

7 – Frames

One of the later inclusions in the HTML standards was the Frames capability. Frames were originally introduced by **Netscape** for version 2 of their **Navigator** web browser and later adopted with some additions by **Microsoft** for version 3 of their **Internet Explorer** web browser. Frames finally became official when the **HTML 4.0** standard was finalised.

Frames allow you to display more than one HTML file within the same web browser window. Each section of the screen is referred to as a frame. The technique is normally used to aid in website navigation. A website that uses Frames will have several HTML files. There will be one HTML file which contains the information about how many frames there will be, how big they will be, what pages will appear in each frame etc. There will also be a separate HTML file for each frame in the site, plus HTML files for any additional pages that may need to open when links are clicked. Take a look at the example below. The HTML used to create the frameset is shown to the right.

Navigation	Main Page	<frameset< th=""></frameset<>
		<frame sf<="" th=""/>
		<frame sf<="" th=""/>
	Navigation	Navigation Main Page

<FRAMESET COLS="20%,80%">

<FRAME SRC="navigation.html" NAME="nav"> <FRAME SRC="main.html" NAME="main"> </FRAMESET>

In the above example, one HTML file would contain information saying that there is a frameset with 2 columns. It would specify how wide each frame is, along with which two HTML files will display in each frame. That makes three files in total, plus any pages that will load if the user clicks on links. Since a frameset can only divide the page in to even columns or rows, if the web developer wants their page divided up in a less even way, it may be necessary to have a frameset inside another frameset like in the example below.

Heading		
Navigation	Main Page	<frameset cols="*" rows="100,*"></frameset>
U U	<u> </u>	<frame name="heading" src="heading.html"/>
		<frameset cols="15%,85%"></frameset>
		<frame name="nav" src="navigation.html"/>
		<frame name="main" src="main.html"/>

Tip Since Dreamweaver can handle most of the details about the frameset for you, it's not necessary to know the HTML, but it can help, especially if you run in to problems. For detailed exercises on HTML for frames go to http://oneil.com.au/pc/html/HTML-6-Frames.pdf

Exercise 1 – Creating a Frameset

Before you begin these exercises, make sure you get the Frames exercise files from <u>http://oneil.com.au/pc/dreamweaver.html</u>. These contain the HTML pages that will be pieced together in our frameset. If you don't have them, you'll need to create pages from scratch to be used in your frameset. Make sure these files are all saved on your computer. The frameset you create will need to be saved in the same location when you get to that part.

1) Open some of the exercise files in Dreamweaver to see how they look.

We will create a frameset that places a heading page (heading.html) across the top of the screen, a navigation page (navigation.html) down the left side and several other files to be displayed in the man frame area. A style sheet (styles.css) is also provided to control the formatting in the main pages while the heading and navigation pages use inline styles for their formatting.

2) From the File menu select New or press [Ctrl] [N].

New Document		
General Templates		
Category:	Framesets:	Preview:
Basic page Dynamic page Template page Other CSS Style Sheets Framesets Page Designs (CSS) Page Designs Page Designs (Accessible)	 Fixed Bottom Fixed Bottom, Nested Left Fixed Bottom, Nested Righ Fixed Left Fixed Left, Nested Bottom Fixed Left, Nested Top Fixed Right, Nested Bottor Fixed Right, Nested Top Fixed Top Fixed Top, Fixed Bottom Fixed Top, Nested Left Fixed Top, Nested Left Split Horizontal Split Vertical 	Description: A frameset with a fixed-size top frame and a nested left frame.
Help Preferences	Get more content	Create Cancel

 From the list of categories select Framesets (in some versions – Page from Sample and then Framesets). In the list of framesets, select Fixed Top, Nested Left, which is one of the more commonly used frame layouts. Click Create.

Dreamweaver will create a page that has 2 framesets. The first frameset divides the page in to two rows. The top row is 80 pixels high by default with the other row taking up the remaining space. Within the second row is another frameset which divides the area in to two columns. The left column is 80 pixels wide with the other column taking up the remaining page. Some temporary blank files are being displayed in each frame currently. We could edit and then save each of those blank files but instead, we will select existing files to be displayed in each frame.

