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First Edition

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HTML Introduction

In this chapter you are introduced to the concepts of linear media and hypermedia. You will learn about HTML and the basics of document structure.

Objectives

Upon completing this section, you should be able to:

1. Explain hypermedia vs. linear media
2. Define HTML
3. Describe the Basic Document Structure

Linear Media

Linear media describes media with a defined beginning and a linear progression to the end. Forms of linear media such as film, audio and videotape, as well as most books are organized with this expectation. The World Wide Web, however, is organized differently.

Hypermedia

Hypermedia is about choice. Users simply select what interests them. A good example is an audio CD where you can choose song 5 and listen to it almost immediately. Contrast this with an audiotape where you would have to scan through from your current location on the tape to the beginning of the song.

When this concept is applied to text you get **hypertext**, where by *{Clicking}* on a link or hotspot (hyperlink) you are transported to a new location within the same page or to a new page altogether.

When you interlink a large number of pages of text on different computers all over the world, you get a spider web-like system of links and pages. This is known as the World Wide Web – a system whereby pages stored on many different web servers, connected to the Internet, are linked together.

The system is useful because all of the pages are created in the same format. This format or “language” is called HTML (Hypertext Markup Language), a subset of an international standard for electronic document exchanged called SGML (Standard Generalized Markup Language).

This course introduces you to the format of an HTML page. You will learn about the components that make up HTML, and how to use FrontPage to create pages to publish on the World Wide Web.

What is HTML Markup?

HTML is a set of logical codes (**markup**) in parentheses that describe the appearance of a web document and the information it contains.

E.g. ``This text would appear bold in the browser``

The codes are enclosed by less than “<”, and greater than “>” brackets. These bracketed codes of the markup are commonly referred to as tags. HTML codes are always contained inside these brackets and are case-insensitive; meaning, it does not matter whether you type them in upper case or lower case. However, tags are easier to recognize in a web document if they are capitalized.

There is an opening element (tag) and a closing element (tag). The closing element is distinguished by the “/” inside the “<” opening bracket, as in `` to end where the text is in bold.

The first word or character that appears inside the “<” opening bracket is called the **element**. An element is a command that tells the browser to do something, such as ``.

Words that follow the element and are contained inside the “>” closing bracket are called **attributes**. Attributes are not repeated or contained in the closing element (tag). Confused? Attributes are another way of describing the element’s properties. For instance, a t-shirt can have several properties or “attributes” – the t-shirt’s color, size, material etc. are all attributes.

Attributes that appear to the right of the element are separated by a space, and followed by an equal sign. The **value** of the attribute is contained in quotes. In the following example the element is FONT, the attribute is COLOR, and the value of that attribute is BLUE.

E.g. ``This text would be blue.``

Most HTML elements have more than one attribute.

E.g. ``This text would be blue and one size larger than normal.``

A Basic Document

An element called **HTML** surrounds the whole document. This element contains two sub-elements, **HEAD** and **BODY**. These elements are required to form any HTML document.

```
<html>

<head>
<title>Document Title</title></head>
<body></body>

</html>
```

Course Goal

The goal of this course is to teach you how to use FrontPage to apply HTML Elements and Attributes in designing web pages. This course will review almost every element in the current HTML specification. Not all web pages use all of the elements, however it is to your advantage to understand that they exist so that you can create more effective pages.

Review Questions

1. What does HTML stand for?
2. What is an Element?
3. What are the Attributes of an Element?

Summary

As a result of this chapter, you should be able to:

- Explain hypermedia vs. linear media
- Define HTML
- Describe the Basic Document Structure

2

Overview of the FrontPage Editor

In this chapter you learn how to use FrontPage.

Objectives

Upon completing this section, you should be able to:

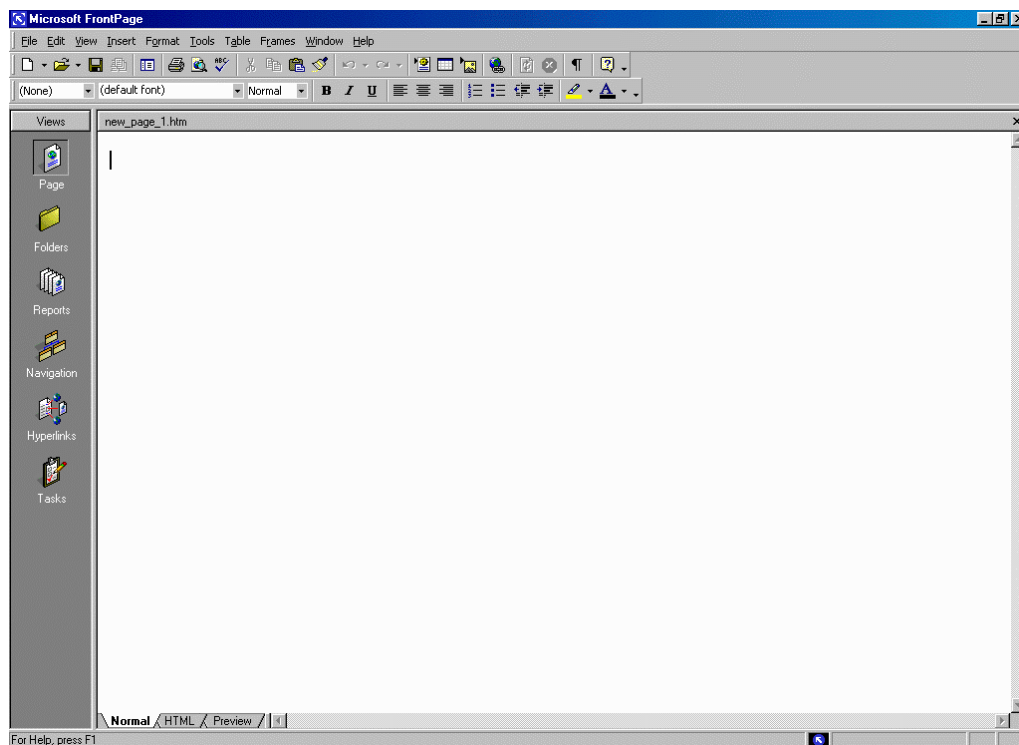
1. Switch between and describe the three editor views
2. Work with the menu options
3. Enable and disable toolbars in FrontPage

Introduction to the Editor

In the first chapter you were introduced to HTML elements and their attributes as well as the basic document format. The good news is you don't need to type all the codes in by hand. FrontPage is going to make creating your HTML web pages easy. In this chapter you get an overview of the FrontPage interface. There are a number of interface options that can be greatly customized. In this chapter we focus on the default settings and use those for the bulk of the course so that you can focus on learning how to create great web pages. We do have a chapter later on that teaches you how to customize the interface to maximize your productivity.

The Editor

The editor (pictured below) has several menus, and toolbars. We will examine each aspect individually in this chapter.



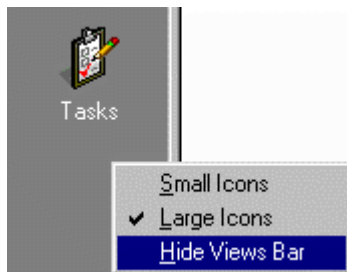
Views Bar

On the left of the screen is the “Views Bar”. This bar is helpful when you are working on a web site that is made up of several linked HTML pages.

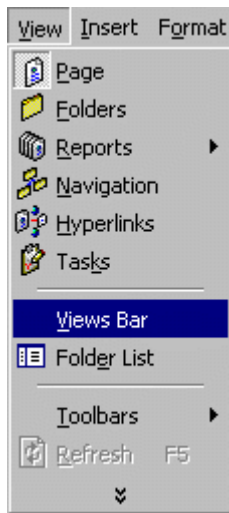
- Folders View – shows the folders and files that make up your website, similar to using Windows Explorer.
- Reports View – allows you to create reports on your web sites.
- Navigation View – shows you the links between pages and allows you to trace the path a surfer may take through your site.
- Hyperlinks View – displays the pages that have inbound links to the current document and the pages that the current document has links outbound to.
- Tasks View – is a to-do list for the web developer(s) working on the website.

This course focuses on creating web pages. You may want to work with the “Views Bar” off to give yourself more screen space (real-estate) to work with.

You can turn it off by right clicking anywhere in the open space and selecting “Hide Views Bar” or by deselecting “Views Bar” from the View Menu.



To turn the “Views Bar” back on use the View menu and click on the “Views Bar” option. You can also select any of the different “Views”: Folders, Reports, Navigation, Hyperlinks, or Tasks from this menu.



Editor Views

FrontPage supports three different views or ways to look at your document:

1. **Normal** – This is the Default Editor view, a WYSIWYG interface.
2. **HTML** – Displays the raw HTML code.
3. **Preview** – You cannot edit in the Preview view, it displays your page the way it will look in a browser.

You can switch between these three views using the icons in the bottom left corner of the editor screen.



Note: By default FrontPage starts with a new, blank document. If you should happen to close a document the Editor Views icons will not be visible. To open a New document select File/New/Page. {Click} on “Normal Page” under the New dialog box.

Normal View

When you first launch FrontPage, any documents you create or edit will be displayed in Normal view. The Normal view is a WYSIWYG view.

WYSIWYG is an acronym for 'What You See Is What You Get'; that is, the way documents are displayed is basically how they're going to look in the Web browser. The display includes images, alignment of block elements, tables, and form elements (buttons, check boxes, etc.), background colors and images. This display is a good way to get a sense of how your document will look on the World Wide Web. It's also easy and convenient to edit your document in this mode, much as you would with a word processor.

HTML View

This view shows the actual HTML code in your document. The HTML Source view is color-coded making it more useful than opening the file in a text editor. You use the HTML View to manually edit the code. Changes you make to your code are reflected in the Normal and Preview mode.

```
<html>

<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>New Page 1</title>
</head>

<body>

</body>

</html>
```

Preview View

The Preview View enables you to see how a document will be displayed in the Internet Explorer web browser. The display includes images, alignment of block elements, tables, form objects (buttons, check boxes, etc.), background colors, and images. This display is a good way to get a sense of how your document will look on the World Wide Web; however, *you cannot edit your page in this mode.*

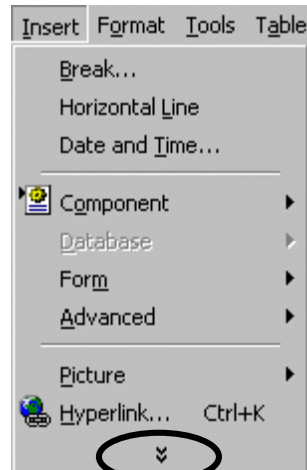
Note: The Preview View is not 100% accurate; always test your page in an actual browser. Testing your page in both Netscape's Navigator and Microsoft's Internet Explorer is also recommended.

Menu Items

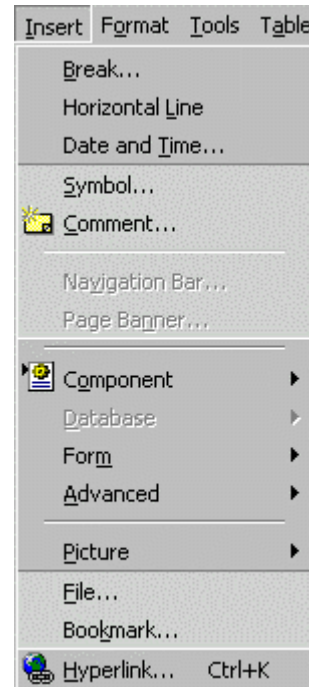
The menu items across the top of the FrontPage window include all the commands accessible on the toolbars as well as additional commands.

In FrontPage 2000 the menus do not automatically display all available options. You will find a double arrow pointing down if there are more options available. You can click on the arrows or leave the menu selected for a short period of time and the full menu will be displayed.

Before



After

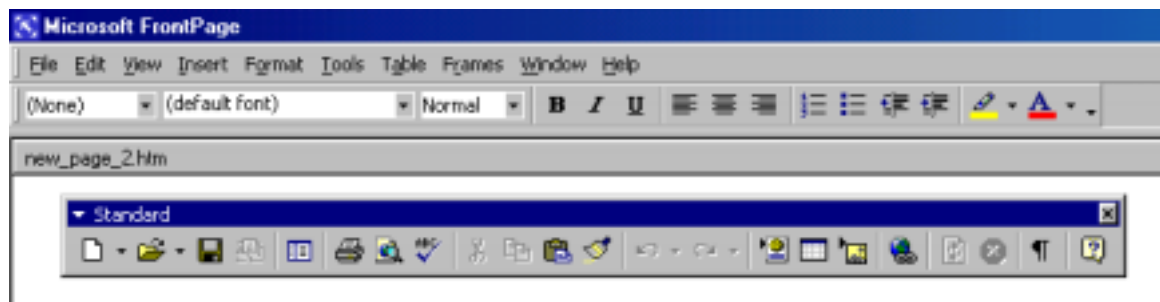


We won't go through every menu option. We will make reference to the menu options when necessary in the course. You may want to make yourself familiar with what is listed on each menu.

Toolbars

You can access commands in FrontPage through the toolbars. ToolTips — short descriptions of what a toolbar button does—appear near the toolbar buttons if you move your mouse cursor over them. There are nine toolbars available, though not all are displayed by default, as FrontPage cannot anticipate your preferences. Like most applications, you can customize your working environment. When you open FrontPage for the first time, the Standard and Formatting toolbars are displayed.

You can move any toolbar to any other position in the toolbar area at the top of the FrontPage screen, or move a toolbar off that area, where it becomes a floating toolbar (sometimes called a `palette'). These Floating toolbars can be positioned anywhere on the screen.



How to Position Toolbars:

{Click} on the toolbar and drag it to wherever you want. To change the floating toolbar back to a fixed toolbar, *{Click}* and hold on its title bar and drag it back to the top of the FrontPage screen or simply *{Double Click}* on its title bar and it will return to its previous position in the toolbars area.

You can close a floating toolbar by *{Clicking}* on the close button in its upper right corner.

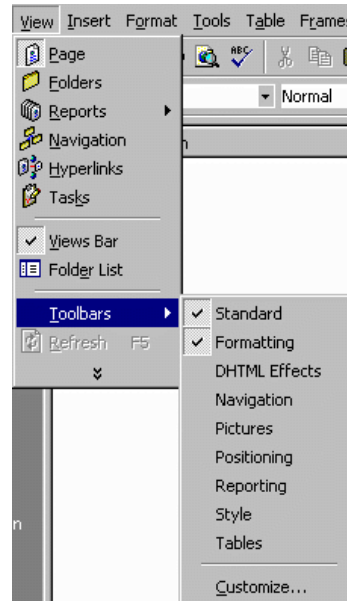
The location of the toolbars will be saved when you exit FrontPage, so they'll be in the same place when you open the Editor again.

Enabling Toolbars

To turn a particular toolbar on or off:

- Choose the Toolbars from the View menu. .
- *{Click}* on the Toolbar that you want to turn on or off.

A toolbar that is currently “on” is indicated with a checkmark next to it.



Standard Toolbar:



The Standard toolbar contains many basic commands, including file commands:

- New, Open, Save, Publish Web
- Folder List
- Print, Preview in browser, and Check spelling
- Cut, Copy, Paste and Format Painter
- Undo, Redo
- Insert Component, Insert Table and Insert Picture
- Create or Edit Hyperlink
- Refresh, and Stop
- Show / Hide marks
- Help

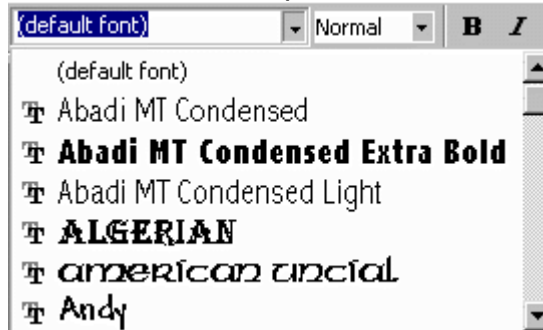
Formatting Toolbar:



Use the Formatting toolbar to modify the content of your page (and hence HTML code).

Select Style

Select Font – Office 2000 products now have a WYSIWYG font list!



Select Font Size

Bold, Italics, Underline

Align Left, Center, and Align Right (Align attribute)

Numbered List, Bulleted List, Decrease Indent, and Increase Indent
(Commonly known as Ordered List, Unordered List, Remove Block Quote, add Block Quote)

Highlight Color

Text Color

Note: This toolbar will be examined fully in the Character Formatting chapter.

Pictures Toolbar: (Note: only active when an image is selected)



Insert Image

Text

Auto Thumbnail

Position Absolutely, Bring to Front, Send to Back

Rotate Left, Rotate Right, Reverse, and Flip

More Contrast, Less Contrast, More Brightness, Less Brightness,

Crop, Make Transparent, Black and White, Wash Out, Bevel, Resample

Select, Rectangle, Circle, Polygon, Highlight Hotspots

Restore

Tables Toolbar:



Draw Table, Eraser

Insert Rows, Insert Columns, and Delete Cells

Merge Cells, Split Cells


Align Top, Center Vertically, and Align Bottom

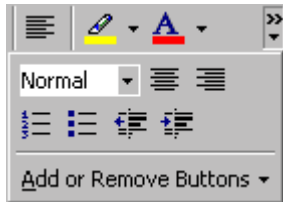
Distribute Rows Evenly, Distribute Columns Evenly

Background Color

Auto Fit

Note: the remaining toolbars are discussed as required throughout the rest of the course.

Note: if you see this, , at the end of the toolbar the double arrow “>>” indicates that there are more buttons but no room to display them. The down arrow “v” will allow you to add and remove buttons from the toolbar.



Review Questions

1. Name three toolbars?
2. What are the default toolbars?
3. What are the three editor views?

Summary

As a result of this chapter, you should be able to:

- Explain the different toolbars
- Turn the different toolbars on and off
- Switch between the three different views of FrontPage

3

The Anatomy of an HTML Document

You will learn about HTML and basic document structure.

Objectives

Upon completing this section, you should be able to:

1. Describe the Basic Document Structure
2. Identify the sub-elements of the header

Document Structure

Documents are marked up with elements and attributes according to a Document Type Definition (DTD). These are the rules that govern the way in which a document can be marked up.

The authoritative source for information about the HTML Specification and the HTML DTD is the World Wide Web Consortium (W3C) at <http://www.w3.org>.

The World Wide Web Consortium is a not-for-profit organization that coordinates the evolution of the Web. It includes the Internet Engineering Task Force, the group of people who make recommendations for new markup.

Head Elements

<HTML>

<HEAD> has sub-elements that define header material:

<TITLE> the title of your document is what appears in a web browser's Favorite or Bookmark list. Your document's title should be descriptive as some search engines use the title for indexing.
</TITLE>

<BASE> can be used to record the document's location in the form of a URL. URL is an acronym for Universal Resource Locator. The URL is essentially the address of the web page or site, as in <http://www.trainingtools.com>. This URL may be used to resolve relative URLs located within the document (necessary if the document is not accessed in its original location). **</BASE>**

<ISINDEX> is an older tag that is currently not recommended for use in developing your pages in the HTML 4.0 Specification.
</ISINDEX>

<META> provides information such as the page's keywords and description that appear in HTTP headers. **</META>**

<SCRIPT> contains either JavaScript or VBScript **</SCRIPT>**

<STYLE> contains cascading style sheet information **</STYLE>**

<LINK> forms a relationship to another object on the Web. It can be used to link a style sheet or a section of JavaScript. **</LINK>**

</HEAD>

<BODY>

The remaining HTML elements are contained within these tags.

</BODY>

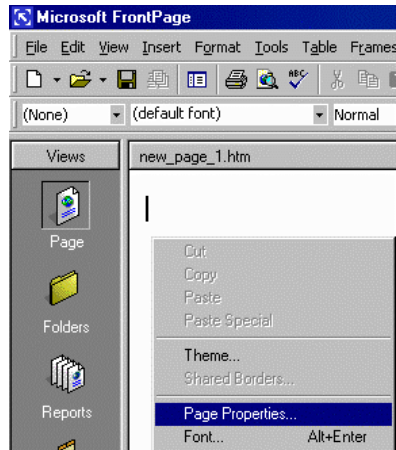
</HTML>

Base, Meta, Script, Link and Style are covered in detail later in the course in the URL and Anchors, Special Elements, VBScript and JavaScript, and Cascading Style Sheets chapters respectively.

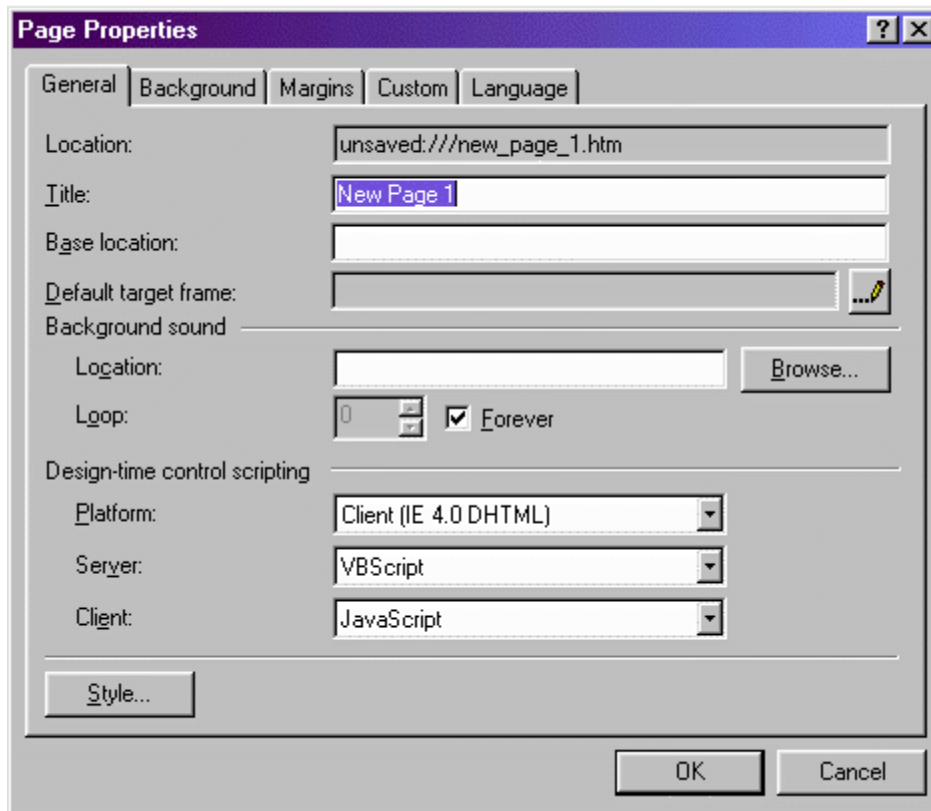
Note: a framed document is formatted differently than a basic document and is discussed in the advanced section of the course.

Page Properties

By *{Right Clicking}* on the document and selecting “Page Properties...” the Page Properties Dialog Box enables you to modify a number of the <HEAD> elements, and attributes of the <BODY> element.



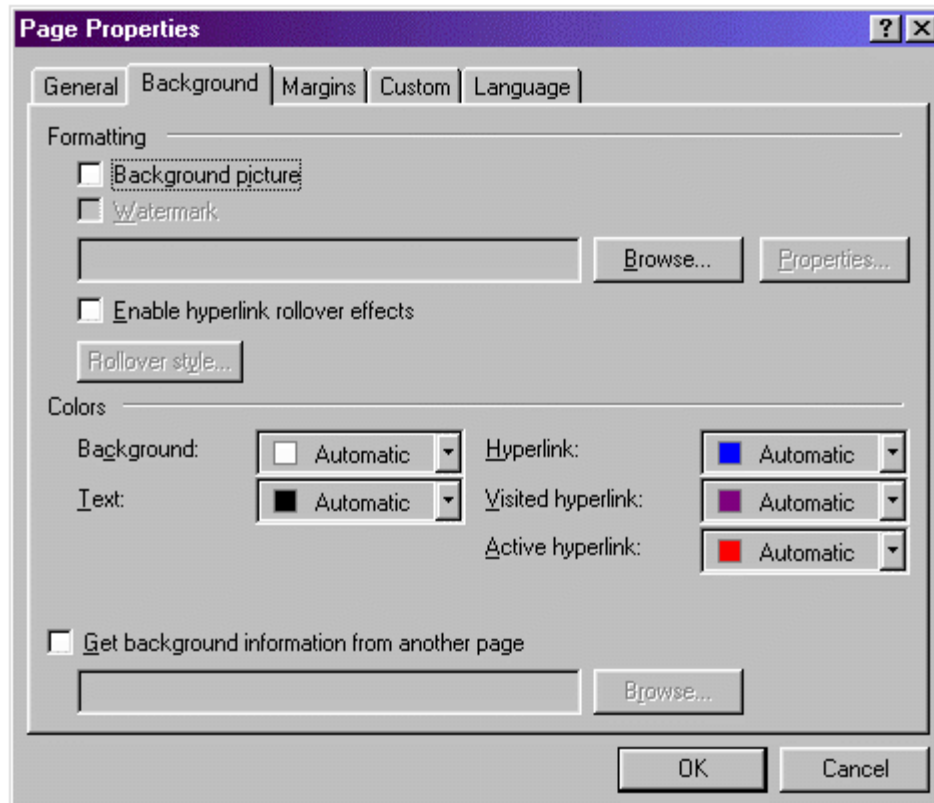
General Tab



We will discuss some of the other options in later chapters. For now, you can enter the Title of your page in the Title box.

