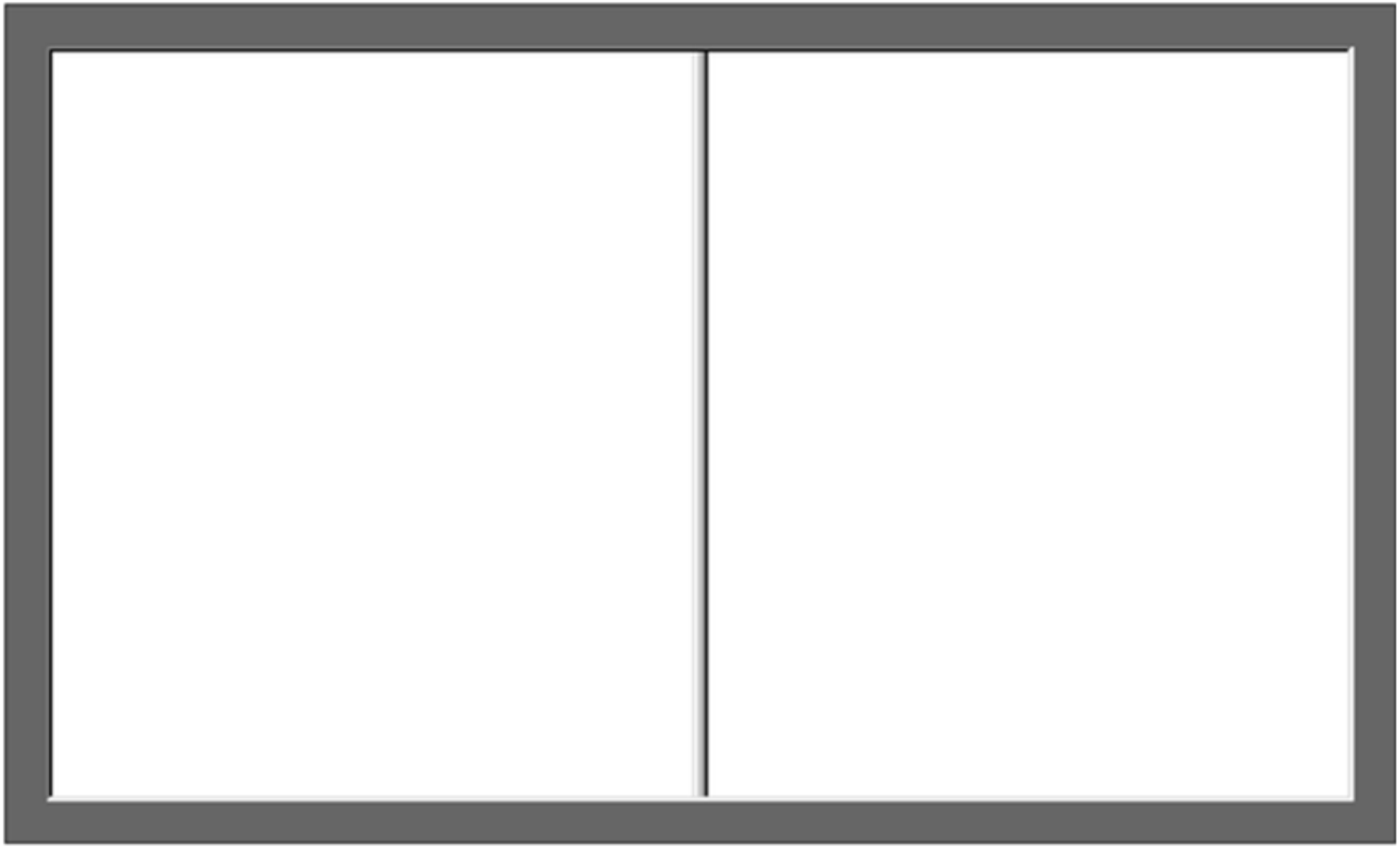
Compound FRAMESET Divisions Example

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

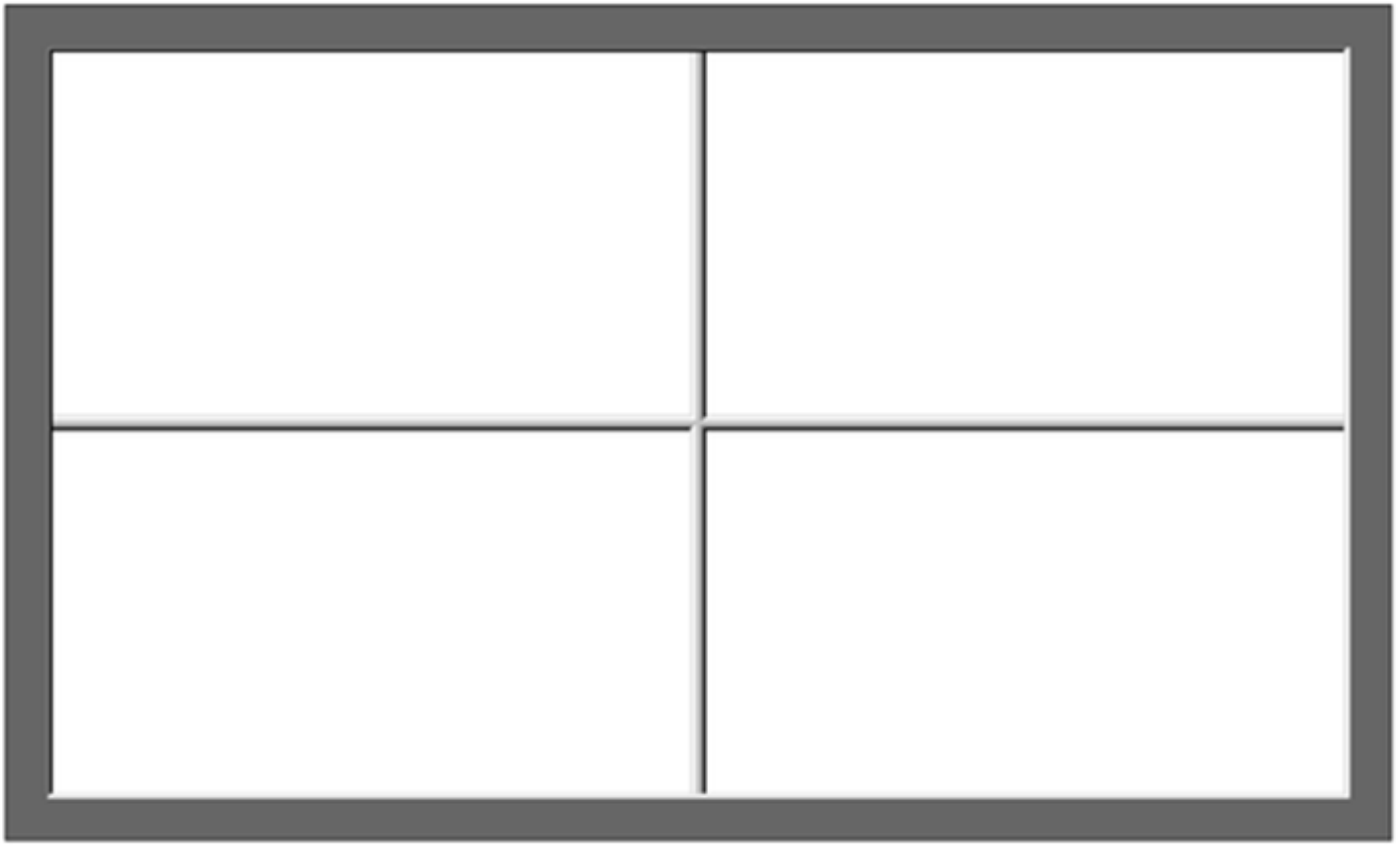
Output


وسائط
المفضلة
بحث
Links
انتقال
C:\Documents and Settings\Khaled\سطح المكتب\HTMLcourse\Web_Page_Design\HTMLExamples\tp026561.html