- 4) The first thing we will do is save the frameset. From the File menu select Save or press [Ctrl] [S]. Enter *index.html* for the filename and make sure it is being saved in the same folder you placed the frames exercise files in.
- 5) For the **Title** of the page enter *Dreamweaver Information*. <u>Title</u>: Dreamweaver Information



6) Hold down [Alt] and click in the top frame. This will make the frame's properties visible in the **Properties panel**.

F	Frame name	<u>S</u> rc	heading.html	•	e 🗀	<u>B</u> orders No	-
'	heading	Sc <u>r</u> oll	No	🜌 No <u>r</u> esize	Border	<u>c</u> olor	
	Margi	n <u>w</u> idth					
	Margin	n <u>h</u> eight					

- 7) Review the explanation of the Frame properties on the next page and make the changes indicated (and shown in the example above).
- **Note** If the frame borders are not visible in Design view, go to the **View** menu, select **Visual Aids** and then select **Frame Borders**.

Property Frame Name	Purpose This identifies the frame. If the user clicks on a link on your page, you can direct the linked document to load in this frame by referring to its name.	Change To Heading
Src	Specifies which HTML file will appear in this frame when the page loads. You can use the Point to File icon ⁽³⁾ to select the file just as you can with hyperlinks	Heading.html
Scroll	Specifies whether a scrollbar will appear in this frame or not. Setting it to no will prevent a scrollbar from appearing. Setting it to Auto will mean a scrollbar will appear whenever the content of the frame won't fit in the available area.	Νο
No resize	When this option is ticked, the website user will be unable to resize a frame by dragging its border.	Ticked
Margin width/height	Controls the amount of blank space around the edges of the frame. Leaving it blank will mean a small amount of blank space will appear around the inside edges of the frame. Setting it to 0 will remove any margin.	Leave blank
Borders Border color	Controls whether the frame will have a visible border. Colour of any visible border around the frame.	No Leave blank

- 8) Hold down **[Alt]** and click on the left frame.
- 9) Set the frame's options as shown below.

F	Frame name	<u>S</u> rc	navigation.html	Ç) 🗀	<u>B</u> orders	No 💌
'	nav	Sc <u>r</u> oll	No	🜌 No <u>r</u> esize	Border	<u>c</u> olor	
	Marg	jin <u>w</u> idth					
	Margi	in <u>h</u> eight					

- 10) Hold down [Alt] and click on the right frame.
- 11) Set the frame's options as shown below.

F	Frame name	<u>S</u> rc	home.html] 🗘 🗀	<u>B</u> orders	Default	-
'	main	Sc <u>r</u> oll	Auto	-	🔲 No <u>r</u> esize	Border	r <u>c</u> olor	•	
	M	argin <u>w</u> idth							
	Ma	argin <u>h</u> eight							

12) Save the changes. The completed frameset should look like the example on the next page.



Exercise 2 – Customising a Frameset

1) Click on the line that divides the top frame from the bottom frames.

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You could drag this line to change the height of the frame, but doing it through the Properties panel allows for more precision. Now that you have clicked on the dividing line, the properties for the frameset should be showing in the Properties panel.

2) In the properties, enter 60 for the frame height, making sure that Pixels is the measurement used (You can also specify a size as a percentage of screen height).



If you click the bottom frame from the preview in the properties panel (as indicated above), you will be able to change the height of the bottom frame. Currently it will be set to take up whatever space the top frame leaves. We'll leave it on that setting. We won't make any changes to the width of the bottom 2 frames.

- 3) Save the changes to your frameset. A) She had a set to your frameset.
- 4) Check the code view [Ctrl] ['] to see what HTML has been used to create your frameset.

	<u>V</u> alue	<u>U</u> nits		
Row	1	Relative	-	RowCol Selection

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Linking in Frames

When your page uses framesets then links may need some additional information to specify what frame the new page is supposed to load in. Hyperlinks can be directed to certain frames by using the Target attribute. A list of possible options for the target attribute in HTML anchors (links) is shown below.