Page Properties – Background Tab

By {Clicking} on the Background tab of the Page Properties dialog box you set a number of attributes of the <BODY> element. You can change your web page's background, text and link colors and enable a rollover effect (where an image or content change when your mouse pointer passes over top of a graphic or text. If you decide to use an image for your document's background, you can also set this property from the Background dialog box.

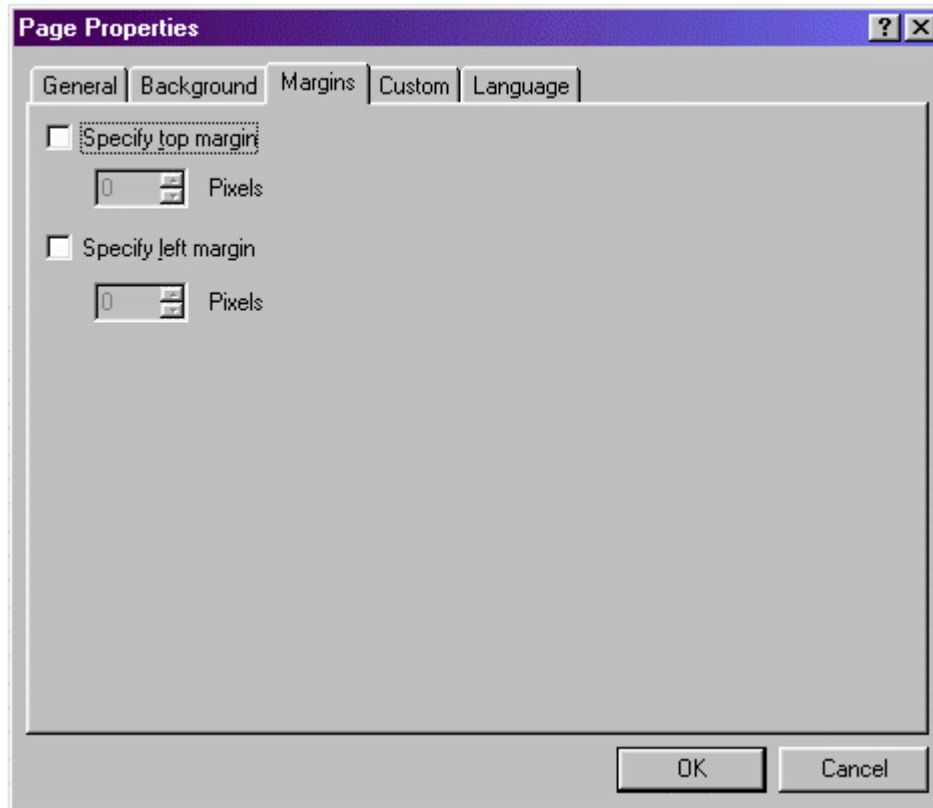


FrontPage Tip

If you plan on using an image for your web document's background, use caution! Avoid background images that are distracting to your visitors or those that hinder the readability of your web page. As well you want to avoid progressive jpegs and large images, as they will increase your web page's download time.

Page Properties – Margins Tab

The Margins tab in the Page Properties Dialog Box allows you to set both the top and left margins for your web document in pixels. These are attributes of the <BODY> element.

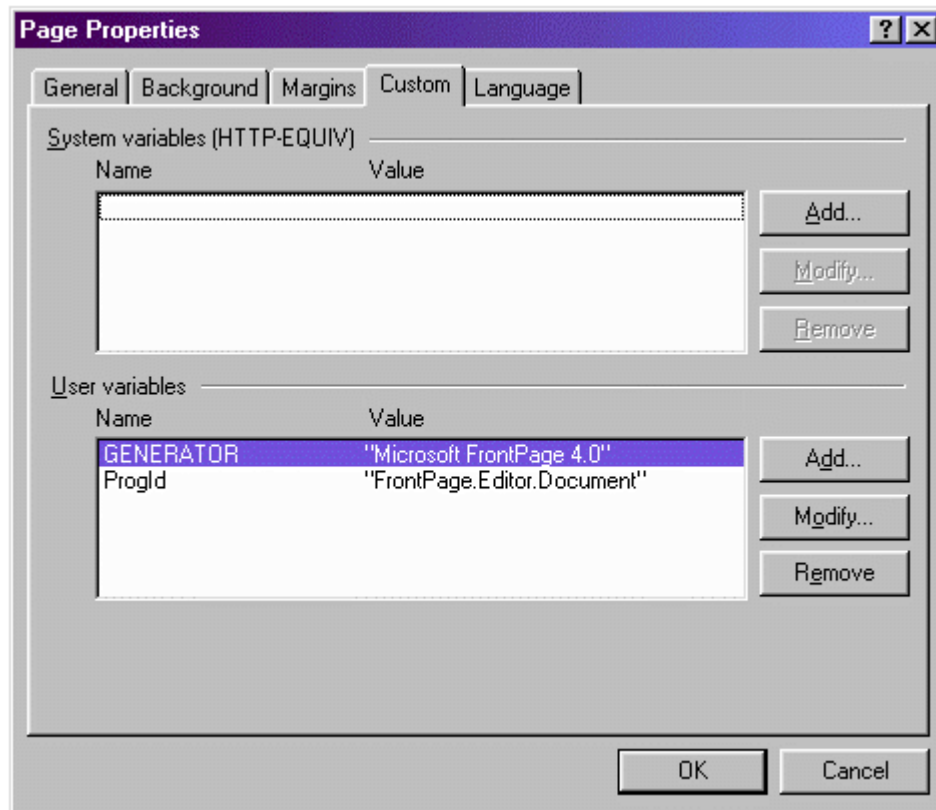


Note: These attributes are only supported by Internet Explorer.

Page Properties – Custom Tab

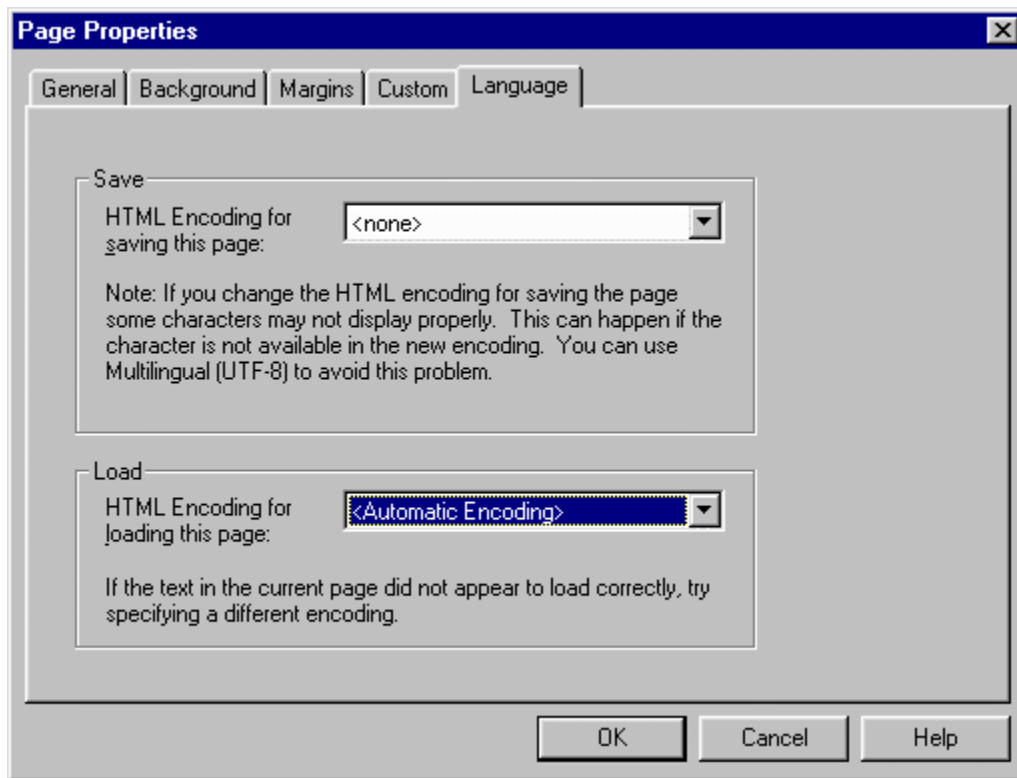
The Custom Tab in the Page Properties Dialog Box displays Meta tags (system variables and user-defined variables) of the active page. Meta tags supply information about a page, but they do not affect the appearance of your web page. In this particular case, the Meta Name “Generator” defines that this web document was created using Microsoft FrontPage 4.0. Meta tags are often used by Search Engines to identify your page. Meta “Description” and “Keywords” use is discussed later.

Remember <META> elements appear in the <HEAD> of your document.



Page Properties – Language Tab

The Language Tab is used to change the HTML character encoding for the page. If you are developing web pages in different languages for various countries of the world you will want to modify these settings. These put additional <META> tags in the page that the browser will understand and display the page properly.



Note: you will need the different language files installed in your operating system to see the page displayed properly.

An example HTML document

In the document below you will see a number of the page settings that were discussed over the last several pages. We will be examining <META>, <TITLE> and <BASE> elements in detail later in Special Elements. The attributes of the <BODY> element determine how your page will look in general.

```
<html>

<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-
1252">
<meta http-equiv="Content-Language" content="en-ca">
<meta http-equiv="keywords" content="Cool, cool, nifty, neat, exciting">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>This is a cool web page</title>
<base href="http://www.trainingtools.com">
</head>


<body background="/Images/teddy.jpg" bgcolor="#000000" text="#FFFF00"
link="#FF00FF" vlink="#00FF00" alink="#00FFFF" topmargin="50"
leftmargin="50">

</body>

</html>
```

Inserting Elements

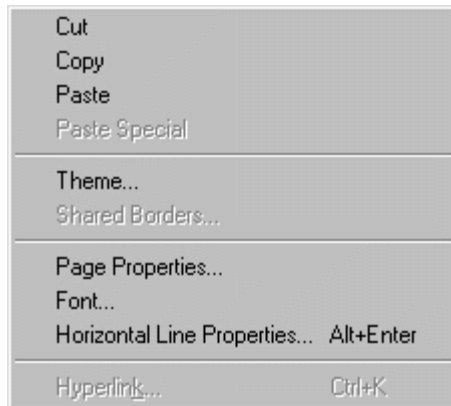
Elements are the components that create the structure of an HTML document. Tables, Images, Forms, Applets are just a few of the many elements you can have on your page. FrontPage does not refer to these components as elements, but rather by the type of element, as in image for example; however, it is wise to familiarize yourself with this term for future reference.

1. Position your cursor where you want to insert the element. *{Click}* the corresponding icon on one of the toolbars. For example, to insert an image in your web page, you would *{Click}* the  button. However, not every element will have a button on the toolbars.
2. Position your cursor where you want to insert the element. From the Insert Menu you can choose from a number of different options to include on your page. Scroll down the menu items and select the appropriate element.

Modifying an Element's Attributes

If you decide to modify the element's attributes, there are a few ways to achieve this:

1. Select the element or content you want to modify and *{Right Click}* on it once. A pop-up menu appears with a number of options. Select the option that reads: "{Element} Properties". FrontPage calls Attributes Properties instead of Attributes.



In this example, you have already inserted a Horizontal Line (covered in the next chapter), but you want to change its properties (*E.g.* Width, Height, Color). *{Right Clicking}* on the Horizontal line causes a pop-up menu such as the one above to appear. To edit the Horizontal Line's properties you would choose "Horizontal Line Properties"

2. Another way of modifying an element's properties is to position your cursor on the element and *{Click}* once. Simultaneously hit the ALT + ENTER keys. The edit properties dialog box appears.

Removing Elements

1. Select the object you wish to remove and hit the delete key (DEL).
2. Select the object or file you want to remove. From the Edit Menu, scroll down and select either "Cut."

Chapter 3 – Exercise 1

The goal of this exercise is to familiarize you with the FrontPage editor and the topics discussed in Chapter 2.

Procedure

1. Start FrontPage 2000.
2. To change the Title of your page, *{Right Click}* on the blank document and select “Page Properties.” In the text field beside “Title,” key in **{Your Company Name – A Project Name}** *E.g.* XYZ Corp. – Intranet Project. *{Click}* OK.
3. To view the source code produced by Step 2, select the HTML Tab located above the status bar. You will be able to see the result of setting the document’s title. It should look something like this:

```
<html>

<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XYZ Corp. - Intranet Project</title>
</head>


<body>

</body>

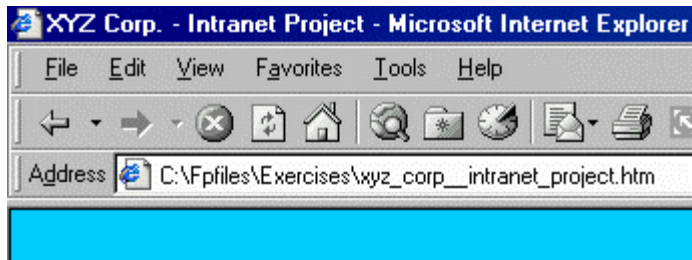
</html>
```

4. Next, *{Click}* on the View menu and make sure that all of the available Toolbars have a checkmark beside them: Standard, Format, Pictures, and Table. (These toolbars are covered throughout the rest of the class.)
5. Switch back to Normal View by selecting the Normal tab above the status bar. *{Right Click}* on your page and select “Page Properties” *{Click}* on the “Background” tab and set your document’s background color to a shade of light blue. *{Click}* OK.

Note: If you don’t specify a background color for your documents, older browsers will default to a light gray background. Both IE 4, IE 5 and Netscape 4.x browsers default to your windows desktop background. If you want your documents to display properly, it is a good idea to set the background color.

6. Save your page by *{Clicking}* on the File menu and choose the Save option. Navigate to C:\Fpfiles\exercises\ Name your file index.htm.
7. Preview your work in your web browser by *{Clicking}* on the Preview in Browser  button. This button is located on the Standard toolbar.

Note: The title should be displayed in top of the window and the color of page should be set to a light blue. We will add additional elements to the body in the next chapter.



```
<html>

<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XYZ Corp. - Intranet Project</title>
</head>

<body bgcolor="#00CCFF">
|
</body>

</html>
```


Review Questions

1. What is an element?
2. What is an attribute?
3. What elements should be placed in the <HEAD> of your page?
4. How do you change the background color of your document?
5. Name two ways to modify an element's properties?

Summary

As a result of this chapter, you should be able to:

- Describe the Basic Document Structure
- Identify the sub-elements of the <HEAD> element
- Modify the <BODY> element's attributes through the page properties dialog box.

4

Headings, Paragraphs and Breaks

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

Objectives

Upon completing this section, you should be able to:

1. List and describe the different Heading elements
2. Know when paragraphs are created
3. Insert line breaks where necessary
4. Add a Horizontal Rule

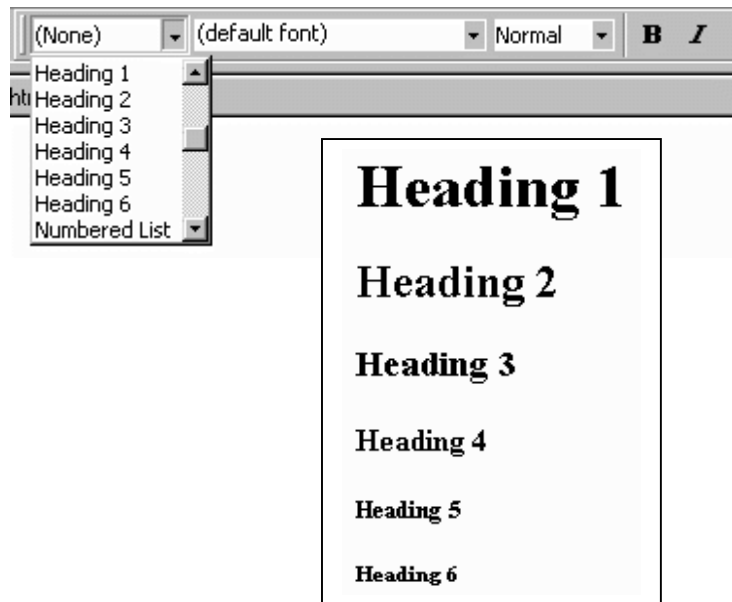
Headings - <Hx> </Hx>

Inside the BODY element, heading elements H1 through H6 are generally used for major divisions of the document. Headings are not mandatory. Headings are permitted to appear in any order, but you will obtain the best results when your documents are displayed in a browser if you follow these guidelines:

- Heading 1 “<H1>” should be used as the highest level of heading, Heading 2 “<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.

The size of the text varies from very large in an <H1> heading tag to very small in an <H6> tag. You could use the Size attribute of the FONT element to change the size of your type or characters, however, the Headings elements offer pre-determined sizes and take less code than using FONT SIZE=“x”.

Headings can be inserted by selecting the desired size with the Style drop-down menu:



Paragraph - <P> </P>

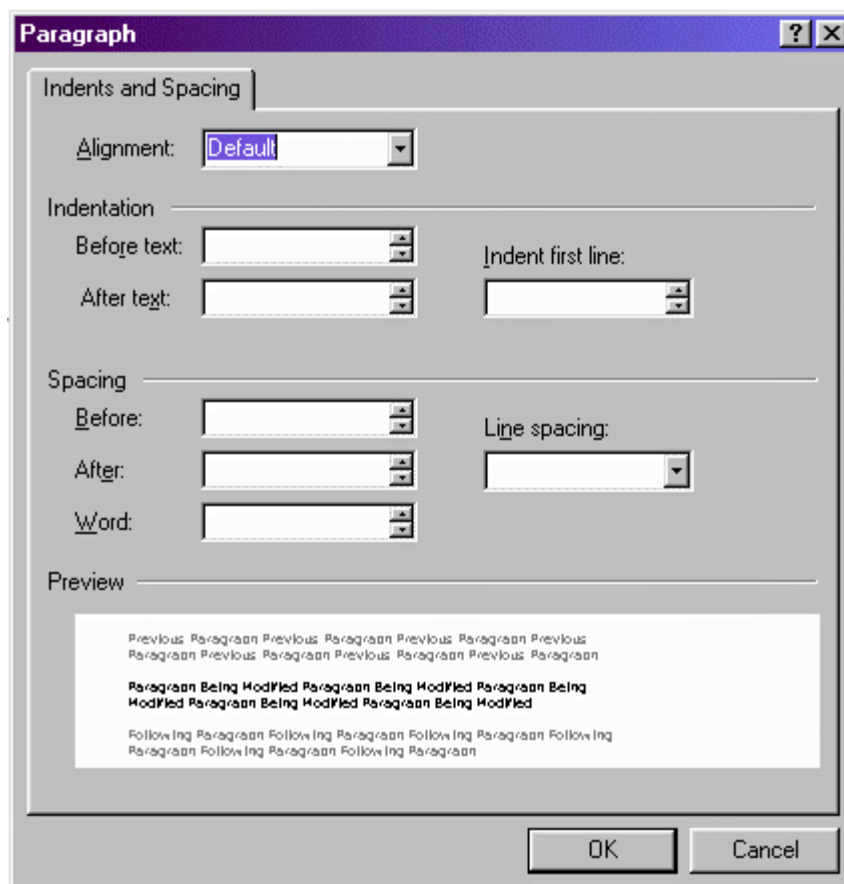
Paragraphs allow you to add text to a document in such a way that it automatically inserts a space above the text and adjusts the end of the line to suit the window size of the browser in which it is being displayed. Each line of text stretches across the entire length of the window.

Each time you press [ENTER] on your keyboard a new paragraph will start.

Paragraph tags are automatically placed around the text you type. For example any text you type is surrounded by <P> and </P> tags when viewed in HTML view.

Paragraph Properties

The Paragraph Properties dialog box is available when you *{Right Click}* inside a paragraph and select "Paragraph Properties..." from the pop-up window. You can choose the paragraph alignment, indentation and the line spacing. FrontPage also displays a preview of your selected options.



Note: Using the Indentation and Spacing settings will add what is called inline style information. Browsers other than Internet Explorer 4 and above may not interpret these settings properly, we recommend testing your pages in multiple browsers in order to guarantee they look the way you expect them to. Inline Styles are covered in detail in the chapter on Cascading Style Sheets.

FrontPage Tip

Browsers ignore multiple spaces between paragraphs, within paragraphs and within tables. If you use multiple spaces between words and insert multiple empty paragraphs, FrontPage is actually inserting a non-visible character known in HTML as an NBSP (non-breaking space). When you switch views from Normal to HTML, you will notice that the special character for a space is

For Example:

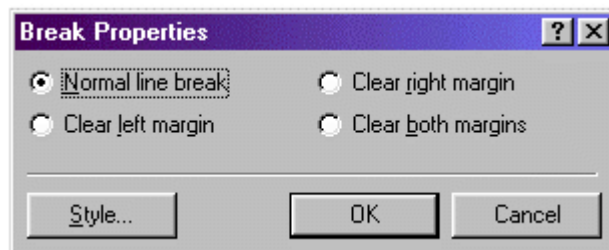
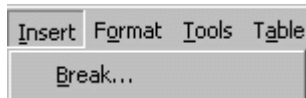
```
<P>There are two  spaces between "two" and "spaces".</P>
```

Special Characters like the non-breaking space are covered in the next chapter.

Break -
</BR>

Line breaks allow you to decide where the text will break on a line or continue to the end of the browser window. There may be instances where you want the text to appear on the next line. Example: a return address contained in one Paragraph but on multiple lines or text in a Header, such as a title for the document.

You can insert a forced Line Break or BR from the Insert Menu or by using Shift Enter. The Shift Enter key combination will not bring up the Break Properties.



```
<p>Paragraphs tags<br>  
Lines separated by Break Tags</p>
```

A
 is an Empty Element. Empty Elements may have properties but do not contain content.

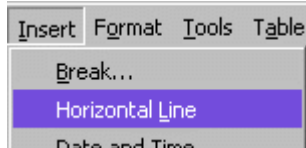
The Break Properties dialog box also enables you to assign properties to a line break. The Clear attribute can be used to force a line down; if an image is located at the page's left margin, the clear attribute will move the cursor down to the first line that is cleared at the left margin. The same applies with the option of clearing the right margin. If an image is at the left or right margins, the clear both margins attribute will force a line break until both margins are cleared.

Horizontal Rule - <HR>

The <HR> element causes the browser to display a horizontal line (rule) in your document.

To insert a Horizontal Rule, {Click} on the Insert Menu and then {Click} on the “Horizontal Line.”

The Horizontal Rule’s properties can be modified by either {Right-Clicking} on the line or by {Double Clicking} it.



WIDTH:

Width of the rule in pixels or percentage of screen width.

HEIGHT:

Height of the rule in pixels.

ALIGN:

Aligns the line (Left, Center, Right).

COLOR:

Sets a color for the rule (Applies to IE 3.0+).

NOSHADE:

Whether the rule should have a 3D or flat look.

HTML View:

```
<h1>Heading 1</h1>  
<hr>  
<h2>Heading 2</h2>  
<p>Paragraph tags<br>  
Lines separated by a Break Tag</p>
```

Normal View:

Heading 1

Heading 2

Paragraph tags
Lines separated by a Break Tag

Chapter 4 – Exercise 1 - Headings

In FrontPage using the file created in the previous chapter add the following elements to your web page:

Procedure

1. Add an H1 to your page. Key in **{Your Company Name}**.
2. Add an H2 after the H1 on your page. Key in **{Your Division or Dept. Name}**.
3. Add an H3 after the H2 on your page. Key in **{A Project Name}** *E.g.* Intranet Project.
4. Add an H4 after the H3 on your page. Key in **{Project Name}** Plan.

