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HTML Basics -FRAME and FRAMESET

INTRODUCTION

Frames allow you to divide the web page into several rectangular areas and to display a separate document in each rectangle. Each of those rectangles is called a "frame". Frames are very popular because they are one of the few ways to keep part of the page stationary while other parts change. Frames are also one of the most controversial features of HTML, because of the way the frames concept was designed, and because many web framed web sites are poorly implemented. HTML frames allow you to present documents in multiple views, which may be independent windows or sub windows. Multiple views offer designers a way to keep certain information visible, while other views are scrolled or replaced For example, within the same window, one frame might display a static banner, a second a navigation menu, and a third the main document that can be scrolled through or replaced by navigating in the second frame.

FRAME DOCUMENT LAYOUT

A Frame Document has a basic structure very much like normal HTML document, except the BODY container is replaced by a FRAMESET container which describes the sub-HTML documents, or Frames, that will make up the page.

```
<HTML>
<HEAD> …..</HEAD>
<FRAMESET>    ……. </FRAMESET>
</HTML>
```

The above example was an HTML document that describes frame layout (called a frameset document) and has a different makeup than an HTML document without frames. A standard document has one HEAD section and one BODY. A frameset document has a HEAD, and a FRAMESET in place of the BODY.

The FRAMESET section of a document specifies the layout of views in the main user agent window. In addition, the FRAMESET section can contain a NOFRAMES element to provide alternate content for user agents that do not support frames or are configured not to display frames. Elements that might normally be placed in the BODY element must not appear before the first FRAMESET element otherwise the FRAMESET will be ignored.

FRAME SYNTAX

Frame syntax is similar in scope and complexity to that used by tables, and has been designed to be quickly processed by Internet client layout engines. Adding a frameset is a simple matter of including the <FRAMESET> container tags after the head of the document in lieu of the body:

```
<HTML>
<HEAD> <!-- Header material --> </HEAD>
< FRAMESET > <!-- Frame definition --> </FRAMESET>
</HTML>
```

For browsers that support frames, the frameset content is parsed and interpreted accordingly. For non-frame-compatible browsers, the result is a blank page. From now, this is the syntax for the frameset element:

< FRAMESET [rows=row Width] [cols=colWidths] [loadEvents] >
. . . Frame or Frameset definitions . . .
</FRAMESET>

Here, rowWidths and colWidths are a comma-delimited list of sizes for their respective frame rows or columns. If not included, each value defaults to one row and one column, in spite of any number of frames that are included in the definition.

<FRAMESET>

This is the main container for a Frame. It has 2 attributes ROWS and COLS. A frame document has no BODY, and no tags that would normally be placed in the BODY can appear before the FRAMESET tag, otherwise the FRAMESET will be ignored. The FRAMESET tag has a matching end tag, and within the FRAMESET you can only have other nested FRAMESET tags, FRAME tags, or the NOFRAMES tag.

- **ROWS= "rowWidths value list":** The ROWS attribute takes as its value a comma separated list of values. These values can be absolute pixel values, percentage values between 1 and 100, or relative scaling values. The number of rows is implicit in the number of elements in the list. Since the total height of all the rows must equal the height of the window, row heights might be normalized to achieve this, A missing ROWS attribute is interpreted as a single row arbitrarily sized to fit.

- **Value:** A simple numeric value is assumed to be a fixed size in pixels. This is the most dangerous type of value to use since the size of the viewer's window can and does vary substantially. If fixed pixel values are used, it will almost certainly be necessary to mix them with one or more of the relative size values described below. Otherwise the client engine will likely override your specified pixel value to ensure that the total proportions of the frame are 100% of the width and height of the user's window.
- **Value%:** This is a simple percentage value between 1 and 100. If the total is greater than 100 all percentages are scaled down. If the total is less than 100, and relative sized frames exist, extra space will be given to them. If there are no relative-sized frames, all percentages will be scaled up to match a total of 100%.
- **Value*:** The value on this field is optional. A single '*' character is a "relative-sized" frame and is interpreted as a request to give the frame all remaining space. If there exist, multiple relative-sized frames, the remaining space is divided evenly among them. If there is a value in front of the '*', that frame gets that much more relative space. "2*,*" Would give 2/3 of the space to the first frame, and 1/3 to the second. Example for 3 rows, the first and the last being smaller than the center row:
  <FRAMESET ROWS="20%, 60%, 20% ">
  Example for 3 rows, the first and the last being of fixed height, with the remaining space assigned to the middle row:

<FRAMESET ROWS=" 100, *,100">

- **COLS= "column_width_list ":** The COLS attribute takes as its value a comma separated list of values that is of the exact same syntax as the list described above for the ROWS attribute. ,

The FRAMESET tag can be nested inside other FRAMESET tags. In this case the complete sub frame is placed in the space that would be used for the corresponding frame if this had been a FRAME tag instead of a nested FRAMESET.