Target	Result when link is clicked
Target name	New page will load in the frame of that name. If no frame of that name exists or if the
E.g. 'nav'	frame name is mistyped, the new page will open in a new browser window of that name.
_blank	New page will open in a new browser window.
_parent	If nested framesets are used, then the new page will fill the current frameset. For example
	in our page, where the bottom two frames are part of a frameset, a link in either of these
	frames using the _parent target will make the new page fill both frames of the frameset.
_self	This is the default option if nothing is specified. The new page will load in the same
	frame as the link that was clicked.
_top	The new page will load in the whole browser window instead of a particular frame.

Exercise 3 – Creating Links with the Target Attribute

- 1) Make sure the frameset is still open in Dreamweaver.
- 2) Select the text *Home* in the left frame.
- 3) Create a hyperlink to the file *home.html*.
- 4) Preview the page in your web browser (save the changes first if prompted).
- 5) Click the link you have created.

Dreamweaver Information Page

Web With

Web Development With Dreamweaver

Develc Macromedia Dreamweaver MX 2004 is a professional HTML editor for designing, coding, and developing websites, web pages, and web applications. Whether you enjoy the control of hand-coding HTML or prefer to work in a visual editing environment, Dreamweaver provides you with helpful tools to enhance your web creation experience.

Macromedia Dreamweaver MX 2004 is a professional HTML editor for designing, coding, and developing websites, web pages, and web applications. Whether you

Dream The visual editing features in Dreamweaver let you quickly create pages without writing a line of code. You can view all your site elements or assets and drag them from an easy-to-use panel directly into a document. You can streamline your development workflow by creating and editing images in Macromedia Fireworks or another graphics application, then importing them directly into Dreamweaver, or by adding Macromedia Flash objects.

> Dreamweaver also provides a full-featured coding environment that includes code-editing tools (such as code coloring and tag completion) and reference material on HTML, Cascading Style Sheets (CSS), JavaScript, ColdFusion Markup Language (CFML), Microsoft Active Server Pages (ASP), and JavaServer Pages (JSP). Macromedia Roundtrip HTML technology imports your hand-coded HTML documents without reformatting the code; you can then reformat code with your preferred formatting style.

> Dreamweaver also enables you to build dynamic database-backed web applications using server technologies such as CFML, ASP.NET, ASP, JSP, and PHP.

Dreamweaver is fully customizable. You can create your own objects and commands, modify keyboard shortcuts, and even write JavaScript code to extend Dreamweaver capabilities with new behaviors, Property inspectors, and site reports.

- 6) The new page loads in the current frame by default. Go back to Dreamweaver and click on the link so its properties appear in the **Properties panel**.
- 7) Change the **Target** property to *main*.



- 8) Create links for each of the other items in the navigation bar so that the text *Requirements* links to *requirements.html*, *Features* links to *features.html* and *Resources* links to *resources.html*. Make sure that each link has the **Target** property set to *Main*.
- 9) From the File menu select Save All.
- 10) Preview the site in your web browser.
- 11) Click on each of the links to test them. Each of the pages should now be loading in the right frame (main).
- 12) When you click the Features link, notice that there is too much text to fit in the frame (unless your monitor is set to a very high resolution) so a scrollbar has appeared for that page. Scrolling down the page will only affect that frame with the heading and navigation still clearly visible. This is one of the advantages of using frames for navigation.
- 13) Click on the *Resources* link in the navigation frame to load the resources page.
- 14) Click on one of the links under the Resources heading. The new page will load within that frame.

When you are linking to a site outside your own, it is better for the new site to fill the whole window rather than being squeezed in to your site's navigation. The other page will look better and most likely be more useful, plus it's generally considered inappropriate to force your visitors to keep your heading, logo etc when they decide to follow a link to someone else's site. We'll add the _top target to those links so that they load in the whole window.

15) Return to Dreamweaver and open the document *resources.html*.

- 16) Click on the first link.
- 17) Change the **Target** attribute for that link to *_top* and do the same for the other links.
- 18) Save the changes.
- 19) Return to your webs browser and reload the site (or preview it again from Dreamweaver if you no longer have it open in your web browser.
- 20) Try the links in the Resources page again. This time the links should load the new sites using the whole window.

Advantages and Disadvantages of Frames

Many people don't like Frames. In a large number of cases, this is simply because they've been to too many websites where frames have been used badly, such as frames with links that don't use the target attribute properly. Below is a list of what are commonly regarded as some of the advantages and disadvantages of frames.