Once you have completed steps 1 – 4, switch from Normal View to HTML View and do the following:

5. Add an H3 after the H4 on your page. Key in **{A different Project Name}** *E.g.* Internet Project.
6. Add an H4 after the H3 on your page. Key in **{Project B Name}** Plan.
7. Your document should look something like this in the HTML view at this point:

```
<html>

<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XYZ Corp. - Intranet Project</title>
</head>

<body bgcolor="#00CCFF">

<h1>XYZ Corporation</h1>
<h2>IS Department</h2>
<h3>Intranet Project</h3>
<h4>Intranet Project Plan</h4>
<h3>Internet Project</h3>
<h4>Internet Project Plan</h4>
<p>&nbsp;</p>

</body>

</html>
```

Chapter 4 – Exercise 2 – Horizontal Rules

In FrontPage do the following:

1. Add a Horizontal Rule after the H1 and before the H2.
2. Set the Horizontal Rule's properties to be only 50% of the width of the screen and its alignment as left justified. (Remember elements have properties.)
3. Add a Horizontal Rule after the first H4 on the page. (Leave the rule at its last default settings.)

Switch to HTML View after you have completed Steps 1 –3:

4. Your document should look similar to this now

```
<html>

<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XYZ Corp. - Intranet Project</title>
</head>

<body bgcolor="#00CCFF">

<h1>XYZ Corporation</h1>
<hr align="left" width="50%">
<h2>IS Department</h2>
<h3>Intranet Project</h3>
<h4>Intranet Project Plan</h4>
<hr align="left" width="50%">
<h3>Internet Project</h3>
<h4>Internet Project Plan</h4>
<p>&nbsp;</p>

</body>

</html>
```

Note: The settings for the second horizontal rule default to the last settings applied. You can change the rule's properties by *{Right Clicking}* on it.

Chapter 4 – Exercise 3 – Paragraphs & Breaks

1. In Normal View, Insert a Paragraph between each one of the Headings.
2. Add a
 in the first paragraph you created so that your page looks similar to the example below.
3. In HTML View, scroll to each paragraph you inserted and notice that between the paragraph tags there is a FrontPage automatically inserts a if you are working in Normal View and do not enter anything in the paragraph.

Note: If you add paragraph tags in HTML View and switch to Normal View, FrontPage will delete an empty paragraph unless you add a NBSP or another entity.

```
<html>

<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XYZ Corp. - Intranet Project</title>
</head>

<body bgcolor="#00CCFF">

<h1>XYZ Corporation</h1>

<p><br>
</p>
<hr align="left" width="50%">
<h2>IS Department</h2>
<p>&nbsp;</p>
<h3>Intranet Project</h3>
<p>&nbsp;</p>
<h4>Intranet Project Plan</h4>
<p>&nbsp;</p>
<hr align="left" width="50%">
<h3>Internet Project</h3>
<p>&nbsp;</p>
<h4>Internet Project Plan</h4>
<p>&nbsp;</p>

</body>
```

Review Questions

1. How do browsers handle multiple spaces?
2. What is one way to start a new paragraph?
3. How many Headings are there?
4. When would you use a Break?
5. How would you insert an HR that is centered and half a page long?

Summary

As a result of this chapter, you should be able to:

- List and describe the different Heading elements
- Know when paragraphs are created
- Insert line breaks where necessary
- Add a Horizontal Rule

5

Character Formatting

In this chapter you will learn to enhance your text 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
2. Use the Format Toolbar to change the appearance of text
3. Align your text
4. Add special characters
5. Use other character formatting elements

Character Formatting

Enhancements to your text can be made by *{Clicking}* on selections from the Format Toolbar:

Formatting Toolbar:



Style






Select from the “Style” drop-down list to apply Block elements such as Headings, which we used in the last chapter. We will be discussing Address blocks in this chapter and Lists in the next chapter.

Font

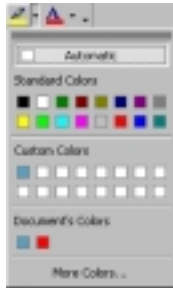
Select from the “Font” drop-down list to change the font face from the browser default. Try to use fonts that users usually have on their computers. If users viewing your page do not have the specified font the look or layout of your page may be significantly different.

Font Size

Select from the “Font Size” drop-down list to modify the size of your text. The default browser size is 3.

-  `Bold `
-  `<I> Italic </I>`
-  `<U> Underline </U>` (Not recommended as links are underlined. Use this formatting option sparingly!)
-  `` Text can be highlighted with the Highlight text icon. `` Highlighted text requires a 4.0 browser or higher to view.
-  Color is modified with the Set Font Color icon.

Note: The arrow at the end of the Background Color button and the Font Color button produce a drop down menu of colors. See below:



Character Formatting Examples:

The following are examples of the different character formatting options in Preview Mode:

Bold, Underline, *Italics*, Colored, Colored Background

If you were to switch to the HTML View mode, the character formatting would look like this:

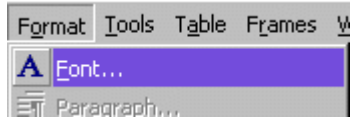
```
<p><b>Bold</b>, <u>Underline</u>, <i>Italics</i>, <font color="#FF0000">Colored</font>, <span style="background-color: #FFFF00">Colored Background</span></p>
```

FrontPage Tip

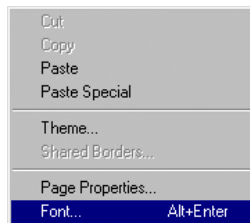
Using different colors for your text is a good idea for emphasizing keynotes; however, keep in mind that too many colors can be distracting to your visitors. Font colors should also be consistent throughout your web site.

Font Properties

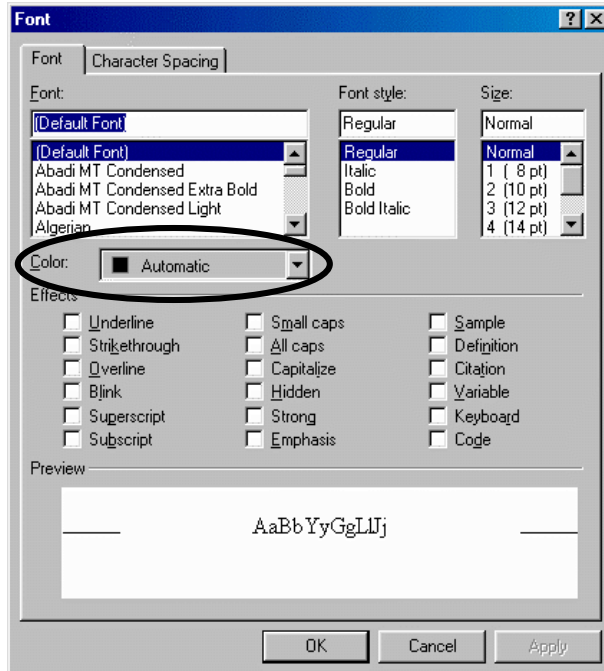
You can achieve the same effects by *{Clicking}* on the Format Menu and selecting the Font option.



Another means of modifying text is to highlight the text and *{Right Click}* on the selection. A pop-up menu appears with various selections. Select "Font..." or use the indicated keyboard shortcut by holding down the Alt key and pressing the Enter key on your keyboard.



The Font Dialog Properties box appears:



You can specify the font, the font style (bold, Italics, etc.) and size. The “Effects” section provides extra options for enhancing type such as: “Underline”, “Strikethrough”, “Over line”, “Blink”, and more. These will be discussed shortly.

The Element

The Element has a number of attributes that are set by the “Font Properties” dialog box. The attributes are:

FACE:

Short for typeface indicates the font you want the text displayed in.

SIZE:

Indicates the size of the text, the default is 3.

COLOR:

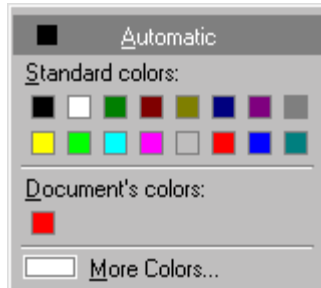
The default is black. Color is information represented as Red, Green and Blue (RGB) values. These values are from 0 to 255 represented in hexadecimal format.

For Example:

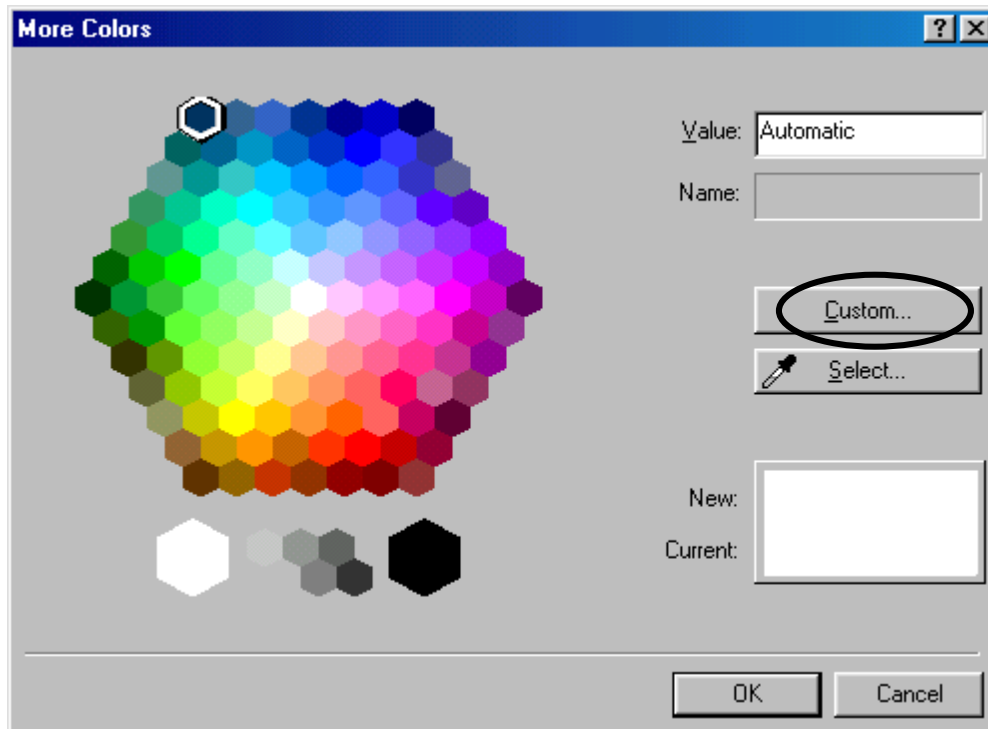
```
<font face="Arial" size="4" color="#FF0000">Large RED</font>
```

Changing text color

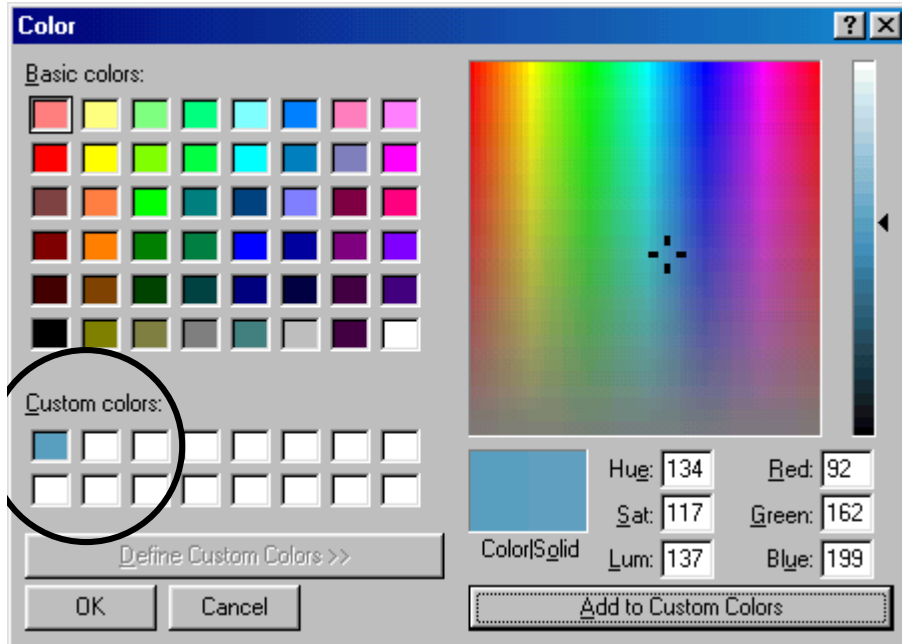
{Click} on the down arrow to the right of “Color” to produce the following dropdown list.



You can customize font colors by selecting “More Colors...” at the end of the drop down menu.



The More Colors box appears displaying a hexagon of standard colors. The button labeled “Custom....” allows you to define a color.



Once you have chosen a color you like, {Click} the button “Add to Custom Colors” and it will be saved for future use.

Additional Character Formatting Effects

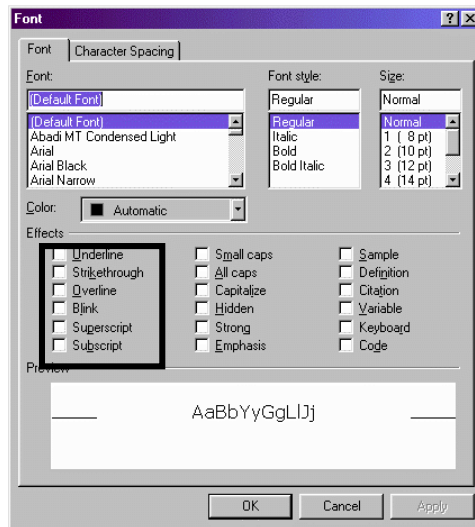
The following formatting elements can be accessed through the Font Properties Dialog box. To change the font's properties, highlight the area of text and {Right Click}. Select "Font" and {Click} on the appropriate effect you wish to apply.

<STRIKE> strike-through text style **</STRIKE>**

<BLINK> this text will be blinking **</BLINK>**

^{ places text in superscript style **}**

_{ places text in subscript style **}**



HTML View:

```
<p>Normal <STRIKE> strike-through text style </STRIKE><br>
Normal <span style="text-decoration: overline">Overline</span><br>
Normal <blink>Blink</blink><br>
Normal <SUP>places text in superscript style</SUP><br>
Normal <SUB> places text in subscript style </SUB>
</p>
```

Normal View:

Normal ~~strike through text style~~
Normal Overline
Normal Blink
Normal places text in superscript style
Normal places text in subscript style

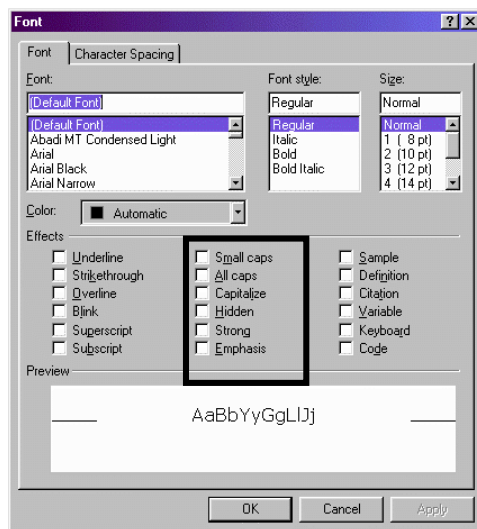
Note: Overline uses what is called an inline style attached to the element. Both of these concepts are discussed later in Cascading Style Sheets. At present we do not recommend you use this feature until you understand Cascading Style Sheets. Blink is not supported by Internet Explorer.

Additional Character Formatting Effects

Note: Small caps, All caps, Capitalize, and Hidden use what is called an inline style attached to the element both of these concepts are discussed later in Cascading Style Sheets.

<**STRONG**> Used where text needs to be expressed a little stronger than normal </**STRONG**> The effect is similar to Bolding text with the <**B**> </**B**> elements.

<**EM**> Used to add emphasis to a piece of text </**EM**> The effect is similar to Italicizing text with the <*I*> </*I*> elements.



HTML View:

```
<p><span style="font-variant: small-caps">This is small caps</span><br>
<span style="text-transform: uppercase">this is all caps</span><br>
<span style="text-transform: capitalize">capitalized</span><br>
<span style="visibility: hidden">hidden, you can't see me</span><br>
<strong>Strong</strong><br>
<em>Emphasis</em></p>
```

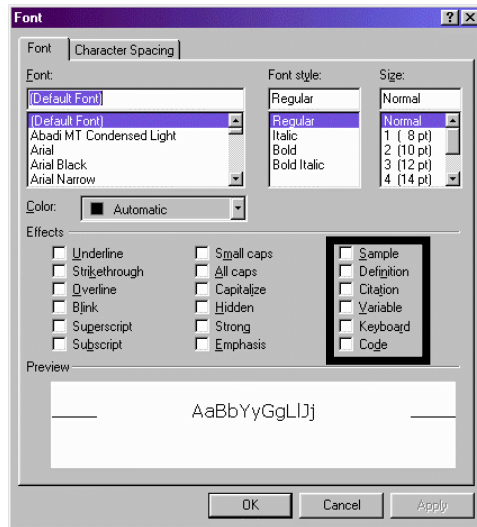
Normal View:

THIS IS SMALL CAPS
THIS IS ALL CAPS
Capitalized
hidden, you can't see me
Strong
Emphasis

Character Formatting - Technical Documentation

These special formatting elements are used for technical documentation applications:

<SAMP> used for sample output from programs, scripts, etc. **</SAMP>**
<DFN> defining instance of the enclosed term **</DFN>**
<CITE> Citation: the act of citing, or quoting **<CITE>**
<VAR> used for variables or arguments to commands **</VAR>**
<KBD> used for text to be typed by the user **</KBD>**
<CODE> used for extracts of program code **</CODE>**



HTML View:

```
<p><samp>This is used for sample output from programs, script, etc.</samp><br>
<cite>Citation</cite><br>
<dfn>Definition</dfn><br>
<var>This is used for variables or arguments to commands.</var><br>
<kbd>This is used for text to be typed in by the user.</kbd><br>
<code>This is used for extracts of program code.</code><br>
</p>
```

Normal View:

This is used for sample output from programs, script, etc.

Citation

Definition

This is used for variables or arguments to commands.

This is used for text to be typed in by the user.

This is used for extracts of program code.

<BASEFONT>

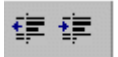
Used to set the base font size for the web page. The size attribute is an numerical value ranging from 1 to 7 (3 is the default). The base font applies to the normal and preformatted text but not to headings, except where these are modified using the FONT element with a relative font size.

NOTE: FrontPage does not have a button or dialog box that offers this option; you will have to edit this tag by switching to HTML View. There is no <BASEFONT> end tag.

<BLOCKQUOTE>

This element is used to create block or indented text, usually quotations. It is usually indented from both margins by the browsers. You can add these tags with the Increase Indent, and remove them with the Decrease

Indent button



</BLOCKQUOTE>

HTML View:

```
<p><b>Chinese Proverb</b></p>
<blockquote>
  <blockquote>
    <blockquote>
      <p>He who asks is a fool for five minutes,<br>
      but he who does not ask remains<br>
      a fool forever. </p>
    </blockquote>
  </blockquote>
</blockquote>
```

Results in Preview:

Chinese Proverb

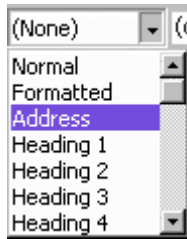
He who asks is a fool for five minutes,
but he who does not ask remains
a fool forever.

NOTE: In this example, the <BLOCKQUOTE> tags were used three times. This caused the text selection to be indented more than if you were to indent the selection once.

<ADDRESS>

The address element specifies information such as authorship and contact details for the current document. Select the text that describes your address and use the Style drop down list to select and apply the address element. The address element italicizes your text and eliminates spacing above and below the text.

</ADDRESS>



HTML View:

```
<p>Please send your details to:</p>
<address>
  12345 Street Name St.
</address>
<address>
  Somewhere, Stateless
</address>
<p>Remember to include a <br>
self addressed stamped<br>
envelope.</p>
```

Results in Preview:

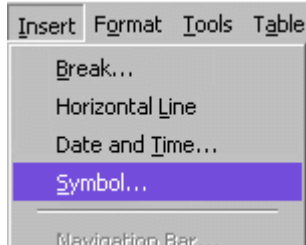
Please send your details to:

12345 Street Name St.
Somewhere, Stateless

Remember to include a
self addressed stamped
envelope.

Special Characters

Using the Insert Menu and selecting the Symbol Option, you can insert special Characters not found on the average keyboard.






A Window containing the available Characters appears.



{Double-Click} on a character to insert it. Dismiss the Special Character palette by *{Clicking}* on the Close button.

Alignment

FrontPage arbitrarily determines the best way to achieve alignment. Headings, Paragraphs, Images, ActiveX Objects, JAVA Applets and Tables all have properties for alignment (ALIGN).

You can change the alignment of an element in FrontPage by *{Clicking}* on the element you want to align and pressing one of the three alignment buttons on the Format toolbar. Alignment usually means LEFT , RIGHT , and CENTER  but, it may also refer to TOP, BOTTOM, MIDDLE etc. depending on the element you have selected.

If the element you want to align is an image, you can change its alignment by *{Right Clicking}* on the image once and selecting "Picture Properties." Not all elements have the alignment options of TOP, BOTTOM and MIDDLE etc.

Proper positioning of all of the components in a web page can be achieved by using other elements to control alignment:

- `<DIV ALIGN="value"></DIV>` Represents a division in the document and can contain most other element types. The alignment attribute of the DIV element is well supported.
- `<CENTER></CENTER>` Will center all the elements it contains.
- `<TD></TD>` and `<TH></TH>` also support the align attribute so that you can align the contents of a table cell.

Note: the following elements will be used later in the course: DIV, TD and TH.

Chapter 5 – Exercise 1

1. Below the bottom Horizontal Rule, add © XYZ Corporation.
2. At the end of the line you just added, Superscript a small TM at the end of the Company Name.
3. After the information you just added, add an address element and enter in your company's address.
4. Switch to HTML View. Your document should look similar to the following:

```
<p>©XYZ Corporation<font size="1"><sup>TM</sup></font></p>
```

```
<address>180 Attwell Dr. Suite 130<br>  
Toronto, ON<br>  
Canada<br>  
M9W 6A9</address>
```

5. Save your work and then Preview your page in your web browser. Your work should look similar to the following:

©XYZ Corporation™

*180 Attwell Dr. Suite 130
Toronto, ON
Canada
M9W 6A9*

Chapter 5 – Exercise 2

1. Add a Blockquote under each H3 and create a brief description about the project.
2. Change the color of the text in the block quote to blue.
3. Decrease the size of the text in the block quote.
4. Switch to HTML View. Your document should look similar to this:

```
<blockquote>
  <p>The internet project is very important to ZYZ Corp. It must reflect the
  business, and our business practices in the best possible method.</p>

</blockquote>
```

5. Switch back to Normal View. Your document should look similar to this:

The internet project is very important to ZYZ Corp. It must reflect the business, and our business practices in the best possible method.

Chapter 5 – Optional Exercise

1. Add some text about the Division or Department in the Paragraph below the H2, and try some of the other character formatting elements.
2. Center the H1 - Company Name in the center of the page.

Review Questions

1. What are six character-formatting elements?
2. What are the two ways you can center text?
3. How would you add the copyright symbol to a page?
4. What are the steps required to change the color of your text?

Summary

As a result of this chapter, you should be able to:

- Change the color and size of your text
- Use the Format toolbar to change the appearance of your text
- Align your text
- Add special characters
- Use additional character formatting elements

Lists

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

Objectives


Upon completing this section, you should be able to:

1. Create an unordered list
2. Create an ordered list
3. Create a definition list
4. Create other lists
5. Nest Lists

List Elements

HTML supplies five list elements. List elements are composed of one or more LI (list item) elements. Most of the list elements are contained within an open and closing list tag.