Frames created with <FRAMESET ROWS="50%, 50%">



Frames created with <FRAMESET COLS="50%, 50%">



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
  scrolling=no>
</frameset>
```

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 doc5.html that linked to doc5.html and we wanted doc5.html to be displayed in the right windowpane; the HTML code would appear in doc5.html as follows:

<A HREF="doc5.html" TARGET="right_pane">Link to Document 5 </A>

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.
2. **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. **<A HREF="stuff.html" TARGET="_blank">**

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. **<A HREF="stuff.html" TARGET="_self">**

If a frame contains the following link, the frameset that contains the frame that contains this link will be replaced by stuff.HTM.

3. **<A HREF="stuff.html" TARGET="_parent">**

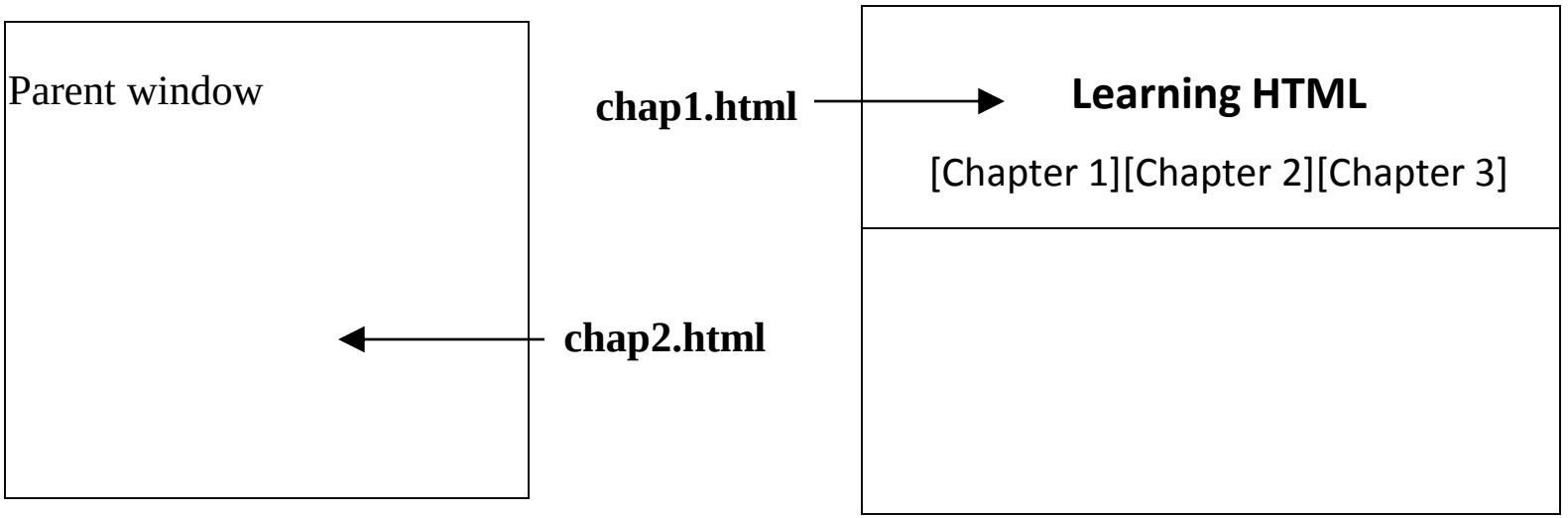
Finally, if a frame contains the following link, clicking the link replaces the entire browser window with the contents of stuff.HTM.

4. **<A HREF="stuff.html" TARGET="_top">**

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.

<A HREF="chap1.html" TARGET="_self"> [Chapter 1]</A>
<A HREF="chap1.html" TARGET="_parent"> [Chapter 2]</A>



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.

<A HREF="chap1.html" TARGET="bottom"> [Chapter 1]</A>
<A HREF="chap2.html" TARGET="bottom"> [Chapter 2]</A>
<A HREF="chap3.html" TARGET="bottom"> [Chapter 3]</A>