<FRAME>

This tag defines a single frame in a frameset. It has 7 possible attributes:

1. SRC
2. NAME
3. MARGINWIDTH
4. MARGINHEIGHT
5. SCROLLING
6. NORESIZE.
7. FRAMEBORDER

The FRAME tag is not a container so it has no matching end tag. The FRAME syntax is :

<FRAME src = "URL">
<FRAME name = "Window name">
<FRAME marginwidth="value">
< FRAME marginheight="value">
<FRAME scrolling="yes|no|auto">
<FRAME noresize>
<FRAME frameborder= "0|1">

- **SRC="url":** The SRC attribute takes as its value the URL of the document to be displayed in this particular frame. FRAMEs without SRC attributes are displayed as a blank space of the same size as the frame would have been.
  For example,
  <FRAMESET rows="100, 200"><FRAME src="framex.html">
  < FRAME src="flower.gif"> </FRAMESET>
- **NAME="window_name":** The NAME attribute is used to assign a name to a frame so it can be targeted by links in other documents (these are usually from other frames in the same document). The NAME attribute is optional; by default all windows are unnamed.
  - Names must begin with an alphanumeric character.
  - Named frames can have their window contents targeted with the new TARGET attribute.

  For example,
  <FRAMESET rows="100, 200">
  < FRAME name="Listl">
  </FRAMESET>
- **MARGINWIDTH="value":** The MARGINWIDTH attribute is used when the document wants some control of the margins for its frame. If specified, the value for MARGINWIDTH is in pixels. Margins cannot be less than one, so that frame objects will

not touch frame edges, and cannot be specified so that there is no space for the document contents. The MARGINWIDTH attribute is optional; by default, all frames by default let the browser decide on an appropriate margin width. For example,

```
<FRAMESET rows="100, 200">
<FRAME src="flower.gif"  marginwidth = 20>
</FRAMESET>
```

- **MARGINHEIGHT=" value":** The MARGINHEIGHT attribute is just like MARGINWIDTH, except it controls the upper and lower margins instead of the left and right margins. For example,

```
< FRAMESET rows="100, 200" >
<FRAME src="flower.gif" marginwidth = 20 marginheight = 20>
</FRAMESET>
```

- **SCROLLING="yes| no| auto":** The SCROLLING attribute is used to describe if the frame should have a scrollbar or not. Yes results in scrollbars always being visible on that frame. No results in scrollbars never being visible. Auto instructs the browser to decide whether scrollbars are needed, and place them where necessary. The SCROLLING attribute is optional; the default value is auto. For example:

```
<FRAMESET rows="100, 200">
<FRAME src="fiower.gif" marginwidth = 20  marginheight = 20 scrolling="yes">
</FRAMESET>
```

- **NORESIZE**: The NORESIZE attribute has no value. It is a flag that indicates that the frame is not resizable by the user. Users typically resize frames by dragging a frame edge to a new position. Note that if any frame adjacent to an edge is not resizable, that entire edge will be restricted from moving. This will affect the resizable of other frames. The NORESIZE attribute is optional; by default all frames are resizable.
- **FRAMEBORDER= "0|1":** This attribute will cause the browser to render a visual delineation (most likely as 3D or beveled border, but it very much depends on the style of the browser that you use). For example:

```
<frameset rows="100,*" >
< frame src="header.html" frameborder="0" />
<frame src="home,html" frameborder="0" />
</frameset>
```

The HTML specification says to use "1" to signify 'border on' and "0" for 'border off', some browsers will also honour values of "yes" and "no". If no value is specified, no border is applied.

<NOFRAMES>

This tag is for content providers who want to create alternative content that is viewable by non-frame-capable clients. A Frame-capable Internet client ignores all tags and data between start and end NOFRAMES tags.

Here is a simple frame document Frame001.HTML:

```
<HTML>
<HEAD><TITLE>A simple frameset document</TITLE> </HEAD>
<FRAMESET cols="30%, 80%">
        <FRAMESET rows="100, 200">
                <FRAME src="framex.html">
                <FRAME src= "flower.gif" >
        </FRAMESET>
        <FRAME src="framey.html">
        <NOFRAMES>
                <P>This frameset document contains:</P>
                <UL><LI><A href="framex.html">Some neat contents</A>
                      <LI><IMG src="flower.gif" alt="A neat image">
                       <LI><A href="framey.html"> Some other neat contents</A>
                </UL>
        </NOFRAMES>
</FRAMESET>
</HTML>
```

Exercise:

1: **Write short note on <FRAMESET>, <FRAME> and <NOFRAMES>?**
2: **List the attribute of <FRAMESET > tag.**
3: **List the attribute of <FRAME> tag?**