Bulleted / Unordered List

Items in this list start with a list mark such as a bullet. Most browsers will change the list mark in nested lists (Netscape, IE 4.x). To start using this option {Click} on the Bulleted List button ,



HTML View:

```
<p>This is an example of a list:  
  
<ul>  
  <li>This is an item</li>  
  <li>This is the second item</li>  
  <li>This is the third item</li>  
</ul>
```

Normal View:

This is an example of a list:

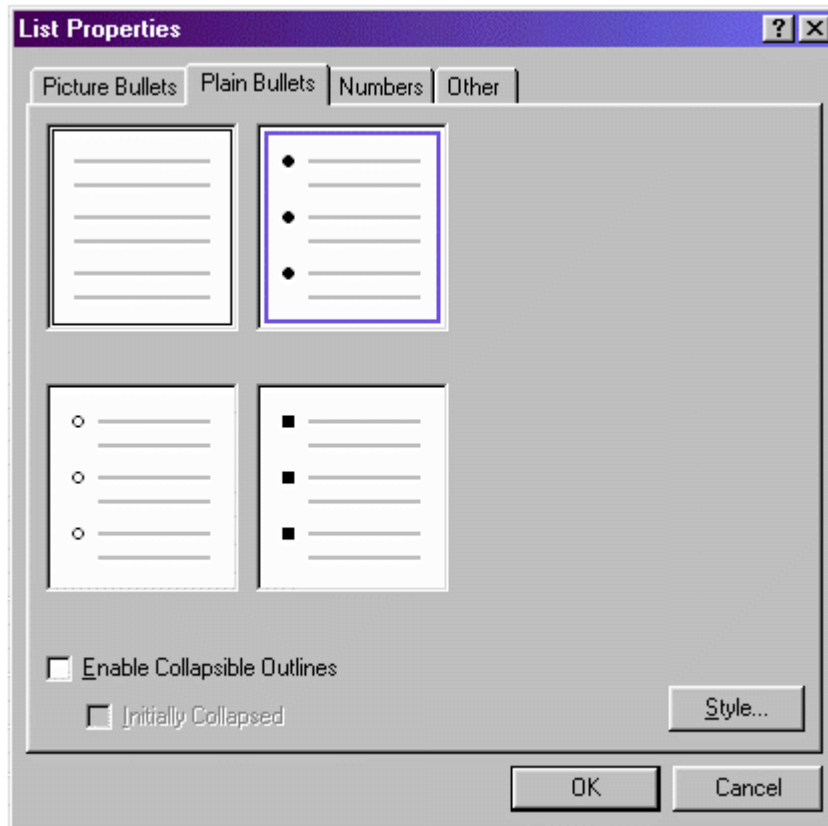
- This is an item
- This is the second item
- This is the third item

To end the Bulleted List {Click} off the Bulleted List button.

List Properties - Plain Bullets



You also have the choice of three bullet types: Disc (default), Circle, Square.

To change the list properties *{Right Click}* on your list. Select “List Properties” from the pop up menu. *{Click}* on the “Plain Bullets” tab and choose from one of the four options. Your selection will set the TYPE attribute of the UL element.



NOTE: Changing the bullet type is not supported in Internet Explorer 3.0 or below.

Numbered / Ordered List

Items in this list are sequenced automatically by the browser. The sequence indicator can be varied to reflect nesting levels. To start using this option {Click} on the Numbered List button , the button will change to  reflect the list's active status.

HTML View:

```
<p>This is an example of a list:
```

```
<ol>
  <li>First item</li>
  <li>Second item</li>
  <li>Third item</li>
  <li>Fourth item</li>
</ol>
```

Normal View:

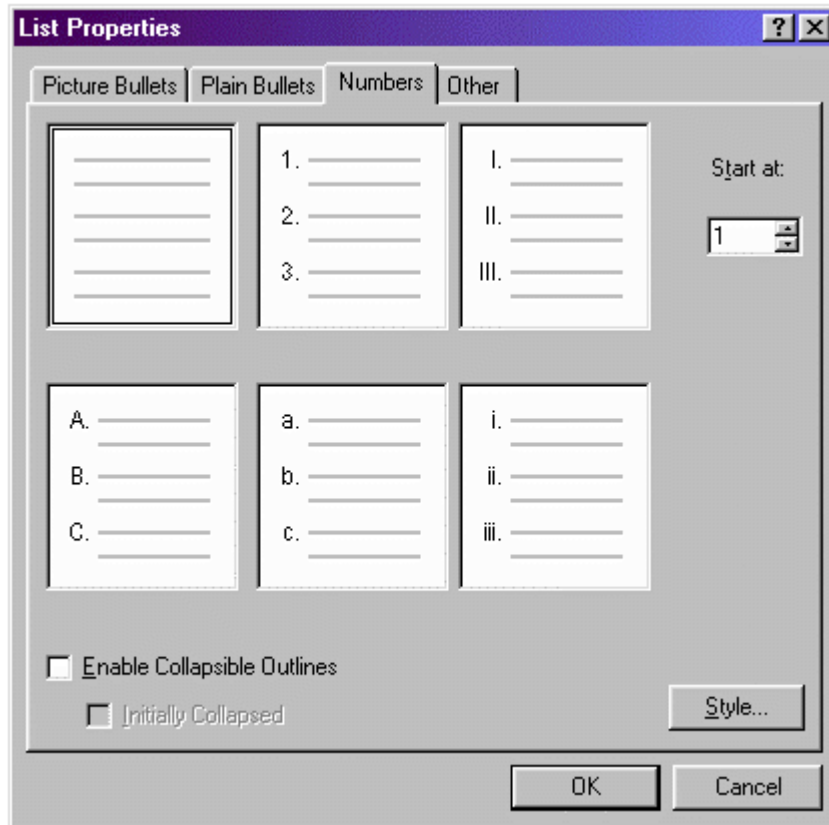
This is an example of a list:

1. First item
2. Second item
3. Third item
4. Fourth item

To end the Numbered List {Click} off the Numbered List button.

List Properties - Numbers

The List Properties Dialog Box is accessed by *{Right Clicking}* on the list and selecting “List Properties.” *{Click}* on the “Numbers” tab and select one of the five numbering schemes available. Your selection will change the settings of the TYPE attribute for the list.



You can also specify a starting number for an ordered list. The value of the START Attribute is always an Arabic number (1,2,3,4...). Changing the starting number is useful in a situation where your list items are separated by an image, unrelated text or a nested list.

The following is an example of a Numbered List:

HTML View:

```
<ol type="i">
  <li>One</li>
  <li>Two</li>
</ol>

<p>Buckle my shoe!

<ol start="3" type="i">
  <li>Three </li>
  <li>Four</li>
</ol>

<p>Out the door!</p>
```

Normal View:

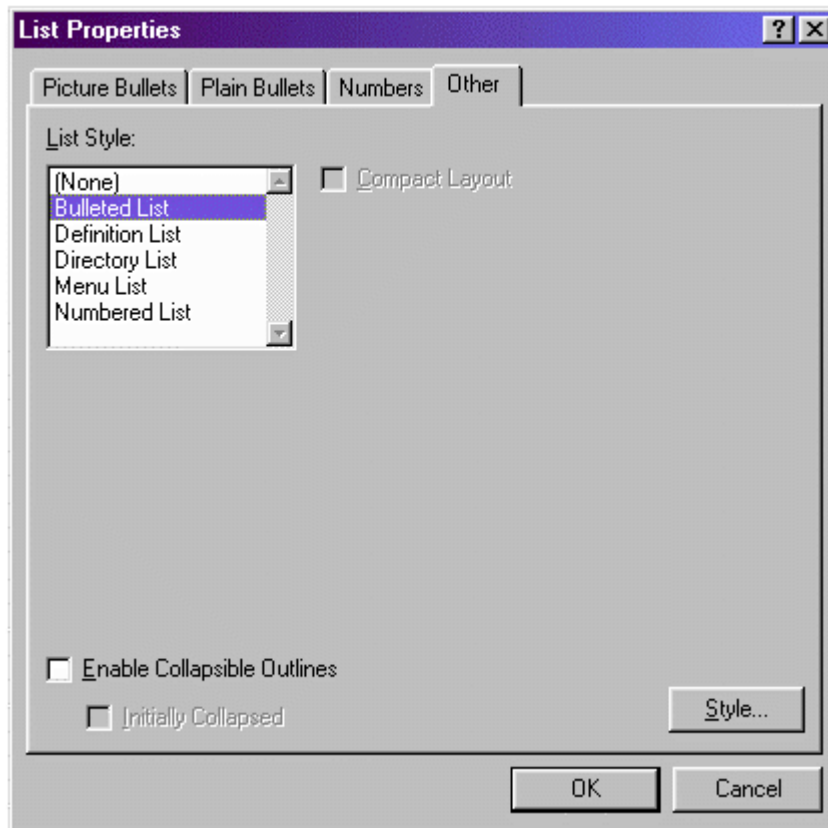
- i. One
- ii. Two

Buckle my shoe!

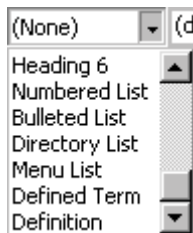
- iii. Three
- iv. Four

Out the door!

List Properties - Other Lists



Formatting Toolbar:



The other lists are inserted from the "Style" menu on the Formatting Toolbar or from the "List Style:" on the Other tab of the List Properties dialog box. *{Click}* on the drop-down list on the Toolbar and select the desired item from the menu.

<DL> - Definition List

A Definition List is different than the lists discussed previously. Each 'item' in a DL consists of one or more Definition Terms (DT elements) followed by one or more Definition Descriptions (DD elements).

To create a Definition List, {Click} on the Change Style drop down menu on the Format Toolbar and select "Defined Term." Type the Definition Term and press the Enter Key. Notice how the next line is indented for the Definition Description to emphasize the relationship between the term and description.

HTML View:

```
<p>This is an example of a definition list:  
  
<dl>  
  <dt>Definition Term</dt>  
  <dd>This is where you type the description of the definition term.</dd>  
</dl>
```

Normal View:

Definition Term
 This is where you type the description of the definition term.

COMPACT:

The definition list type also has a 'compact' attribute. When this attribute is set less white space is displayed in the browser.

HTML View:

```
<dl compact>  
  <dt>Definition Term</dt>  
  <dd>The actual definition</dd>  
</dl>
```


<DIR> - Directory List



Directory list is a special unordered list. Each LI element in this kind of list should be no longer than 24 characters.

<MENU> - Menu List

Menu list is another unordered list. Each LI element in this kind of list should be no longer than one line.

Note: The exact formatting of Directory and Menu lists will vary depending on the Web browser used. Most current browsers do not support these lists.

FrontPage Tip

To change from a Bulleted / Unordered List to a Numbered / Ordered List, place your cursor in the list. *{Click}* on the Numbered / Ordered List button . You can change it back to an Unordered List by *{Clicking}* on the Bulleted / Unordered List button .

Nesting Lists

To create a nested list (a list within a list):

1. In FrontPage, place the cursor at the end of the item in the primary list that precedes the line where you want the nested list to begin.
2. Press ENTER to create a new line.
3. *{Click}* the Increase Indent button twice on the Format toolbar.
4. Type the first list item to be added, then *{Click}* the Numbered List or Bulleted List button on the Format toolbar if you want to change the list type for the nested list.
5. Press ENTER for each additional line item you want to add to the secondary list.
6. To add more items after the primary list level use the decrease indent button until the list item is at the correct level.

HTML View:

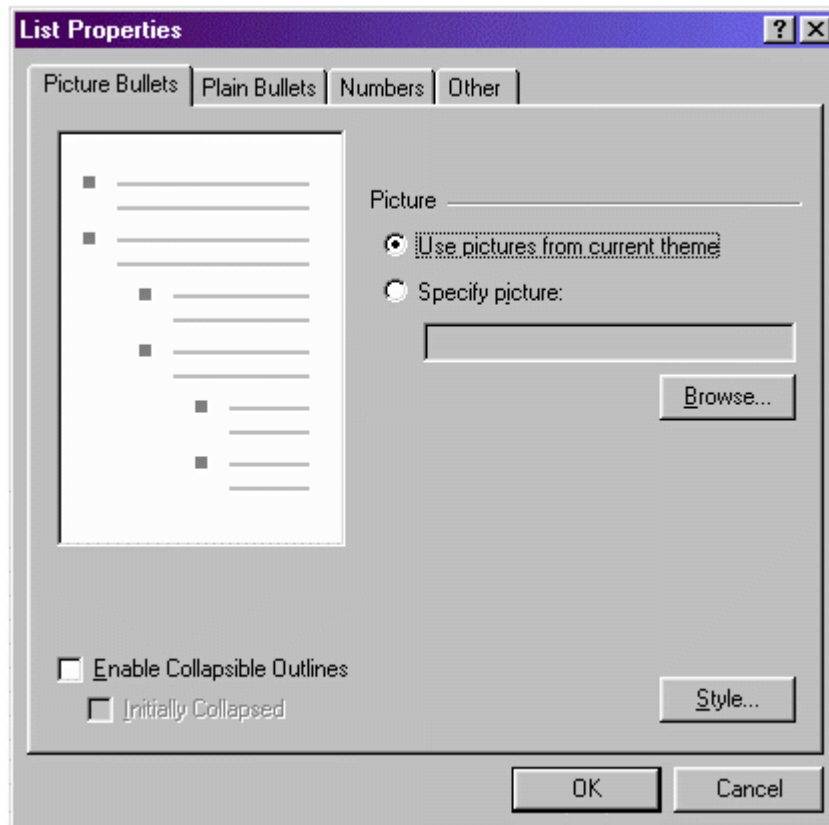
```
<ul>
  <li>This is an example of a Nested List<ul>
    <li>Sub item one</li>
    <li>Sub item two</li>
    <li>Sub item three</li>
  </ul>
</li>
</ul>
```

Normal View:

- This is an example of a Nested List
 - Sub item one
 - Sub item two
 - Sub item three

List Properties - Picture Bullets

Images can also be used as bullets, however this inserts HTML code involving Image and Table elements that have yet to be discussed. Images are covered in Chapter 6 and Tables are covered in Chapter 8. We do not recommend you experiment with this option at this time.



If you place a check in the box labeled “Enable Collapsible Outline”, users browsing your web site will be able to collapse or expand an outline list. This will affect all list items at the current list level and all sub-levels below.

Enabling this feature will result in FrontPage inserting a fragment of code called “JavaScript.” This topic will be covered in Day 2 of the FrontPage Courseware.

Note: Collapsible outlines can only be viewed in 4.0 or higher browsers such as Microsoft Internet Explorer 4.0 or Netscape Navigator 4.0.

Chapter 6 – Exercise 1

1. Add an Ordered List below your first Project Plan Heading.
2. Enter two or three list items.
3. Nest another Ordered List below the second item in the first list.
4. Change the numbering scheme to lower case roman numerals for the nested list.
5. Add two items.
6. Add a paragraph after your list with some text.
7. Insert another ordered list after your paragraph, and start numbering where your first list left off.
8. Switch from Normal View to HTML View. Your work should look similar to this:

```
<ol>
  <li>Getting Advice</li>
  <li>Choose a platform for the server</li>
  <ol type="i">
    <li>Evaluate the options</li>
    <li>Read the industry reports</li>
  </ol>
</ol>
<p>We should really consider using FrontPage 2000 as our HTML Editor!</p>
<ol start="3">
  <li>Decide which browsers we are developing for</li>
  <li>Choose a screen resolution to develop to</li>
</ol>
```

9. Save and Preview your work. Your page should look something like this:

1. Getting Advice
2. Choose a platform for the server
 - i. Evaluate the options
 - ii. Read the industry reports

We should really consider using FrontPage 2000 as our HTML Editor!

3. Decide which browsers we are developing for
4. Choose a screen resolution to develop to

Chapter 6 – Optional Exercises

1. Create another list this time under the second Project Plan.
2. Try switching between Ordered Lists and Unordered Lists.

Review Questions

1. Can you nest lists?
2. When would you use an ordered list over an unordered list?
3. Why would you use a definition list?
4. What other lists are available?
5. How can you change the type of list you originally selected?

Summary

As a result of this chapter, you should be able to:

- Create an unordered list
- Create an ordered list
- Create a definition list
- Create other lists
- Nest your lists

7

Anchors and URLs

In this chapter you learn about Uniform Resource Locators and how to add them as Anchors or Links inside your web pages.

Objectives


Upon completing this section, you should be able to:

1. Insert links into documents
2. Define Link Types
3. Define URL
4. List some commonly used URLs
5. Set Link Colors
6. Create an Image Map using FrontPage's Mapping Tools

Link Elements

Most HTML documents contain links to other documents located on the Internet. These links are defined by URLs (Uniform Resource Locators), which provide the location and filename of a document and the method used to access it.

The following elements represent links to other documents:

** **: Create or Edit a Hyperlink . The **<A>** element is called an “anchor.” The **HREF** attribute of the anchor element specifies a URL. If this attribute has a value, the contents of the **<A>** element will be highlighted when the document is displayed in a browser. *{Clicking}* on the highlighted content will cause the browser to attempt to open the file specified by the URL.

HTML View:

```
<p><a href="http://www.microsoft.com/">Microsoft's Homepage</a> </p>
```

Normal View:

[Microsoft's Homepage](http://www.microsoft.com/)

In this example, the highlighted text “Microsoft’s Homepage” represents the link to the file named as the value of the HREF. In this case, the value of the HREF links to Microsoft’s homepage.

Link Types

There are three major types of links:

Internal Links

Are links within a document. They help in the navigation of large documents.

Local Links

Are links to documents on the local web server. Local links can be the full (absolute) URLs (E.g. <http://www.yourdomain.com/sales/report.htm>) or a partial (relative) URL related to your current directory (E.g. </sales/report.htm>).

External Links

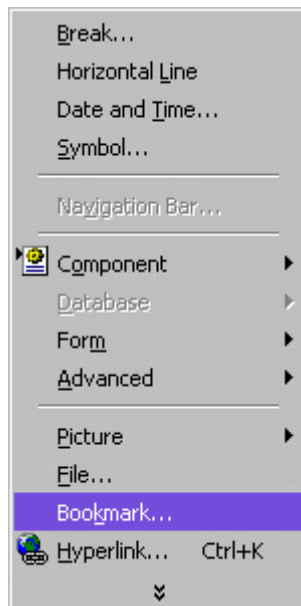
Links to pages on other web servers. External links are always the full URL.

Creating Internal Links

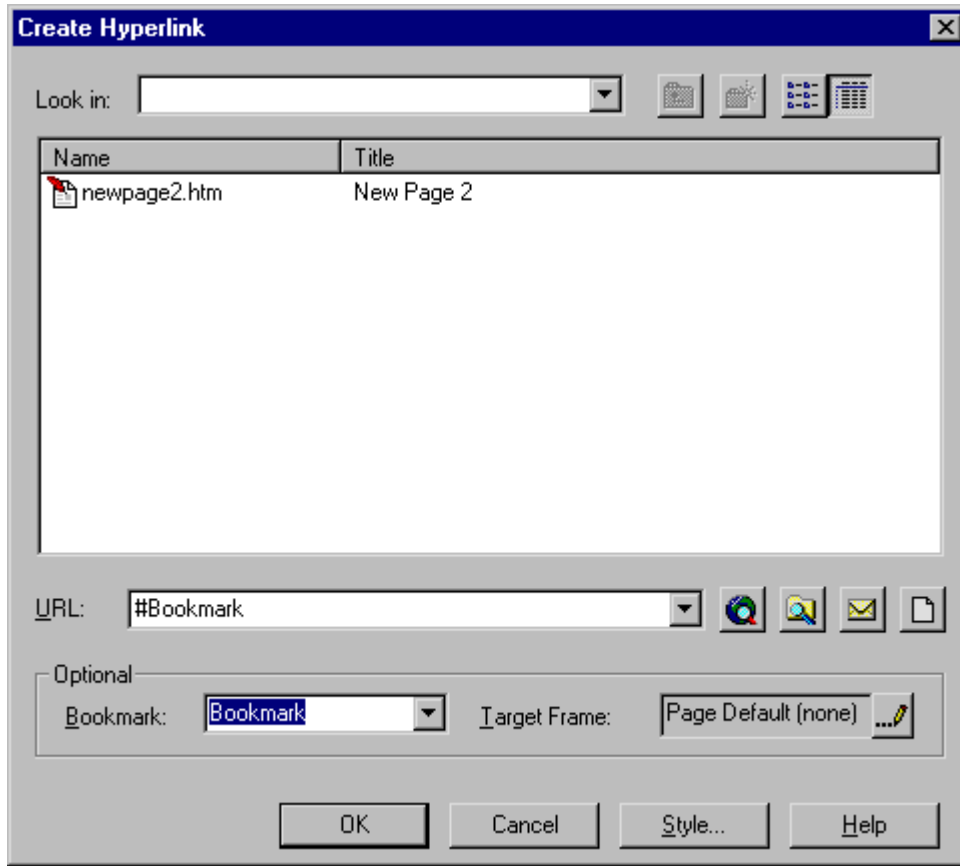
An Internal Link or “Bookmark” is a named location on a page that is the target of a hyperlink. In the URL, a bookmark is preceded by a number sign character (#).

To create a “Bookmark” follow these steps:

1. Select text in the document you would like to create a link to. Locate the “Edit” menu and select the option “Bookmark.”



2. In the Bookmark Name field of the dialog box that appears, enter the name of the bookmark, or accept the name that FrontPage suggests. You can include spaces in the bookmark name, however spaces in the name are not standard HTML practice.
3. *{Click}* OK when you have chosen a name. FrontPage places a dotted underline beneath the text to indicate a Bookmark has been applied.
4. Next select the text that you would like to create as a link to the bookmark. Go to the Insert Menu and select “Hyperlink” from the list of options.



5. In the dropdown menu list, locate the name of the Bookmark you want to link too. Once you have chosen the Bookmark Name, {Click} the OK button.
6. Switch from Normal View to HTML View. The code will be similar to the following:

HTML View:



```
<p>This is the hyperlink to the <a href="#Bookmark">Bookmark</a></p>
```

```
<p><a name="Bookmark">Bookmark</a></p>
```

When you {Click} on the HREF hyperlink, your browser will jump to the bookmark created in Step 2.

Creating Local Links

Local or relative links are hyperlinks to documents on the same web server. This type of link can be created easily from the Hyperlink Dialog Box.

1. Highlight the text that you would like to act as the link to the new document.
2. *{Click}* on the “Insert” menu and choose Hyperlink, or locate the Hyperlink button  on the Standard Toolbar.
3. From the Hyperlink Dialog box, locate the document to link to by *{Clicking}* on the file  button. Select the document and *{Click}* OK.
4. Switch from Normal View to HTML View. The code should look similar to the following:



HTML View:

```
<p>A link to the next <a href=" ../page2.htm">page</a></p>
```



Normal View:

A link to the next [page](#)

Creating A Link to A New Page

1. FrontPage gives you the option of creating a new page and adding a link from the current page simultaneously.
2. Highlight the text you would like to act as the link to the new page.
3. *{Click}* on the Hyperlink  button and locate the New Page  button.
4. The New Page Dialog box appears prompting you to choose the document template. Select the template and *{Click}* OK.

Creating External Links

External Links are created by *{Clicking}* on the Hyperlink  button on the Standard Toolbar. If you know the URL of the document you want to link to, type it into the URL text field. Or, an easy method of creating an external link is to *{Click}* on the  button to open your browser window. This method will allow you to search the Internet to locate the file you want to link to.

If you are planning to include External Links on your web pages, a safe practice is to send an email to the site's owner asking permission to link to their web site. You may also want to ask whether they would be willing to exchange reciprocal links.

URLs - Uniform Resource Locators

A URL is a standard way of referencing a Service or protocol, a Host name, a Port, and a Directory-path.

Service **://** Host name : Port / Directory-path

E.g. <http://www.xnu.com:80/default.htm>

Not all of these components appear in each URL, as you will see when you learn about the different types of URLs for different protocols. But the preceding example is a good general guide.

HTTP – HyperText Transport Protocol

This is used to link your HTML pages to HTML pages on your site, or to pages on other sites around the Internet.

E.g. <http://www.xnu.com/default.htm>

- The type of protocol is identified as http.
- The Host name is www, in the domain 1stvirtual, in the zone com (which identifies it as a commercial site.)
- default.htm is the actual web page.

FTP – File Transfer Protocol

The FTP protocol is used to download files from a FTP server to the surfer's computer.

E.g. <ftp://ftp.xnu.com/prizes/brkbrk.wav>

- The type of protocol is identified as ftp.
- The Host name is ftp.1stvirtual.com.
- The subdirectory is prizes.
- The file is brkbrk.wav

News– News Groups

Newsgroups or discussion groups are places for people to post messages, and read other peoples messages.

E.g. <news:alt.internet.services>

- The type of service is identified as news, for the Usenet newsgroup service.

- The newsgroup is alt.internet.services.
This will invoke a client's news reader program.

Gopher

Gopher was a predecessor of HTML and HTTP, it is rarely used today as it is too much work to maintain.

E.g. `gopher://owl.trc.purdue.edu/`

- The type of service is identified as gopher (a predecessor to the World Wide Web.)
- The Host name is owl.trc.purdue.edu.