Advantages

- Static navigation, such as navigation bars will always be visible. They don't get lost when the user scrolls down a page.
- Logos, messages etc can also remain visible.
- Some designs are easier than other techniques (such as tables) using frames.
- Graphics used in navigation, heading frames etc only need to be downloaded once rather than repeatedly loading for each page.

Disadvantages

- Search engines may not be able to index a frames site properly.
- Individual pages in a site are harder for users to bookmark.
- Older browsers or browsers for people with disabilities may not support frames (see the next section for tips on dealing with that problem).
- Frames sites can be difficult to edit since more than one HTML file is involved at a time.
- Framed websites often don't work too well on smaller screens such as on web enabled phones.

Remember that page layouts that can be done with frames can often be done just as well without them. It's worth thinking carefully about whether you can really benefit from using frames before basing your website around them.

Exercise 4 – Adding No Frames Content

Some browsers don't recognise frames. One way of catering for those browsers is to create two versions of your website – one with frames and one without, then you can create a main page for your site that that provides links for the user to go to the version of their choice. If you don't feel like going to such lengths, there is another way to provide for the browsers that don't support frames. HTML allows for a **NOFRAMES** section of the page. Browsers that recognise frames will use them and ignore what's in the **NOFRAMES** section. Other browsers that can't handle frames will ignore them and the content of the **NOFRAMES** section will appear in the browser instead.

- 1) Make sure your *index.html* frameset is still open in Dreamweaver.
- 2) From the **Modify** menu, select **Frameset** and then select **Edit Noframes Content**. A blank page will appear representing what non frames compatible browsers will see.
- 3) Enter the following content.

Dreamweaver Information

- <u>Main</u>
- <u>Requirements</u>
- <u>Features</u>
- <u>Resources</u>
- 4) Each of the items in the bulleted list should be a link to the appropriate page and the first line should be a level 1 heading.
- 5) From the **Modify** menu, select **Frameset** and then select **Edit Noframes Content** to return to your normal view.

You won't be able to preview the **NOFRAMES** section unless you have a browser that doesn't support frames. You will be able to see the **NOFRAMES** section in your HTML code.

6) Check code view **[Ctrl] [']** to see the **NOFRAMES** section that has been added to your frameset. In the example below, the **NOFRAMES** section is highlighted. You may need to click on the border between the frames before you switch to code view, otherwise you may be seeing the HTML for one of the files that appears within a frame instead of the HTML for the frameset itself.

```
<FRAMESET ROUS="60,*" COLS="*" FRAMEBORDER="NO" BORDER="0" FRAMESPACING="0">
 <FRAME SRC="heading.html" NAME="heading" FRAMEBORDER="NO" SCROLLING="NO" NORESIZE ID="heading" >
 <FRAMESET COLS="80,*" FRAMEBORDER="NO" BORDER="0" FRAMESPACING="0">
 <FRAME SRC="navigation.html" NAME="nav" FRAMEBORDER="NO" SCROLLING="NO" NORESIZE ID="nav">
 <FRAME SRC="home.html" NAME="main" SCROLLING="AUTO" ID="main">
 </FRAMESET>
</FRAMESET>
 NOFRAMES><BODY>
(Hl>Dreamweaver Information </Hl>
CUL>
 <LI><A HREF="home.html">Main</A></LI>
 <LI><A HREF="requirements.html">Requirements</A></LI>
 <LI><A HREF="features.html">Features</A></LI>
 <LI><A HREF="resources.html">Resources</A></LI>
 /UL>
(P>  </P>
C/BODY></NOFRAMES>
</HTML>
```