E-mail – Electronic Mail

This URL will launch the surfer's e-mail software and populate the "To:" field with the e-mail address specified.

E.g. `mailto:webmaster@1stvirtual.com`

- The type of service is identified as the mail client program.
- The recipient of the message is webmaster@1stvirtual.com.

Telnet – Remote Terminal Emulation

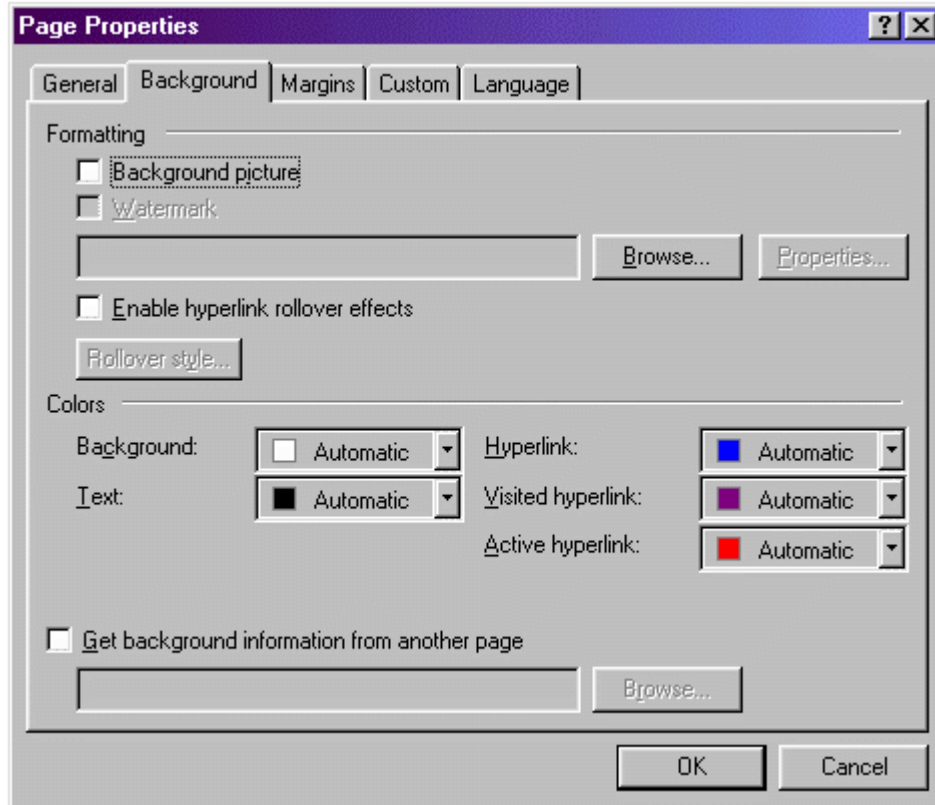
This URL will launch the terminal emulation program called telnet on the surfer's computer.

E.g. `telnet://media.mit.edu`

- The type of service is identified as the telnet client program.
- The Host name is media.mit.edu.

Specifying Link Colors

The colors of the links are set through the File menu > Properties > Background tab ... and choosing the appropriate color.





The following is the raw HTML produced from the work above. Since the colors are set in the <BODY> tag they apply to all links in the document.


```
<BODY BGCOLOR="#000000" TEXT="#FF0000" LINK="#FFFF80" VLINK="#0000FF"
ALINK="#FF80FF">
```

Note: Be careful in choosing appropriate link colors for your web documents. Most of your visitors will be used to the default link colors: Dark Blue (Hyperlink), Purple (Visited Hyperlink) and Red (Active Hyperlink). Also, many users set their browsers to override your chosen link colors with their own choices.

Chapter 7 – Exercise 1

1. In FrontPage create a new document. Choose your document's page title, background color, link colors etc.
2. Using the address element, type your company's address. Below the address element, add the following e-mail address:
webmaster@xyzcorp.com
3. Highlight the e-mail address and *{Click}* on the Link button. 
4. In the Create Hyperlink dialog box, *{Click}* on the button that creates a hyperlink to an email address. 
5. Center the hyperlink and save your work.

Chapter 7 – Exercise 2

1. Within your existing document, go to a new line and enter your company's name.
2. Highlight the text and *{Click}* on the Link button. 
3. In the Create Hyperlink dialog box, locate the text field labeled "URL" and type in your company's homepage address after http://
4. Center the hyperlink and save your work.
5. Preview your work in a browser and *{Click}* on the link to your company's homepage.

Review Questions

1. What are the components of a URL?
2. What protocols are supported by URLs?
3. What is the difference between an internal and external link?
4. What is the difference between absolute and relative URLs?
5. How do you set the link colors of a web page?

Summary

As a result of this chapter, you should be able to:

- Insert links into documents
- Define Link Types
- Define URL
- List some commonly used URL types
- Set Link Colors
- Create Image Maps using FrontPage's Mapping Tools

Images and Image Maps

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

Objectives

Upon completing this section, you should be able to:

1. Distinguish between supported graphics formats and unsupported graphics formats
2. Determine which graphic format for the type of image
3. Add images to your pages

Supported Image Formats

GIF

Graphic Interchange Format uses a maximum of 256 colors, and uses combinations of these to simulate colors beyond that range. The GIF format is best for displaying images such as logos, icons, buttons and other images with uniform colors and tones.

GIF images come in two different versions and have some extra functionality that JPEGs do not. You can save GIF images in GIF 87 or GIF 89a format. GIF 89a has the following features that GIF 87 and JPEG files do not:

Interlacing

If you save a GIF 89a image as interlaced, the browser will be able to display the image as it loads, gradually getting crisper and clearer until it has loaded. Interlaced GIFs have slightly larger file sizes than non-interlaced GIFs, so you will have to decide whether the interlacing effect is worth the extra download time for your images.

Transparency

With GIF 89a format images you can set a single color to be transparent, that is, it will allow the background color or image to show through it. Transparency is most commonly used to make the rectangular background canvas of an image invisible; this feature can be very effective in web page design.

Animated GIFs

GIF 89a images can also be animated using special software. Animated GIF images are simply a number of GIF images saved into a single file and looped. Netscape Navigator and Microsoft Internet Explorer both display animated GIFs, but many other browsers cannot, and may not be able to display even the first image in the loop. Animated GIFs also take longer to download, therefore use animated GIFs with caution.

JPG, JPEG

Joint Photographic Expert Group is the best format for photographs because JPEG files contain millions of colors.

JPEG images don't give you the option of including transparency or of interlacing images, but they do allow you to specify the degree of file compression so that you can create a balance between image quality and file size.

A new addition to the JPEG format is Progressive JPEG. Progressive JPEGs boast superior compression to regular JPEGs. They also give you a wider range of quality settings, and support interlacing.

Limited Support or Non-Supported Image Formats

Some browsers support the following image formats, however, incorporating these file types in your HTML pages is not recommended as not all browsers currently support them. You should first convert them to a supported format using a graphics editor.

PNG

Portable Network Graphics is good for combinations of text and graphics within one image. PNG permits true color images, variable transparency, platform-independent display, and a fast 2D interlacing scheme. PNG images are currently only supported by Internet Explorer.

BMP

MS Windows bitmap

TIFF

Tagged Image File Format

PCX


Originally developed by ZSOFT for its PC Paintbrush program, PCX is a graphics file format for graphics programs running on PCs.

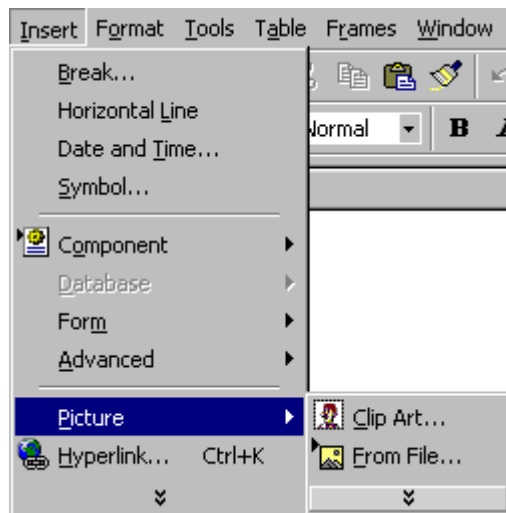
Inserting Images



The image element defines a graphic image on a web page. Be aware that some browsers may not be able to display images or the user has chosen to disable images. In that case the description you include in the ALT attribute will be shown.

How to Insert Images

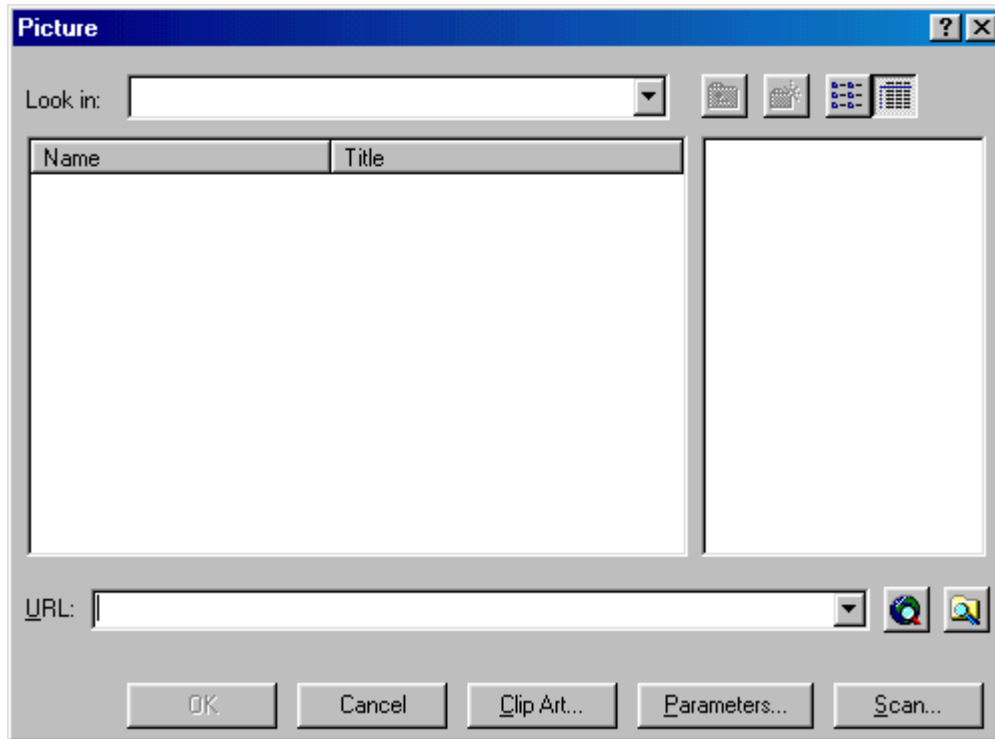
FrontPage 2000 provides you with two different ways to insert images:

1. On the Standard Toolbar, {Click} on the image  button. The Image Properties Dialog Box will appear.
2. Locate the “Insert” Menu and scroll to the option, “Picture.”



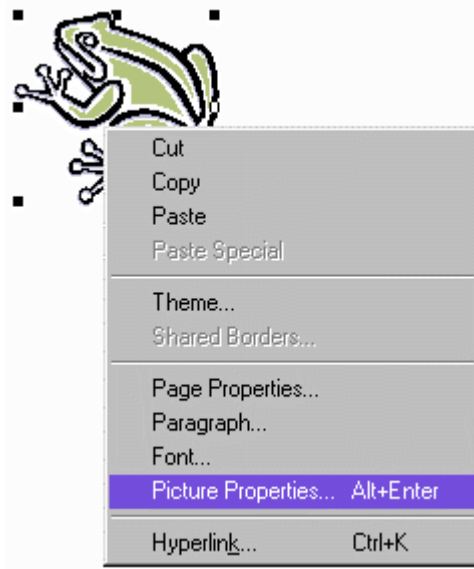
The Image Dialog Box provides you with several means of obtaining images. By *{Clicking}* on the folder  icon, you can find images within directories on your computer. *{Click}* on the icon with the globe  to search for images on the Internet.

To acquire a scanned image *{Click}* on the “Scan” button. To insert Clip Art from the Microsoft Clip Art Gallery *{Click}* on the “Clip Art” button.

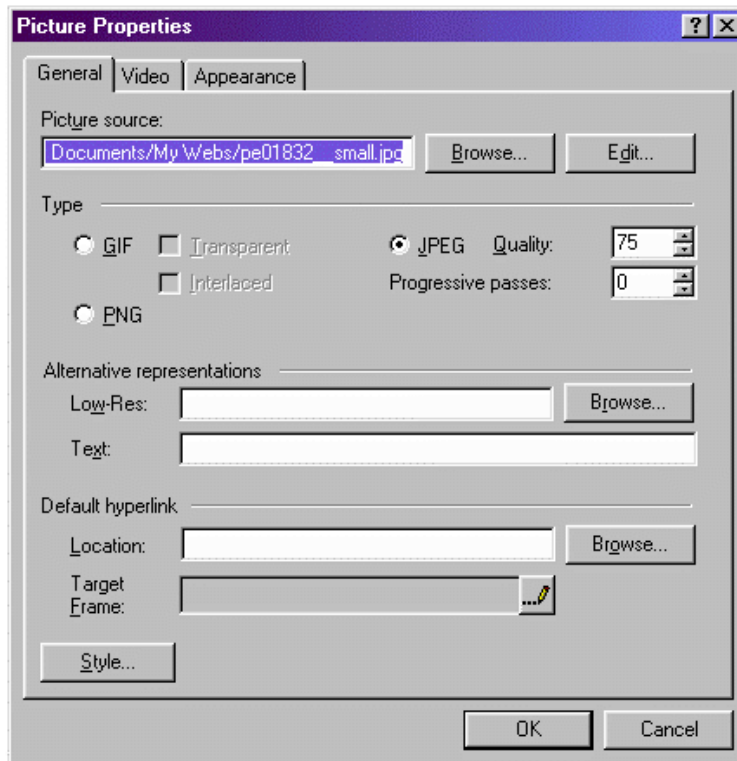


Image/Picture Properties

To edit an image's attributes or "properties," select the image, *{Right Click}* on the image and choose "Picture Properties" from the pop up menu.



Picture Properties - General



SRC - Picture Source:

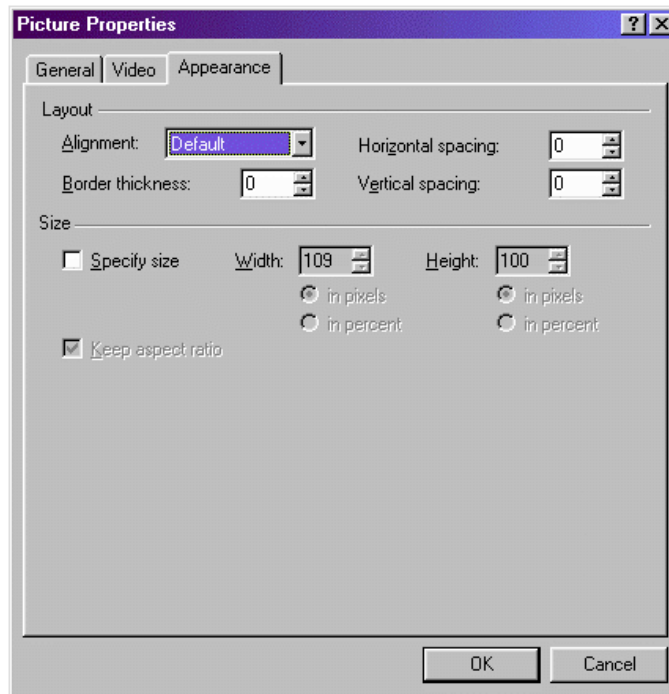
This is the path information or URL that describes the location of the image file.

E.g. <http://www.whatever.com/images/graphic.gif> or </images/graphic.gif>

ALT - Alternate Text:

This is a text field that describes an image or acts as a label. It is displayed when people turn the graphics off in their browsers, or when they position the cursor over a graphic (now supported in most browsers). It is also required as an accessibility feature as users with impaired vision may not be able to see your graphics.

Picture Properties - Appearance



BORDER – Border thickness:

Border around the image, specified in number of pixels. If you use an image in an anchor you will want to set the border value to zero so that it is not outlined.

HSPACE – Horizontal Spacing:

Horizontal Space on both sides of the image specified in pixels. A setting of 5 will put five pixels of transparent space on both sides of the image.

VSPACE – Vertical Spacing:

Vertical Space on the top and bottom of the image, again specified in pixels. A setting of 5 will put five pixels of transparent space on both sides of the image.

ALIGN - Alignment:

This allows you to align the image on your page. The options include: Bottom, Middle, Top, Left, Right, TextTop, ABSMiddle, Baseline and ABSBottom.

WIDTH - Width:

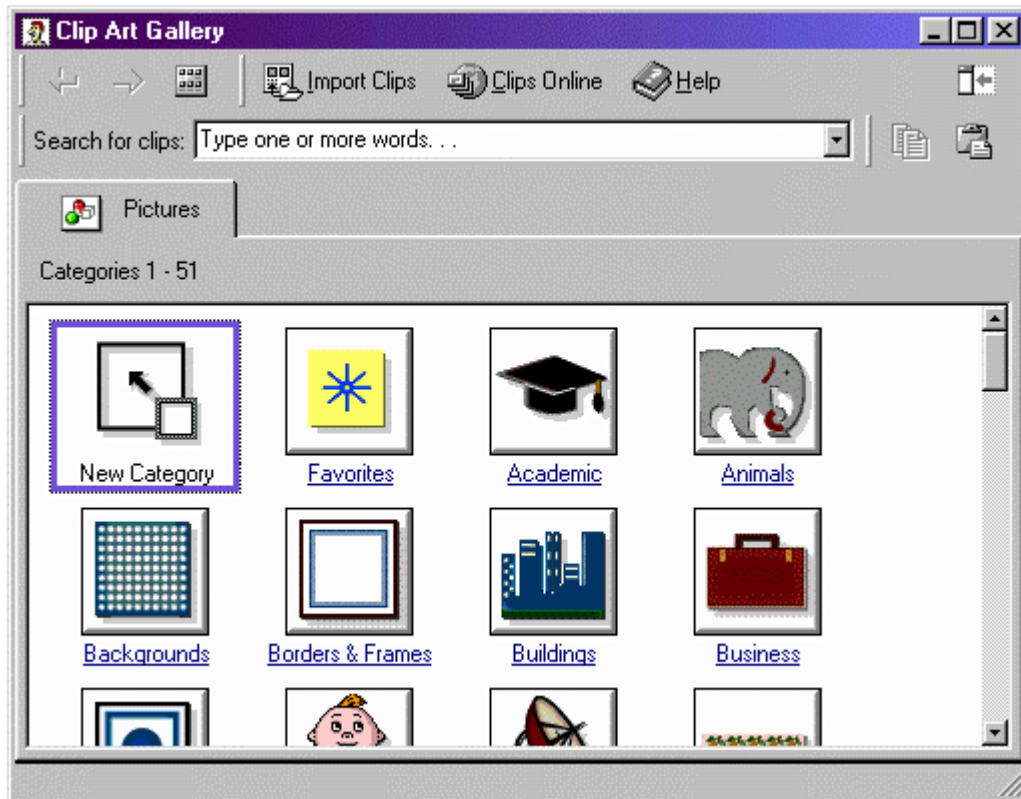
Is the width of the image in pixels. This is filled in when you select the image to place on the page.

HEIGHT - Height:

Is the height of the image in pixels. This is filled in when you select the image to place on the page.

Inserting Images with Clip Gallery


To insert an image using Microsoft Clip Gallery, *{Click}* on the Insert Menu and choose the “Picture/Clip Art....” option.



Select one of the image categories by *{Clicking}* the category icons.

Once you have selected a main category you are presented with a thumbnail view of all the images in that category. For example under Academic you are presented with thumbnail views of Books, Activities, Graduations and Drop Cap Letter.

Once you have found the image you are looking for, you simply *{Click}* on it and are given four options such as insert clip, Preview Clip, Add Clip to Favorite and Find Similar Clip.

FrontPage 2000 also enables you to import images from other resources as well as their own online clipart gallery. To access the FrontPage online gallery {Click} on the clips online icon .

FrontPage Tips


- Try to keep your image file sizes small.
- Don't rely exclusively on images to convey your information.
- Use alternate text for images.
- Don't use background images that make it difficult to read text.

Using Images as Links

Now that you have added images to your pages, you can turn them into links either internal or external by placing them inside the anchor element.

1. {Click} on your image so that it is highlighted.



2. {Click} on the Hyperlink button .
3. Enter the URL you wish the link to point to.
4. Make sure that your element has it's BORDER attribute set to zero, otherwise it will have a box around it the same color as your hyperlinks.

HTML View:

```
<a href="http://www.trainingtools.com">  
  
</a>
```

Image Maps

Image maps are images that have been divided into link regions. *{Clicking}* in a region of the image causes the web surfer to connect to a new URL. Image maps are a graphical form of creating links between web pages.

There are two types of image maps:

1. client-side
2. server-side

Both types of image maps involve a listing of co-ordinates that define the regions and which URLs those co-ordinates are associated with. This is known as the map file.

Server-side Image Maps

Server-side image maps (called ISMAP) involve a separate map file that is linked to the image by a program running on a Web server. Server-side image maps are one of two flavors NCSA - National Center for Supercomputer Applications or CERN - Conseil European pour la Recherche NuCLaire.

```
<A HREF="http://sitename/picture.map">  
<IMG ISMAP SRC="Picture.gif" BORDER=0>  
</A>
```

CERN Style: picture.map file

```
default filename.htm  
circle (123,160) 20 next.htm
```

NCSA Style: picture.map file

```
default filename.htm  
circle next.htm 123,160 123,180
```

Supported Shapes:

- Circle – Center-point radius or, for NCSA center, edge point
- Poly – List of vertices, max. 100, that define an irregular space
- Rect – Upper-left, and Lower-right
- Point – single spot, coordinates are x,y

Note: Server-side images maps are not commonly used, since the invention of Client-side Image Maps.

Client-side Image Maps

Client-side image maps (USEMAP) use a map file that is part of the HTML document (in an element called MAP), and is linked to the image by the browser.

```
<IMG SRC="Picture.gif" USEMAP="#map1">  
  
<MAP NAME="map1">  
<AREA SHAPE="RECT" COORDS="9,120, 56,149"  
  HREF="whatever.htm">  
<AREA SHAPE="RECT" COORDS="100,200, 156,249"  
  HREF="wherever.htm">  
</MAP>
```

SHAPE:

- RECT, or RECTANGLE: require four coordinates: X1, Y1, X2, and Y2
- CIRC, or CIRCLE: requires three coordinates centerx, centery, and radius
- POLY, or POLYGON: requires three or more pairs of coordinates

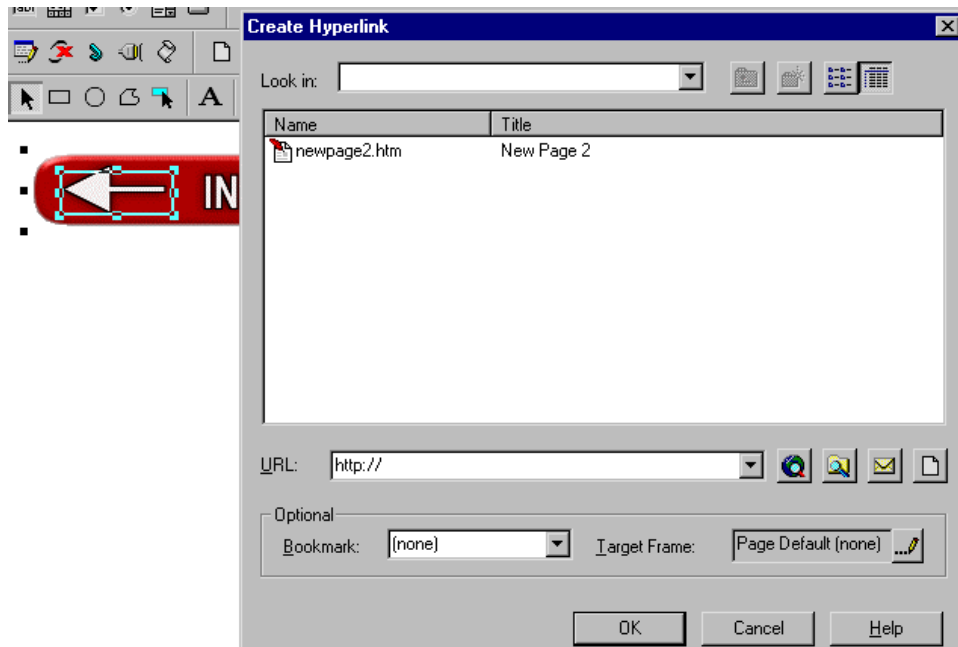
Creating Image Maps in FrontPage

FrontPage's Pictures Toolbar:



An easy way to create image maps is to use the Image Mapping toolbar. By default, this toolbar is turned off. It appears only when you insert an image, and becomes active when an image is selected.