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Inline Frames

If you've been wondering why we keep checking code view when editing HTML isn't necessary with a WYSIWYG editor, now you're about to see that is sometimes is necessary. Other times it may not be necessary but might just be handy. Inline Frames are potentially a useful features in websites but unfortunately aren't supported too well in Dreamweaver. This means that there's no easy way to add one to your site other than to do it through HTML. An inline frame allows you to add a frame that you can position on your page just as you would position a picture, rather than dividing the whole page in to frames. When Microsoft introduced support for Frames in version 3 of Internet Explorer, they included Inline Frames as an additional use for frames. When Frames became part of the HTML 4 specification, inline frames were included also. For a long time few browsers other than internet explorer supported Inline Frames even if they supported normal frames. These days though, inline frames are fully supported in the most popular browsers such as **Internet Explorer**, Firefox and Opera. Inline frames are created in HTML using the IFRAME tag. The tag has a number of attributes that are similar to those of a normal frame such as another frame (in case links elsewhere on the page need to load a document in the inline frame) and other options for borders and scrollbars. It also has some attributes that are very similar to those of the image tag such as height, width and alignment for positioning the inline frame on the page. Anything placed between the opening <IFRAME> tag and the closing </IFRAME> tag will appear in browsers that don't support inline frames.

Exercise 5 – Adding an Inline Frame

- 1) Open the *requirements.html* file in the editor.
- 2) Go in to Code view by clicking the button Ocde or by pressing [Ctrl] [`].
- Add a blank line after the closing tag of the heading (</H1>) and before the opening tag of the unordered list ().

<H1>Requirements</H1>

← Create a new line here

800 MHz Intel Pentium III processor (or equivalent) and later

4) On the blank line, type the following. The **SRC** (source) attribute specifies which file will appear in the frame, in this case it will be *mac_requirements.html*.

<IFRAME SRC="mac_requirements.html"></IFRAME>

5) Save and preview the page. If it looks something like the example below you know it's working.



- 6) Try scrolling in the frame.
- 7) There is a link at the bottom of the Mac Requirements document (*Mac Tips*). Click on that link and another document will load in the frame.
- 8) The last link in this document goes back to the Mac Requirements document. The other three links that are arranged in a bulleted list all go to other sites. Each of these links uses the *_top* target so they will load in the full window, just like in a normal frame. Try one of them.

Now we'll go back to our frame and edit some of its properties.

9) In the HTML, right click anywhere in the IFRAME tag and select Edit Tag <iframe>.

<hl>Requirements</hl>		
<iframe <="" src="mac_requirements.html" th=""><th>Edit Tag <iframe></iframe></th><th>Ctrl+F5</th></iframe>	Edit Tag <iframe></iframe>	Ctrl+F5
<ot></ot>	Insert Tag 😽	
800 MHz Intel Pentium III proc	Eunctions	LI>

Dreamweaver might not support IFRAME tags so well in design view but the support in code view's good enough.

10) Complete the options for the tag as shown below.

Tag Editor - Iframe		
General Browser Specific	Iframe - General	
Style Sheet/Accessibility Alternate Content	Source:	mac_requirements.html Browse
	Name:	mac
	Width:	250
	Height:	200
	Margin width:	
	Margin height:	
	Alignment:	right
	Scrolling:	auto (default)
		Show borders
		D Tag info
		OK Cancel

Tip If you click on Tag info in the bottom right corner of the Tag Editor, the window will expand to show a section at the bottom that explains each of the tag's options.

- 11) Click **OK**.
- 12) Save and close the file.
- 13) Open *index.html* in the editor and preview it in the web browser.
- 14) Use the navigation bar to get to the *Requirements* page so you can see the inline frame.
- 15) The completed site with the Requirements page showing should appear like the example on the following page.



Requirements

Frames

Dreamweaver Information Page

Requirements

- 800 MHz Intel Pentium Ⅲ processor (or equivalent) and later
- Windows 2000, Windows XP
- 256 MB RAM (1 GB recommended to run more than one Studio product simultaneously)
- 1024 x 768, 16-bit display (32-bit recommended)
- 650 MB available disk space

Mac Requirements

- 600 MHz PowerPC G3 and later
- Mac OS X 10.3, 10.4
- 256 MB RAM (1 GB recommended to run more than one Studio 8 product simultaneously)
- 1024 x 768 thousands of

Exercise 6 – Revision Questions

1) For each of the following Frameset layouts, how many HTML files would be needed?







- 2) If your website uses frames for navigation, what are two things you can do to make sure the site's content is available to people using any browser?_____
- 3) Describe two good reasons for using frames in a website.

4) Describe two good reasons for avoiding using frames in a website.

5) Describe two ways that an inline frame might be used in a website.