1. Select the image.
2. Select an area drawing tool: circle, rectangle, or polygon.
3. *{Click}* and drag the pointer to define the mapped area or "hotspot".
4. Enter information in the dialogue box.
5. *{Click}* OK
6. Once you have finished creating your image's hotspots, *{Click}* OK.



HTML View:

```

<body>

<p><map name="NavBar">
<area href="http://www.trainingtools.com" shape="rect" coords="15, 294, 80, 309"></map>
</p>

</body>

```

Changing an Image Map's Hot Spots

1. Select the hot spot by *{Clicking}* on it. Notice how a bounding box with sizing handles at each corner surrounds it.
2. *{Click}* and drag the hotspot to a new location or use the arrow keys to nudge the hotspot one pixel at a time.

Changing an Image Map's Size

1. Select the hot spot by *{Clicking}* on it once.
2. Drag the hot spot's resizing handles to change its width or height.

Deleting an Image Map's Hot Spots

1. Select the hot spot by *{Clicking}* on it once.
2. Locate the "Edit" menu and *{Click}* on the Clear option once. Or, press the Delete key.

Chapter 8 – Exercise - Adding Images

1. Create a new document in FrontPage.
2. Using the Microsoft Clip Art Gallery select a graphic from the images available and insert it into your web page.
3. Work with the alignment properties to get the image positioned where you like it on the page.
4. Try changing the VSpace and HSpace properties to see the effect.
5. Add a border to one or more of your images.
6. Switch from Normal View to HTML View. Your document should look similar to the following:

HTML View:

```
<p> </p>
```

7. Switch back from HTML View to Normal View. Your document should look similar to the following:

Normal View:



Chapter 8 – Optional Exercise

1. Try adding a graphic image from a file location, not from the gallery.
2. Use the Insert Image button to add one of the graphics located in C:\Fpfiles\images\ directory.

Review Questions

1. Why should you describe the image in the ALT parameter?
2. Why do you use transparency for your graphics?
3. Why would you reduce the number of colors in a graphic image?

Summary

As a result of this chapter, you should be able to:

- Distinguish between supported graphics formats and unsupported graphics formats
- Determine which graphic format is best suited for the type of image
- Add images to your web documents
- Use the Microsoft Image Gallery to add an image

Tables

In this chapter you learn that tables have many uses in HTML. The most obvious is a table of data, but tables can also be used for advanced layout, such as placing text and graphics on a page at just the right spot, as well as placing form input boxes and simulating columns.

Objectives

Upon completing this section, you should be able to:

1. Create a Table
2. Change a table's properties
3. Edit a table
4. Add a caption
5. Modify a Table Cell and it's properties
6. Perform advanced Table editing

Tables

The <TABLE> </TABLE> element has four sub-elements; Table Row <TR></TR>, Table Header <TH></TH>, Table Data <TD> </TD>, and Caption <CAPTION> </CAPTION>. The Table Row elements usually contain Table Header elements or Table Data elements. The Table Header and Table Data elements can contain several of the body elements, which allows for rich formatting of the data in the table.


HTML View: Table Sample

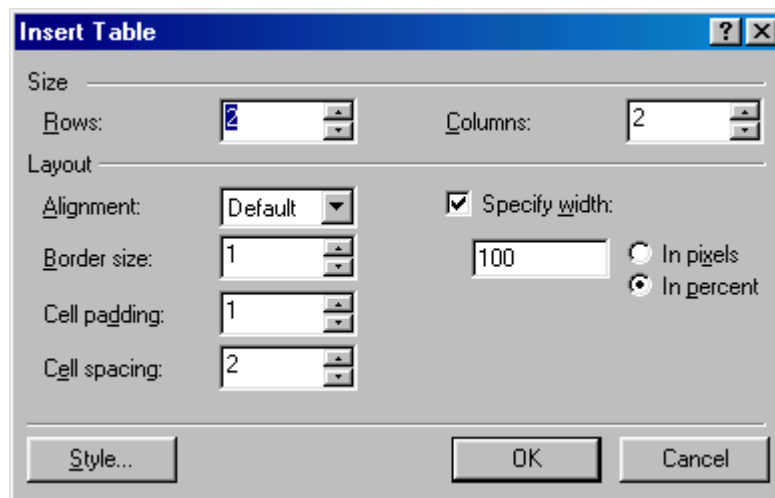
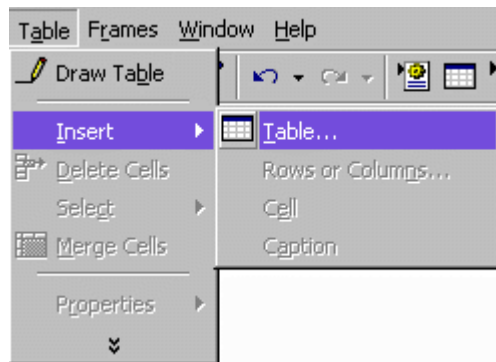
```
<table border="1" width="50%">
  <tr>
    <th>Column One Header</th>
    <th>Column Two Header</th>
  </tr>
  <tr>
    <td width="50%">Row One, Column One</td>
    <td width="50%">Row One, Column Two</td>
  </tr>
  <tr>
    <td width="50%">Row Two, Column One</td>
    <td width="50%">Row Two, Column Two</td>
  </tr>
</table>
```

Normal View:

Column One Header	Column Two Header
Row One, Column One	Row One, Column Two
Row Two, Column One	Row Two, Column Two

Inserting a Table

You can insert a table by *{Clicking}* on the table  icon on either the Standard Toolbar or by selecting the Insert Table... command in the “Table” menu. The Table Icon and the Insert Table... menu item will be grayed out if your cursor is not at a valid location in the HTML Document for a table.



Rows and Columns:

The number of rows and columns in the table, this will create `<TR></TR>` sets for the rows and `<TD></TD>` sets for the columns.

ALIGN - Alignment:

You can set the table to align to the left, center, right or justify.

WIDTH – Width:

You can specify the table width as an absolute number of pixels or a percentage of the document width. The width corresponds to the WIDTH attribute of the TABLE element. You can set the width for table cells as well.

BORDER - Border:

The lines that form the boundary of each table cell when the file is displayed in a browser. You can choose a numerical value for the border width specified in pixels. You can choose your selection from a drop down list or enter it manually in the text box provided. The table border corresponds to the BORDER attribute of the TABLE element. A setting of zero will make the border invisible.

CELLPADDING - Cell Padding:

To modify the area of transparent space around the contents of your cells increase or decrease cell padding accordingly.

CELLSPACING - Cell Spacing:

To modify the area of space between each cell, without modifying the size of the cells increase or decrease cell spacing accordingly.

NOTE: Some browsers do not draw borders around empty table cells, placing a will cause the browser to display the border and make the cell appear empty.

HTML View:

```
<div align="left">
  <table border="1" width="600" cellpadding="3" cellspacing="3">
    <tr>
      <td>&nbsp;</td>
      <td>&nbsp;</td>
    </tr>
    <tr>
      <td>&nbsp;</td>
      <td>&nbsp;</td>
    </tr>
  </table>
</div>
```

Results in Preview:

Changing a Table's Properties

Once you have created the table, you will want to edit some of the other key attributes of the table.

You can edit a table's properties by positioning your cursor inside a cell of the table and using either:

1. A *{Right Click}* and choosing Table Properties...
2. The Table Menu → Table Properties

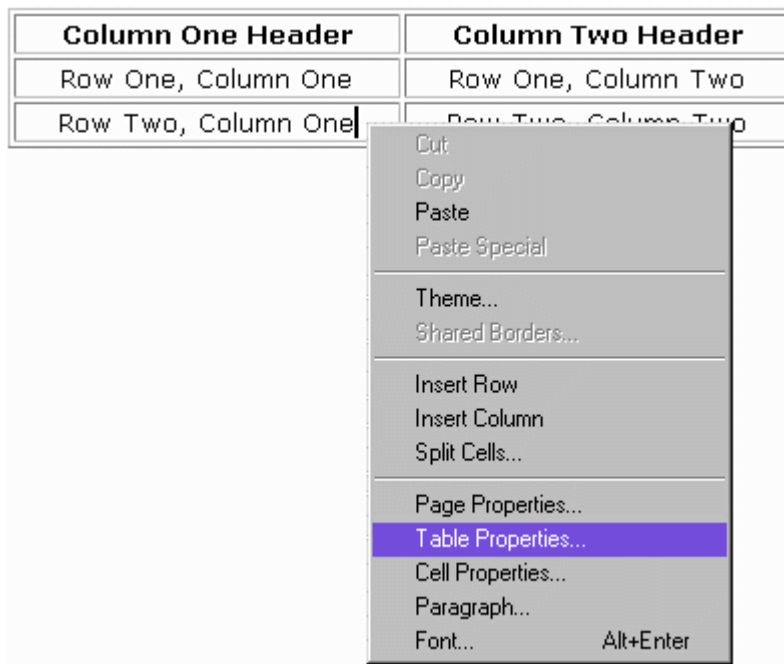
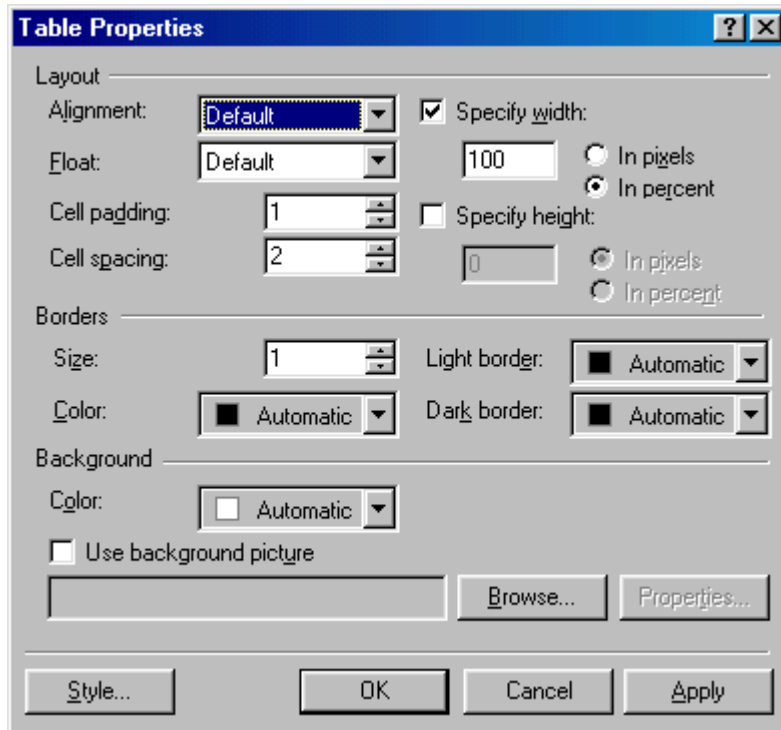


Table Properties

You can change all the regular properties of your table by selecting the option from the “Table Properties” dialog box. The Table Properties dialog box allows you to edit the table and changes will be reflected when you {Click} the “Apply” button.



All of the properties discussed are available from this dialog box.

Alignment:

This indicates the table’s positioning on the page. There are four options of alignment: Default, Left, Right and Center. FrontPage uses the <DIV> element to align tables, will go into more detail on <DIV> in the Cascading Style Sheet Chapter.

ALIGN - Float:

Allows you to have text flow to the right of the table, left of the table, or not at all. This option sets the ALIGN attribute of the <TABLE> element.

CELLPADDING - Cell padding:

This sets the space between the contents and inside edges of cells. You can only set the cell padding for an entire table. The default setting for cell padding is one.

CELLPADDING - Cell spacing:

This sets the spacing of the cells in a table. Cell spacing determines how much space is placed between all the cells in a table. You can only set the cell spacing for an entire table. The default setting for cell spacing is two.

WIDTH - Table Width:

Used to specify the minimum width of the table in either pixels or percentage. If the table's size is not specified, the web browser may scale the table, thus changing how the table will appear. Specifying the width of the table in pixels guarantees that the web browser will not scale the table inappropriately. A table width that is specified in percentage will inevitably alter its appearance as a user's monitor resolution may be changed to a larger or smaller setting.

HEIGHT - Table Height:

Used to specify the height of the table in either pixels or percentage. The guidelines of the table's width also apply to its height.

BORDER - Border:

Sets the color of the table's entire border with this option.

BORDERCOLOR – Border Color:

The color of the border around the table. This is supported properly by Navigator 4.0 and Internet Explorer 3.0 and above.

BORDERCOLORLIGHT - Light Border:

Sets one of the table's border colors. This is used to create three-dimensional effect. Supported only in Internet Explorer 2.0 and above.

BORDERCOLORDARK - Dark Border:

Sets one of the table's border colors. This is used to create three-dimensional effect. Supported in Internet Explorer 2.0 and above.

BGCOLOR - Background Color:

This option allows you to set a different color for the table than the document's background color. You can select a color from the palette or choose to customize one.

BACKGROUND - Background Picture:

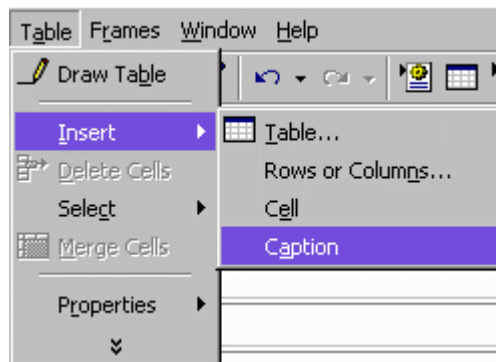
This allows you to select an image for the table's background. Only current versions of web browsers support this option.

FrontPage Tip

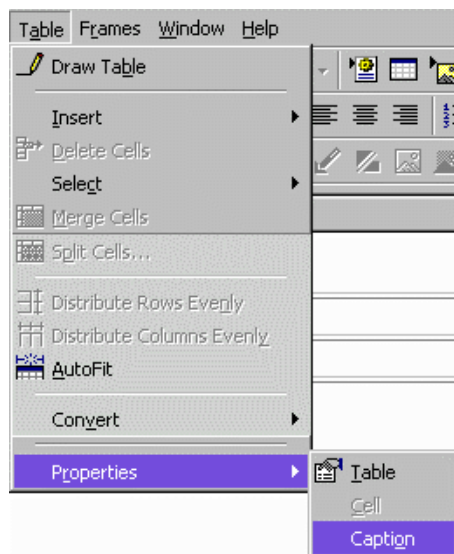
The most appropriate setting for a table's width is 600 pixels. This guarantees that users who have their monitors set at 640 x 480 resolution will not have to scroll to the right to view your web page. Monitors set at greater resolutions will also display your table correctly.

Table Caption

A Table caption allows you to specify a line of text that will appear centered above or below the table. This can act like a title for the table.



The caption element has one attribute VALIGN that can be either TOP (above the table) or BOTTOM (below the table). You can use character-formatting codes inside the Caption element.





HTML View:

```
<div align="left">
  <table border="1" width="600" cellpadding="3" cellspacing="3" align="right" bordercolor="#008000"
    bordercolorlight="#FFFF00" bordercolordark="#800080" bgcolor="#008080">
    <tr>
      <td> </td>
      <td> </td>
    </tr>
    <tr>
      <td> </td>
      <td> </td>
    </tr>
    <caption valign="bottom">Table 1: Sales Results</caption>
  </table>
</div>
```

Note: The <CAPTION> element is located just inside the <TABLE> element.

Results in Preview:

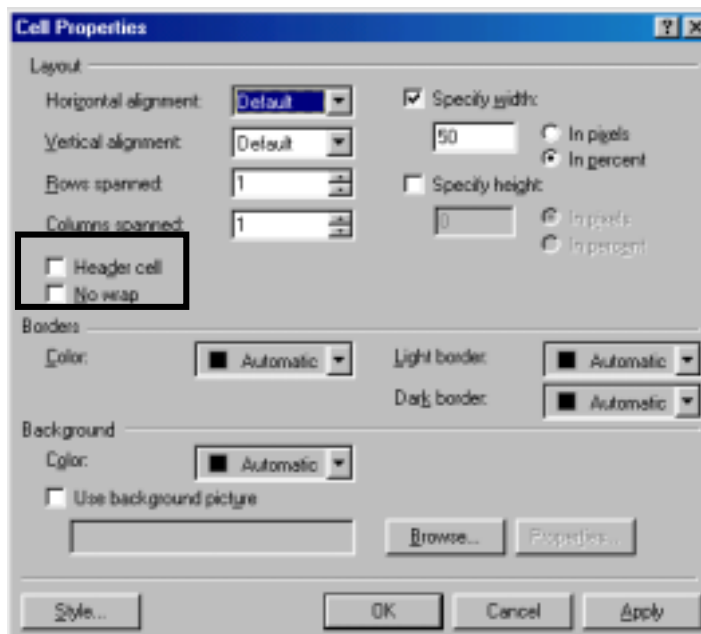
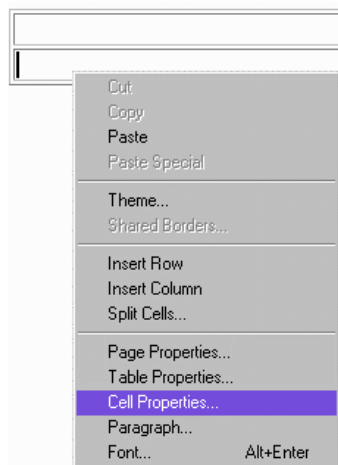
Table 1: Sales Results

TH - Table Header

Table Data cells are represented by the TD element. Cells can be changed to TH (Table Header) elements, which results in the contents of the Table Header cells appearing in bold text.

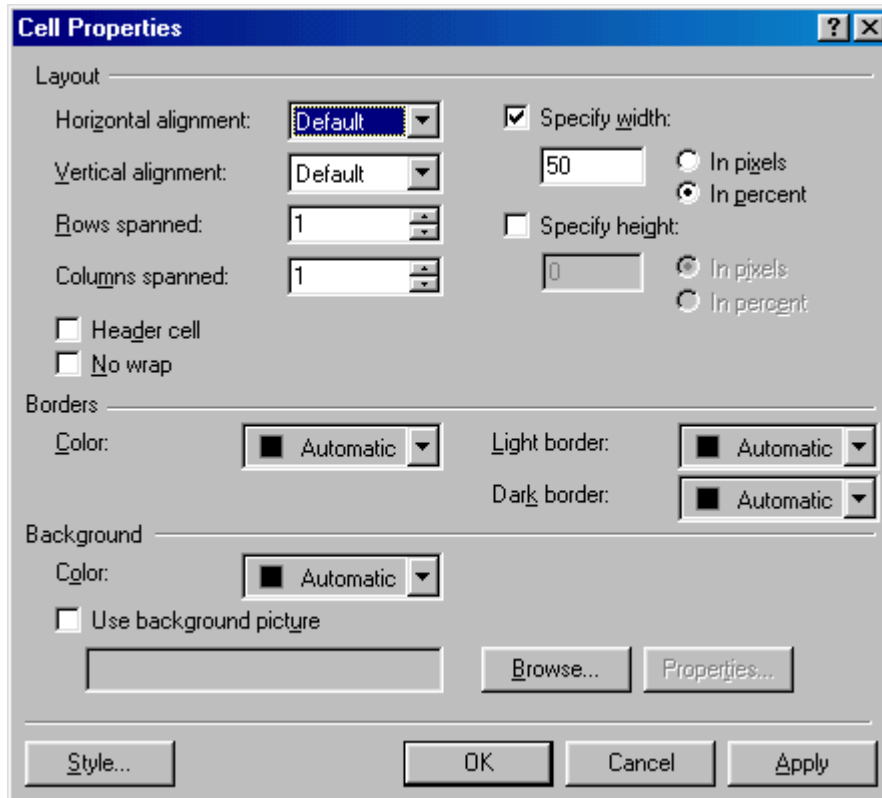
Rows, columns or individual cells can be changed to Table Header cells or to Table Data cells by *{Right Clicking}* in the cell, row or column that you want to change. Select "Cell Properties" from the pop up dialogue box; *{Click}* the Header cell check box; choose Apply to see the result or *{Click}* OK to apply and close the dialogue box.

If you simply wish to bold the text, we suggest that you insert a element inside the table cell(s) instead of changing the table cell element.



Cell Properties

The Cell Properties Dialog Box is used to set the properties of a specific cell. To change the particular settings of a cell, place your cursor within that cell and *{Right Click}*.



ALIGN - Alignment:

This sets the alignment for the cell's content. Options include default, left, center and right.

VALIGN - Vertical Alignment:

This sets the vertical alignment of the cells content. The settings are Default (Middle), Top, Baseline and Bottom.

WIDTH - Specify Width:

Sets the width of the cell in pixels or as a percentage.

HEIGHT - Specify Height:

Sets the height of the cell in pixels or as a percentage.

ROWSPAN - Number of Rows Spanned:

Sets the number of rows a cell should extend across.

COLSPAN - Number of Columns Spanned:

Sets the number of columns a cell should extend across.

TH - Header Cell:

Sets the text in the cell to bold.

NOWRAP - No Wrap:

This ensures that Web browsers do not wrap the text inside the cell. If this option is not selected, the text in the cell might be wrapped.

BORDER - Border:

Select a color for the entire cell's border.

BORDERCOLORLIGHT - Light Border:

Select a color for one of the cells border colors. This creates a three dimensional effect.

BORDERCOLORDARK - Dark Border:

Select a color for one of the cells border colors. This creates a three dimensional effect.

BGCOLOR - Background Color:

Allows you to choose a color for the cell's background. Cells within a color can have different colors.

BACKGROUND - Background Picture:

Allows you to choose an image for the cell's background.

HTML View:

```
<div align="left">
<table border="1" width="600" cellpadding="3" cellspacing="3" align="right" bordercolor="#008000"
bordercolorlight="#FFFF00" bordercolordark="#800080" bgcolor="#008080">
  <tr>
    <td nowrap bgcolor="#FFFF00" bordercolorlight="#FF00FF" bordercolordark="#800080" valign="top"
align="left" width="50" height="50">&nbsp;&nbsp;&nbsp;</td>
    <td>&nbsp;&nbsp;&nbsp;</td>
  </tr>
  <tr>
    <td>&nbsp;&nbsp;&nbsp;</td>
    <td>&nbsp;&nbsp;&nbsp;</td>
  </tr>
  <caption valign="bottom">Table 1: Sales Results</caption>
</table>
</div>
```

Advanced Table Editing

Once you have inserted a table, you can:

- Add or delete a single row or column.
- Merge rows or columns together.

You can edit the Table by using the commands available in the Table Menu or from the Table Toolbar.

Table Toolbar:



Draw Table, Eraser

Insert Rows, Insert Columns, and Delete Cells

Merge Cells, Split Cells

Align Top, Center Vertically, and Align Bottom

Fill Color

Auto Fit

NOTE: The [ENTER] key will place a
</BR> inside a cell instead of a paragraph.

Chapter 9 – Exercise 1

1. Insert a table above the bottom Horizontal Rule.
2. Change its background color to yellow.
3. Increase the table's border to a setting of 5.
4. Change the Top Row to a table Heading, and add some headings.
5. Add some text/data to your table.
6. Center the table using the Center element.
7. Center the address using the Center element.
8. Save and Preview.

Review Questions

1. When you insert a table what are the initial properties that you can specify through the dialog box?
2. How would you set other key attributes such as alignment and cell padding?
3. What is Cell Spacing?
4. How do you change a row into Table Header cells?

Summary

As a result of this chapter, you should be able to:

- Insert a table
- Explain a table's properties
- Edit a table
- Add a table header

Frames

Frames are a relatively new addition to the HTML standard, having been included in release 3.0 and therefore not all browsers support this group of elements. Popular browsers, such as Netscape and Internet Explorer releases 3.0 and higher do provide full frames support.

Objectives

Upon completing this section, you should be able to:

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

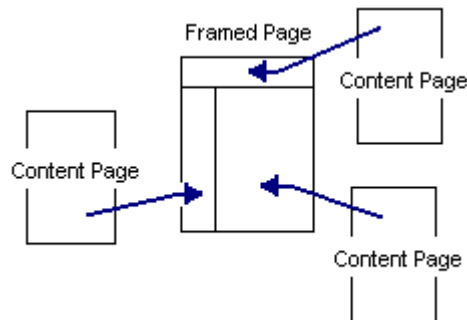
Prerequisites

- Internet Explorer 3.0 or greater
- Navigator 2.0 or greater
- Frames are Platform Independent

Introduction to Frames

A frames page is best described as a page that divides the browser's window into multiple windowpanes (frames). The key document (the frames page) divides the browser's display area into separate regions (frames). It also indicates the content HTML pages that will be downloaded and displayed in each frame.

Lets examine an example of a framed page that has three viewable frames. This type of page is actually made up of four HTML pages. One page of the four describes the divisions of the window into three frames. It also gives a unique name to each frame, and lists the URL of the content page that will be loaded into that frame. The other three HTML pages are the contents of the frames and are loaded into each frame as indicated by the frames page.



To review, your browser first downloads the frames page from the web server to your browser. Your browser divides the active window into multiple frames. Your browser then downloads each of the pages indicated by the frames page into the appropriate frame.

Frames are typically used as a layout solution. By placing an HTML page made up of your Navigation bar or links in one Frame you ensure that the Navigation options are always available to the user because you can designate the pages that the links point to are displayed in another frame.

Framed sites can be more work because of the number of pages involved.

The Anatomy of a Frames Page

A frames page is different than a normal HTML document. Below is an example:

```
<html>

<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<title>New Page 6</title>
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
</head>

<frameset rows="64,*">
  <frame name="banner" scrolling="no" noresize target="contents">
  <frameset cols="150,*">
    <frame name="contents" target="main">
    <frame name="main">
  </frameset>
</frameset>
<noframes>
<body>

  <p>This page uses frames, but your browser doesn't support them.</p>

</body>
</noframes>
</frameset>

</html>
```

You can see that <FRAMESET> element is replacing the position of the <BODY> element. The <FRAMESET> element is the one that defines the division of the window into multiple panes (frames). The sub element of <FRAMESET> is <FRAME> that names the windowpane (frame) and specifies the web page that will populate that windowpane (frame).

When older browsers read pages written to a higher standard of HTML they ignore any elements that they do not understand. The early browsers did not support frames, so they will ignore all the <FRAMESET>, <FRAME> and <NOFRAMES> elements. This will leave you with the <BODY> element between the <NOFRAMES> element. A browser that does not support frames will only see the code between the <BODY> elements.

The reverse is also true. A new browser will ignore everything between the <NOFRAMES> elements.

Editor View Tabs

When you begin working with frames pages the editor adds additional views to make it easier to work with.



Normal View

This view gives you an approximate idea of how your web page will appear.

No Frames

This view displays the page that will appear in web browsers that cannot view a page created in frames. Some web pages will inform the user that the page is viewed only with a frames capable browser. Other web sites will give the visitor the option of viewing the document in a page formatted without frames.

HTML View

This view displays the HTML coding of all the different pages within the frames. To edit a specific page's HTML coding *{Click}* on the specific frame.

Frames Page HTML

This view displays the main document of the web page. It displays the HTML coding that divides the web page into separate regions and its properties.

Preview

This view allows you to see how your web page will appear on the Internet.

<FRAMESET>

The <FRAMESET> element contains information about how the active window is divided. If you use one of FrontPage's frame templates, the properties within the <FRAMESET> element will be pre-determined. You can however modify the properties in the Frames Page HTML View.

ROWS:

Determines the size and number of rectangular rows within a <FRAMESET>. They are set from the top of the display area to the bottom.

Possible values are:

- absolute pixel units, E.g. "360,120"
- a percentage of screen height, E.g. "75%,25%"
- relative values using the asterisk (*) character, E.g. "100, *"

The latter enables the developer to allocate all unassigned vertical space proportionately. Values are given within quotation marks and separated by commas.

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, E.g. "480,160"
- a percentage of screen height, E.g. "75%,25%"
- relative values using the asterisk (*) character, E.g. "100, *"

The latter enables the developer to allocate all unassigned horizontal space proportionately. Values are given within quotation marks and separated by commas.

FRAMEBORDER:

Possible values 0, 1, YES, NO. A setting of zero creates a borderless frame.

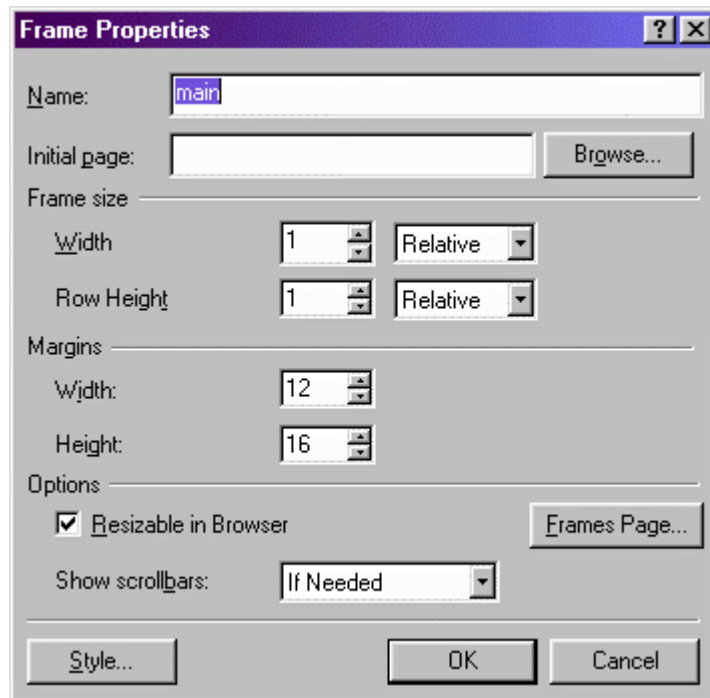
FRAMESPACING:

This property specifies the amount of padding, in pixels, between frames when the frames page is displayed in a Web browser. The default for most Web browsers is 2 pixels.

Frames can be borderless, but you will need to change this value to zero as well, or you will have a gap between your frames where the border used to be.

<FRAME>

This element defines a single frame within a frameset. To edit a frame's properties, locate the "Frame" menu and select "Frame Properties." Another method of modifying the properties of the <FRAME> element is to select the frame and *{Right Click}* anywhere in the frame.



Name:

Required, as it names the frame. The name is used to allow targeting by other HTML documents. In order to place a document other than the one specified by the Initial Page property in this frame you will need to reference its name. Frame names are case sensitive we suggest you always use lowercase names.

Resizable in Browser:

When checked, this option allows users to resize the frame in a web browser. If this is disabled, users will view the page at the preset size in their web browser.

Show Scrollbars:

This specifies the use of scrollbars around the frame when displayed in a web browser. There are three options to choose from:

- If Needed: This displays scrollbars if the content within the frame cannot be viewed without scrolling.
- Never: This option turns off scrollbars.
- Always: This option turns on scrollbars.

Frame Size:

This determines the size of the frame relative to the other frames within the document. The specific size of the frame changes depending on whether it belongs to a row or a column. If you decide to change a frame's size during the editing process FrontPage automatically updates any changes that are made to the individual frame in the <FRAMESET>.

Column Width/Height:

This option is enabled when the frame selected belongs to a column that contains other frames of the same size above or below it. You can specify both the column width and height of frame as follows:

1. In values that are relative to other frames in the same column.
2. As a percent of the size of the window when the frames page is displayed in a Web browser.
3. In a fixed number of pixels.

If you change the column width for the selected frame the change will be applied uniformly to all other frames in that column. The sizes of frames in other columns to the left or right of the selected frame will be adjusted accordingly.

Width/Row Height:

This option is enabled when the selected frame belongs to a row that contains other frames of the same size to the right or left of it. You can specify the frame's row width and height as follows:

1. In values that are relative to other frames in the same row.
2. As a percent of the size of the window when the frames page is displayed in a Web browser.
3. In a fixed number of pixels.

If you change the row height for the selected frame, the change will be applied uniformly to all other frames in that row. The sizes of frames in other rows above or below the selected frame will be adjusted accordingly.

Margin Width:

This option specifies the width, in pixels, that the contents of the frame should be indented from the left and right frame borders.

Margin Height:

This option specifies the height, in pixels, that the contents of the frame should be indented from the top and bottom frame borders.

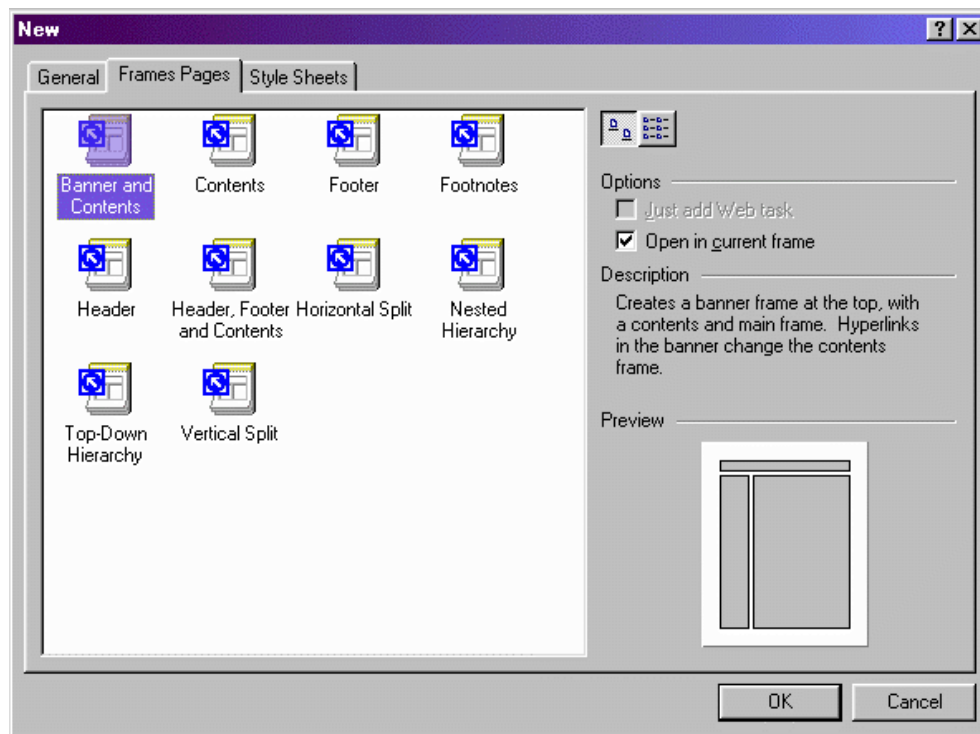
Initial Page:

Required, as it provides the URL for the page that will be displayed in the frame.

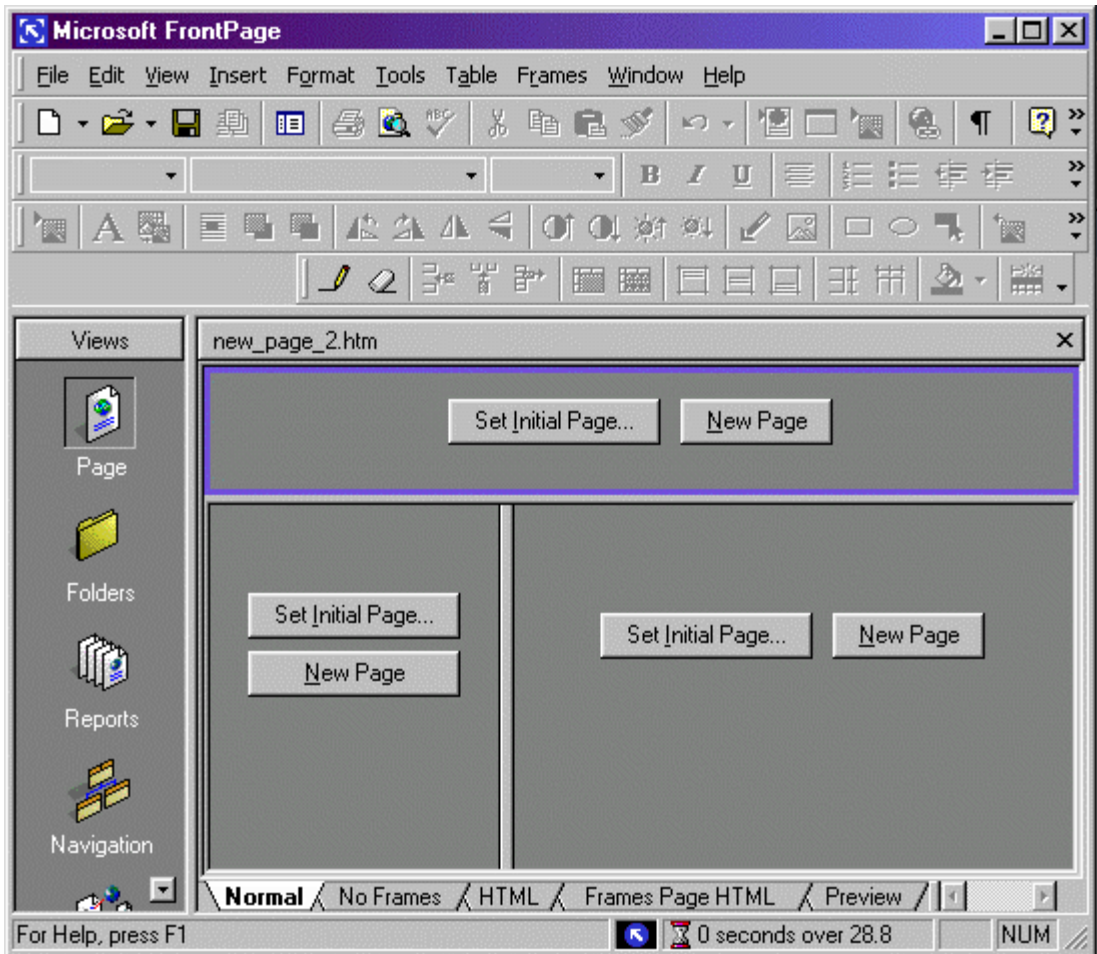
Creating a Frames Page

Creating a frames page with FrontPage is a quick and simple task.

1. Go to the “File” menu and {Click} on “New.”
2. {Click} on the “Frames” tab and select a template for your frames page. In the dialog box, you will be able to see what each frames template looks like in the “Preview” window.
3. Once you have selected a template that suits your needs {Click} OK. FrontPage immediately creates the frames environment and you can begin editing your page.



The Frames Dialog Box provides you with several different templates to choose from. You can see what each template will look like in the Preview window and a short explanation of the document’s structure is detailed in the “Description” section.



In this example, the frames document consists of three frames that will contain three different documents. Each frame region has three buttons that allows you to insert a pre-existing page into a frame or to create a new page.

Set Initial Page Button

Sets the page that will be viewed in that particular frame. *{Clicking}* on this button will initiate the “Create Hyperlink” dialog box. Locate the specific file within a directory on your computer/server or you may link to a file on the Internet.

New Page Button

This button also sets the page that will be viewed in that particular frame, however, instead of choosing a pre-existing file, it causes a new page to be created for future editing.

Frame Properties

Using the FrontPage editor, you can easily modify the frame properties of the main document or individual framed pages.

Editing the Frame Page's HTML

Switch to the Frames Page HTML View. Your document should look similar to the following:

```
<frameset rows="64,*">
  <frame name="banner" scrolling="no" noresize target="contents">
  <frameset cols="150,*">
    <frame name="contents" target="main" src="newpage1.htm">
    <frame name="main" src="newpage3.htm">
  </frameset>
</frameset>
<noframes>
<body>
<p>This page uses frames, but your browser doesn't support them.</p>
</body>
</noframes>
</frameset>
```

Targets

Since we now have multiple windows to deal with, we have to have a way of identifying them so that our other pages end up in the correct frame. Earlier in the chapter we stressed that we should name our frames with lowercase names. We did this because the names become the value of the TARGET attribute for any element that links to another HTML document. If you fail to specify a TARGET then the HTML document will be loaded into the current frame.

A “target” is used with the <A>, <AREA>, <BASE> and <FORM> elements; its purpose is to ‘target’ or redirect the hyperlink to a specific frame. The target attribute has the following syntax:


```
<A HREF="framedoc.htm" TARGET="Frame-window-name">
```


```
<AREA SHAPE="RECT" COORDS="5,15,25,40" HREF="framedoc.htm" TARGET="Frame-window-name">
```

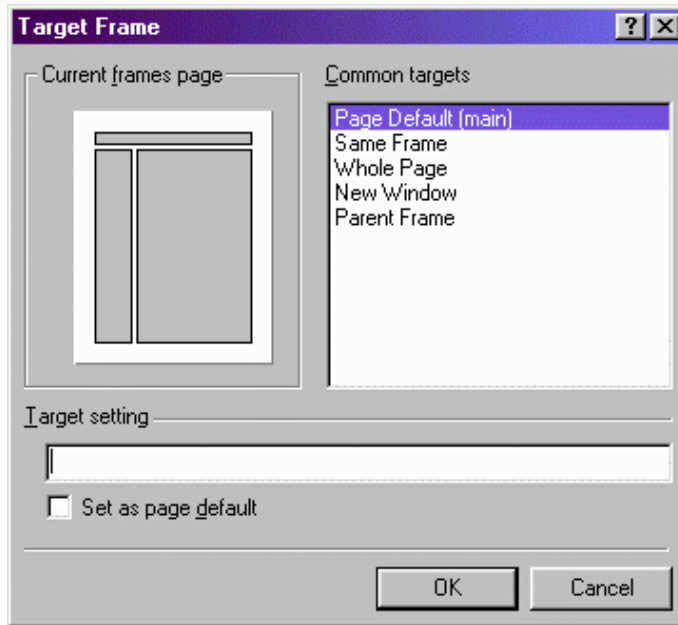
```
<BASE TARGET="Frame-window-name">
```

```
<FORM ACTION="cgi bin/script" TARGET="Frame-window-name">
```

Creating a Frame Target

To specify a frame target, in which to display a page pointed to by a hyperlink, create a link by {Clicking} on the Create/Edit Hyperlink  button.

1. In the Hyperlink Dialog Box, select the file or insert the URL of the web page you want to link too.
2. Locate the “Target Frame” section in the Hyperlink Dialog Box and {Click} on the “Edit Target” button .
3. In the Target Dialog Box, you are provided with five (5) common target options:



Page Default

Specifies that the page pointed to by the hyperlink should be displayed in the default target frame for the active page.

Same Frame

Sets the target frame of the hyperlink to the same frame that contains the hyperlink. Use this setting to override the page's default target frame.

Whole Page

Sets the target frame of the hyperlink to the entire Web browser window.

New Window

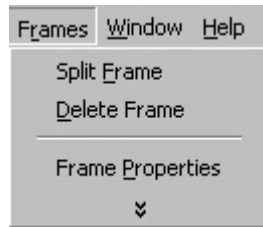
Sets the target frame of the hyperlink to open a new browser window on the user's desktop.

Parent Frame

Specifies to display the page that is the target of the hyperlink in the frame that contains the current frameset tag. This is an advanced feature.

Editing Frames

You can edit existing frames by *{Clicking}* on the “Frames” menu in FrontPage.



Split Frame

This option is used to split the current frame. You can choose whether to split the frame horizontally or vertically to create two new frames. The contents of the original frame appear in the left frame (if you split the original frame into columns) or in the top frame (if you split the frame into rows).

Delete Frame

This option is used to delete the current frame selected. You can also delete a frame by *{Clicking}* on the frame and hitting the Delete Key.

Chapter 10 – Exercise 1

In this exercise you will work with a frames based page.

Procedure

1. In your browser open the file called frames.htm; it is located in the c:\Fpfiles\frames\ directory.
2. *{Click}* on the links in the frame on the left, notice how the content on the right changes.

Chapter 10 – Exercise 2

In this exercise you will add a link to the page in the frame on the left.

Procedure

1. Open the site_menu.htm page in the c:\fpfiles\frames\ directory.
2. Select the words “Our Products” and *{Click}* on the Insert Link Button.
3. In the Hyperlink dialog box, locate the file called products.htm.
4. In the Target Frame field, use the Page Default (Main) setting.
5. Save the file, and reload the frames.htm document in your browser. *{Click}* on the words “Our Products” and observe what happens.

Review Questions

1. What is the TARGET attribute used for?
2. What are two attributes of the FRAMESET element?
3. What is the NOFRAMES element used for?

Summary

As a result of this chapter, you should be able to:

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

Forms

Forms enable 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 that information.

Objectives

Upon completing this section, you should be able to:

1. Create a FORM
2. Add elements to a FORM
3. Define CGI
4. Describe the purpose of a CGI Application
5. Specify an action for the FORM

Prerequisites

- Forms work in all browsers
- Forms are Platform Independent

Forms

A form is a set of data-entry fields on a page that are processed on a server. The data is sent to the server when a user submits the form by *{Clicking}* on a button or an image. Fields are the building blocks of forms.

To insert a form into your web page, locate the “Insert” menu and select “Form.” To insert a form field select one of six available field types.

<FORM>

The Form element contains properties that are invisible to the user, but are essential in specifying how the data will be processed, transported and encoded.

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.

ENCTYPE:

Determines the mechanism used to encode the forms contents (leave default.)

NAME:

Is a form name used by VB script or JavaScript.

TARGET:

Is the target frame where the response page will be displayed to the user.

The rest of the form elements are used to create the form displayed in the browser and collect the data to be sent to the application.

Form Properties

The screenshot shows the 'Form Properties' dialog box with the following details:

- Where to store results:**
 - Send to**
 - File name: fpweb:///private/form_results.txt (with a 'Browse...' button)
 - E-mail address: (empty text field)
 - Send to database
 - Send to other: Custom ISAPI, NSAPI, CGI, or ASP Script (dropdown menu)
- Form properties:**
 - Form name: (empty text field)
 - Target frame: (empty text field with a small icon)
- Buttons:** Options..., Advanced..., OK, Cancel

Send to

If you do not require your form to be processed by a CGI script you can use this option to generate a text file. To save the file in a particular directory select browse and choose the directory. You must enter a filename with a .txt extension. To E-mail the results of the form enter an appropriate E-mail address. To control the format of the results select "Options."

Send to other

Select this option if the results of your form are being processed by a script, a discussion group handler, or a registration handler. Select "Options" to configure the required parameters for forms processed by scripts and handlers.

Form Name

Enter the name you have chosen for the form here.

Target Frame

If you have chosen to generate a response page for your form, informing the user that it has been successfully or unsuccessfully processed for example, you can designate if the response page appears in Page Default, Same Frame, Whole Page, New Window, or Parent Frame.

Options

Select "Options" to configure parameters for either "Send to" or "Send to other." If you selected "Send to" you can configure the following options:

File Results, E-mail Results, Confirmation Field, and Saved Fields. If you selected “Send to other” you can configure the following options: Action, Method, Encoding Type, and Style.

Advanced

Select “Advanced” to add Hidden fields to your form. Select “Add” to create new hidden fields. “Modify” to modify existing hidden fields and “Remove” to delete existing hidden fields.

Form Elements


Form elements also have properties called “form fields.” A form field is where the user fills in or selects information to be submitted. FrontPage provides you with the following fields: One-Line Text Box, Scrolling Text Box, Check Box, Radio Button, Drop-Down Menu, and Push Button.

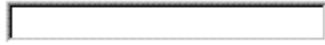
You can insert form fields by *{Clicking}* on the “Insert” menu, selecting “Form” and selecting the desired field type.

<INPUT> Elements 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 by default
SIZE =	Number of characters in text field
MAXLENGTH =	Maximum number of characters accepted

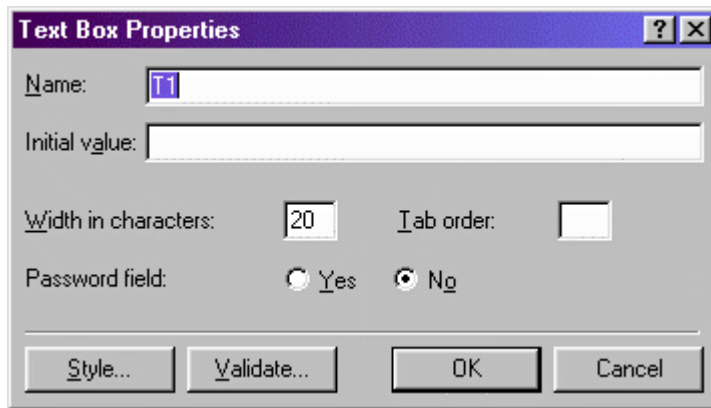
Field Types

Text boxes:

To create a textbox, {Click} on the Insert Text box button 



You can edit the properties of the text box by {Right Clicking} on the text box and selecting “Form Field Properties.”



In the Text Box Properties dialog box, you can modify the following attributes:

Name:

The name of the variable to be sent to the CGI application.

Initial Value:

Usually left blank, but can have a default value.

Width in Characters:

The number of characters the user can enter in the text box. You can also change the size of the text box by dragging the sizing handles.

Tab Order:

Controls the order in which the user can move from field to field.

Password field:

A text box can be used as a password field for user validation.

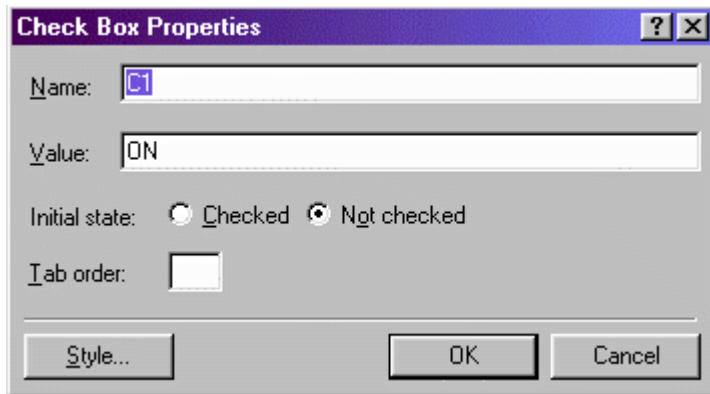
Validate:

This button displays the Form Field Validation dialog box. The Validation dialog box controls what the user can enter in the text box.

Check Box:

Check boxes allow the users to select more than one option. To insert a check box {Click} on .

This option and this option



Name:

The name of the variable to be sent to the CGI application.

Value:

The default value is on but can be changed to OFF.


Initial Status:

The status of whether it will appear checked or unchecked when displayed in the web browser.

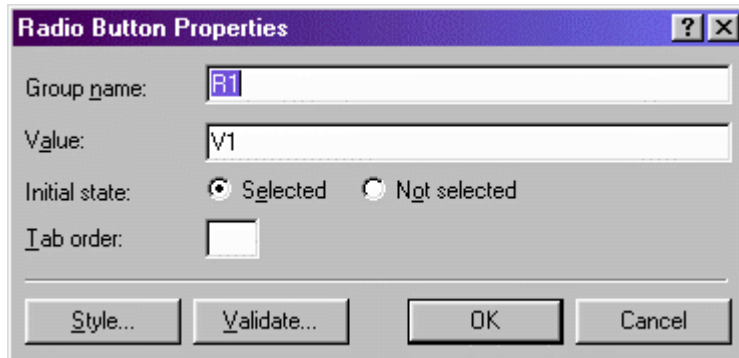
Tab Order:

Controls the order in which the user can move from field to field.

Radio Button:

Radio buttons allow users to select only one option. To insert a radio button {Click} on .

This option or that option .



Name:

The name of the variable to be sent to the CGI application.

Value:

The value associated with the button. Each radio button must have its own value.

Initial Status:

The status of whether it will be selected or not selected when displayed in the web browser.

Tab Order:

Controls the order in which the user can move from field to field.


Validate:

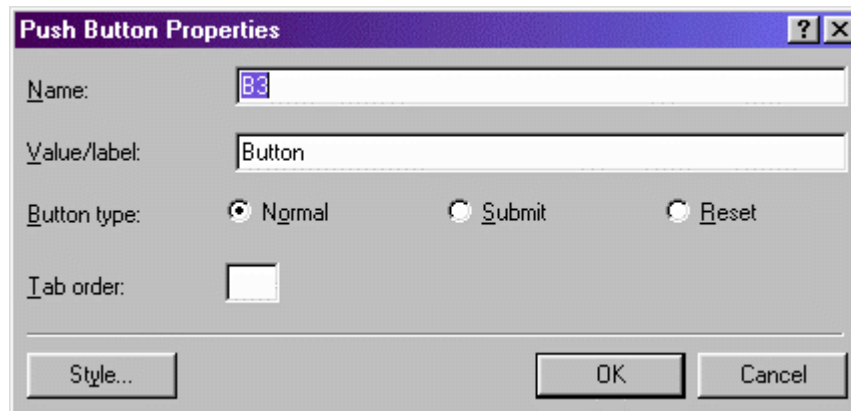
This button displays the Form Field Validation dialog box. Use it to define the group a set of radio buttons belong to, the value of each button, the initial selection state, and the tap order.

Push Button:

Push Buttons are elements used with either JavaScript or VBScript to cause an action to take place.

To add a push button {Click} on .

The result is a button .



Name:

The name of the variable sent to the CGI application.

Value/Label:

The label of the push button. If you supply a label, it replaces the default label on the push button.


Button type:

Select Submit to use the button to submit the form; when you select Submit, the default label is Submit. Select Reset to use the button to reset the form to its initial state; when you select Reset, the default label is Reset. Select Normal if you want to insert a generic button to which you can assign a script; when you select Normal, the default label is Button.

Tab Order:

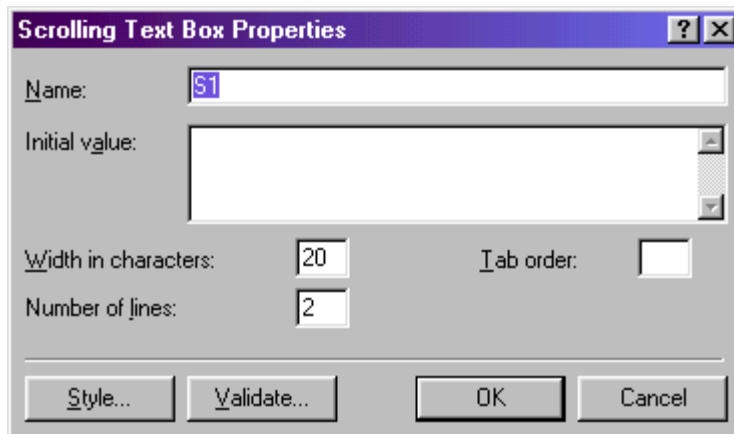
Controls the order in which the user can move from field to field.

Scrolling Text Box:

Allows users to input multiple lines of text. To insert a scrolling text box {Click} on .



You can edit the properties of the scrolling text box by {Right Clicking} on the scrolling text box and selecting “Form Field Properties.”



Name:

The name of the variable to be sent to the CGI application.

Initial Value:

Usually left blank, but can have a default value.

Width in Characters:

The number of characters the user can enter in the scrolling text box. You can also change the size of the scrolling text box by dragging the sizing handles.

Number of Lines:

The number of lines or height of the scrolling text box.

Tab Order:

Controls the order in which the user can move from field to field.

Validate:

This button displays the Form Field Validation dialog box. The Validation dialog box controls what the user can enter in the scrolling text box.

FrontPage Tip

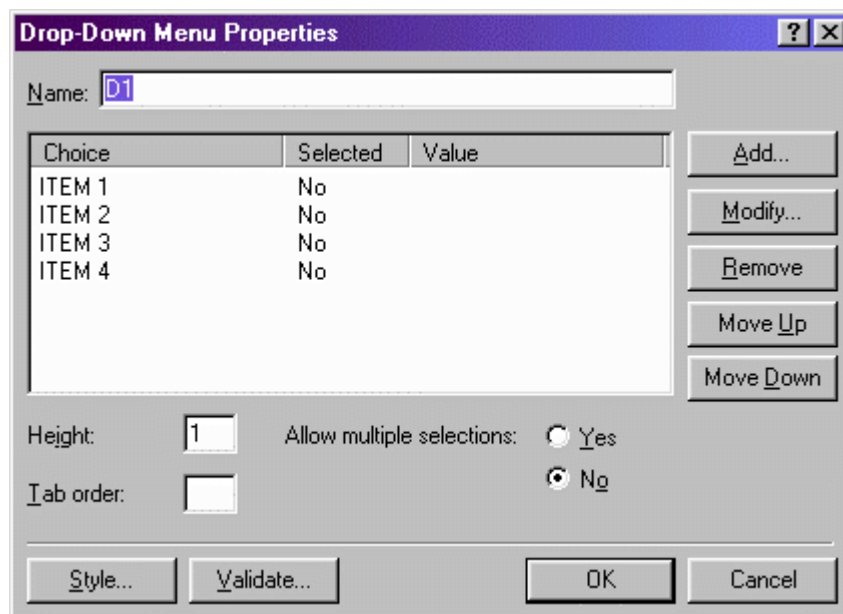
Add the WRAP attribute to the <TEXTAREA> </TEXTAREA> element in HTML view to ensure that text scrolls properly in Netscape browsers. You will need to type this in using the HTML View.

```
<textarea rows="2" name="$1" cols="20" wrap>
```

Drop-Down Menu

The following two are types of <SELECT> </SELECT> elements, where the elements are set differently.

Drop-Down Menus contain a list of selections users choose from.



Name:

The name of the variable to be sent to the CGI application.

Choice: lists the names of the menu choices associated with this drop-down menu. You can add menu choices by *{Clicking}* on the "Add" button. Each choice is designated by <OPTION> </OPTION> tags in HTML.

Selected:

Choose whether you want the menu choice on the current row to be selected or not selected when it is first displayed in a Web browser.

Value:

Sets the value of the menu choice on the current row.

Move Up:

{Click} Move Up to move the currently selected choice up in the menu.

Move Down:

{Click} Move Down to move the currently selected choice down in the menu.

Height:

{Click} Height to set the height of the menu. The height of a drop-down menu field controls how the menu appears:

1. If the menu allows only 1 selection and the height is 1, most Web browsers display the menu as a drop-down list.
2. If the menu allows only 1 selection and the height is larger than 1, most Web browsers display the menu as a scrollable list.
3. If the menu allows more than 1 selection and the height is 1, most Web browsers display the menu as a scrollable list with half-height scroll arrows. This combination of settings makes it difficult to use the menu.
4. If the menu allows more than 1 selection and the height is larger than 1, most Web browsers display the menu as a scrollable list with full-height scroll arrows.

Allow multiple selections:

Select Yes to allow more than one menu item to be selected at a time. Select No to permit only one selection at a time.

Tab order:

Controls the order in which the user can move from field to field.

Common Gateway Interface (CGI)

When the user has finished filling in the form and presses submit the data is sent to the application on the server specified in the action attribute of the form element.

The application is commonly referred to as a CGI application/program. It resides and runs on the web server. It is typically but not always stored in a directory called cgi-bin.

The application can be written in any language; however, it must be one supported by your web server's operating system and web server software. A very popular language for creating CGI applications is PERL (Practical Extraction Report Language).

PERL is an interpreted language with rich text manipulation characteristics. Because it is interpreted its performance compared to a compiled CGI application is slower, thus negatively affecting server performance. It has been ported to most popular operating systems and is currently available for most versions of UNIX, Windows NT, and Windows 95. The actual application is commonly referred to as a script.

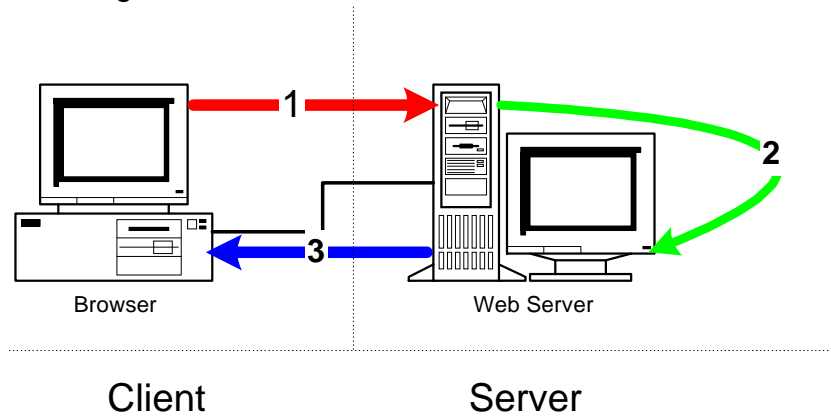
CGI Scripts

CGI Scripts process the form's data and send a response back to the user.

They can be written to calculate numbers as in a sales order. They can format data and put it into a database such as a mailing list or guest book. Depending on the situation, a CGI Script can be written to do almost anything.

Intranet Application Development Architectures

1. Simple CGI Program



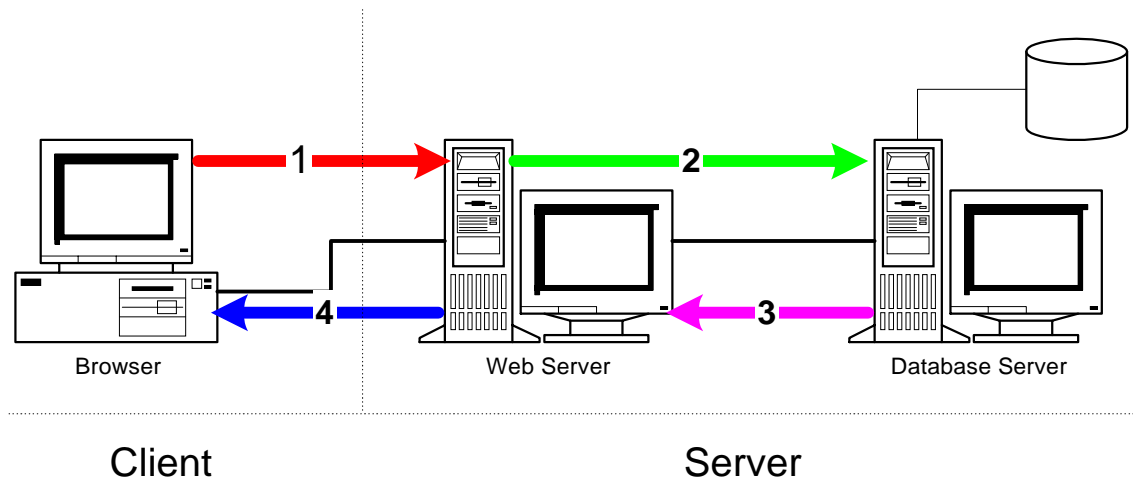
1. The client fills out an HTML document containing the <FORM> element and presses the submit button. This sends the data the user entered to the web server.

2. The web server receives the data and passes it to the program specified in the ACTION attribute of the <FORM> element. This program is called a CGI (Common Gateway Interface) program. It can be written in a number of languages; VBScript, JavaScript, PERL, C++, etc. It can perform a number of different functions.

3. The CGI program creates a new HTML document on the fly and sends it to the client.

Browser	Web Server	CGI Program
Netscape Navigator	Netscape Enterprise Server	- NSAPI -C++ - PERL - Server side JavaScript
Microsoft Internet Explorer	Microsoft Internet Information Server	- ISAPI -C++ - PERL - Active Server Pages (ASP) JScript or VBScript

2. Three-Tier Web Application Development



1. The client fills out an HTML document containing the <FORM> element and presses the submit button. This sends the data the user entered to the web server.

2. The web server receives the data and passes it to the program specified in the ACTION attribute of the <FORM> element. This program is called a CGI (Common Gateway Interface) program. It can be written in a number of languages; VBScript, JavaScript, PERL, C++, etc.

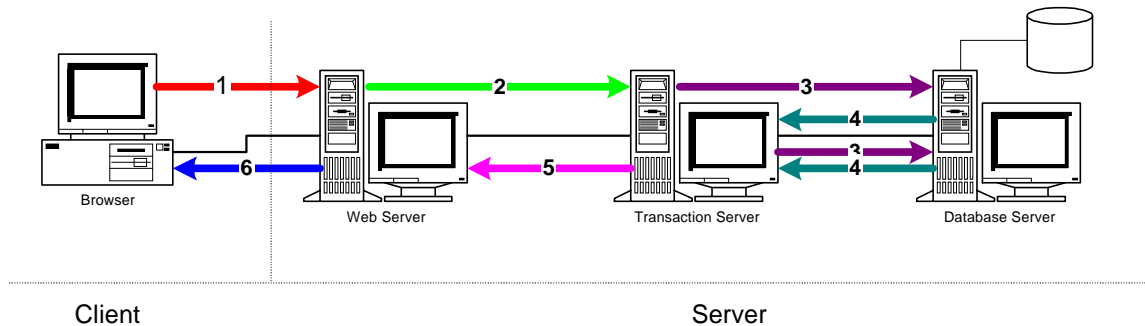
The program in this case creates a command and issues it to the database server.

3. The Database Server receives the command and issues it against the database. The data returned from the command is then sent back to the CGI application running on the web server.

4. The CGI program creates a new HTML document on the fly with the data returned from the database server and sends it to the client.

Browser	Web Server	CGI Program	Database Server
Netscape Navigator	Netscape Enterprise Server	- NSAPI -C++ - PERL - Server side JavaScript	- Oracle - Informix - Sybase - Microsoft SQL - Other ODBC compliant
Microsoft Internet Explorer	Microsoft Internet Information Server	- ISAPI -C++ - PERL - Active Server Pages (ASP) - JScript or VBScript	

3. Four-Tier Web Application Development



1. The client fills out an HTML document containing the <FORM> element and presses the submit button. This sends the data the user entered to the web server.

2. The web server receives the data and passes it to the program specified in the ACTION attribute of the <FORM> element. This program is called a CGI (Common Gateway Interface) program.

In this case the program invokes a transaction on the transaction server.

3. The Database Server receives a command from the transaction server and issues it against the database.

4. The data returned from the command is then sent back to the transaction, this cycle will continue until the transaction fails or completes.

5. When the transaction completes successfully or unsuccessfully it passes the result to the web server.

6. The CGI program running on the web server then creates a new HTML document on the fly with the data returned from the transaction server and sends it to the client.

Transaction Server Choices:

- Microsoft Transaction Server
- Netscape Application Server
- Oracle Application Server

Chapter 11 - Exercise 1 - Creating an Order Form

In this exercise, you will create the order form for a car. You will need to provide a choice of options and colors, as well as space to fill in the name and phone number.

Your full name:

Phone number:

Which car are you ordering? Valona Mycra Carollo

Color? red white black blue green yellow

What options would you like?

Moon Roof

Bucket Seats

Remote Keyless Entry

Alarm System

Deluxe Stereo

Procedure

1. In FrontPage create a new file.
2. *{Click}* on the Text Input button on the Forms Toolbar or choose Insert Menu – Form – One-Line Text Box. This will create a blank, 20 character text input box that allows the end-user to enter information into the form when they are viewing it in their browser. Position your cursor to the left of the text box but still inside the outline of the form. Type “Your First Name:” as a label for your text input field.
3. *{Right Click}* and *{Click}* on the “Form Field Properties” on the Input box to edit the properties. In the Name field type "NAME".
4. *{Click}* OK.

5. Place the cursor to the right of the "NAME" input box, and hit the [ENTER] key. This will give you a new empty paragraph.
6. Type "Phone number: " and insert another text box with the Name field as "PHONE."
7. *{Click}* OK.

Switch from Normal View to Preview. Your document should look similar to the following:

Your Full Name:

Phone Number:

Chapter 11 - Exercise 2 - Radio Buttons

Inserting Option/Radio Button elements so that the end-user may select the car they qualify for and the color they would prefer.

Procedure

1. Place the cursor to the right of the last text box field and press ENTER. Type in the following text: "Which car are you ordering? Valona ". Add one space after Valona, and {Click} on the Radio button from the Insert Menu > Form options.
2. Follow the same procedure for the Myrca and the Carollo. In order to make these choices mutually exclusive (so that it is only valid to make one choice), the properties of the radio buttons must be edited.
3. {Right Click} on each radio button and select "Form Field Properties", and type "CAR" in the Name field. In the Value field, enter "Valona" and {Click} OK.
4. Follow the same procedure for the radio buttons for the other two cars, Typing "CAR" in the name field and entering the type of car (Valona, Myrca or Carollo) in the Value Box. By providing the same name for each of these buttons, the user is restricted to selection only one button.
5. Using the same procedure as above, insert a paragraph, type the text: " Color? ", and create a radio button for each of the following colors: red, white, black, blue, green and yellow. Remember to {Right Click} on each of these radio buttons and select "Form Field Properties", and provide the same Name but a different Value. The Name box for each color should be COLOR. The value box will be the Color name E.g. Red or White etc.

Your Full Name:

Phone Number:


Which car are you ordering? Valona Myrca Carollo

Color? red white black blue green yellow

Chapter 11 - Exercise 3 - Adding Checkboxes

Include a list of options that the end-user can choose from when ordering a car. These selections will not be mutually exclusive, since a car could be equipped with many options.

Procedure

1. Place your cursor on the last line of radio buttons and *{Click}* ENTER once. Type: "What options would you like?"
2. Press the [ENTER] key to get a new, empty paragraph, and type: "Moon Roof." Add a space and *{Click}* on the Checkbox button  on the FORMS menu.
3. *{Right Click}* on the Checkbox, select "Form Field Properties." Enter "Moon Roof" in the Name Box.
4. Repeat this process adding other options: Bucket Seats, Remote Keyless Entry, Alarm System and Deluxe Stereo.
5. Insert a Push Button and *{Right Click}* on it to change its properties so that it is a Submit Button. Enter the VALUE of the Submit Button as "Order Car."
6. *{Click}* OK and Save your file.

Your Full Name:

Phone Number:

Which car are you ordering? Valona Mycra Carollo

Color? red white black blue green yellow

What options would you like?

Moon Roof

Bucket Seats

Remote Keyless Entry

Alarm System

Deluxe Stereo

Order Car

Now setup where the form's data will be processed.

7. Select the "Order Car" submission button and *{Right Click}* on it once. From the pop-up menu choose the option "Form Field Properties."
8. For testing purposes, you may use the "Form Test" CGI Script located on the XtraNet University Web Server. To employ a CGI script using FrontPage, *{Click}* on the radio button labeled: "Send to Other" and choose the option, "Custom ISAPI, NSAPI, CGI or ASP Script"
9. *{Click}* on the button labeled "Options" and fill in the following information:
10. Action: <http://www.xnu.com/formtest.asp>
Method: Get
11. Save your document and preview it in your browser.

Review Questions

1. When would you use Check boxes over Option/Radio Buttons?
2. Do you need a submit button?
3. Where does the data entered in the form go?

Summary

As a result of this chapter, you should be able to:

- Create a FORM.
- Add elements to a FORM.
- Define CGI.
- Describe the purpose of a CGI Application.
- Specify an action for the FORM.

Special Elements

In this chapter you learn to create animated pages using a Meta element and how to use the Meta element to help index your website on the Internet. You will also learn how to use some additional elements that allow you to add background sound, scrolling text, and blinking text.

Objectives

Upon completing this section, you should be able to:

1. Create live pages using the Meta element
2. Use the Meta element to add information relevant to Internet search engines and people viewing your source code
3. Add background sound to an HTML page
4. Add a Marquee
5. Add Blinking text

Prerequisites

- The requirements are described with each element.

Uses of the Meta Element

Client Pull, Server Push

Client pull is different in that the HTML page has a META element inside the HEAD element of the document which instructs the browser to do something, which in this case is REFRESH itself. The other instructions specify the time interval and the URL to be used. In this way a series of pages can be presented without the user requesting the new pages to be loaded.

```
<META HTTP-EQUIV="Refresh" CONTENT="1;URL=ht.htm"> </META>
```

```
<html>
<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Refresh" content="1;URL=ht.htm">
<meta name="Description" content="This is my company website. It contains
all of the products / services that our company offers">
<meta name="KEYWORDS" content="company name, product information, location, industry, country, province/state">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XYZ - Intranet Project</title>
</head>
<body>
</body>
</html>
```

Generator

This specifies what editor created the current page. In this case the attribute will indicate "Microsoft FrontPage 4.0."

Refresh

This instructs the browser to refresh itself. The other instructions specify the time interval and the URL to be used.

Description

You can use the Meta element to embed information in the Head of your page that the search engines will use to display a description of your site.

```
<META NAME="description" CONTENT="This is my company's web site.
The site contains information on our products and services."></META>
```

Keywords

You can use the Meta element to embed information in the Head of your page that the search engines will use for keywords when people are searching for your site.

```
<META NAME="keywords" CONTENT="product name, service name, company name, country, province/state, industry, etc."></META>
```

Author

You can embed the author's name in a Meta element.

```
<META NAME="author" CONTENT="Your Name"></META>
```

Company

Similarly you can embed the company name.

```
<META NAME="company" CONTENT="Company Name"></META>
```

Copyright

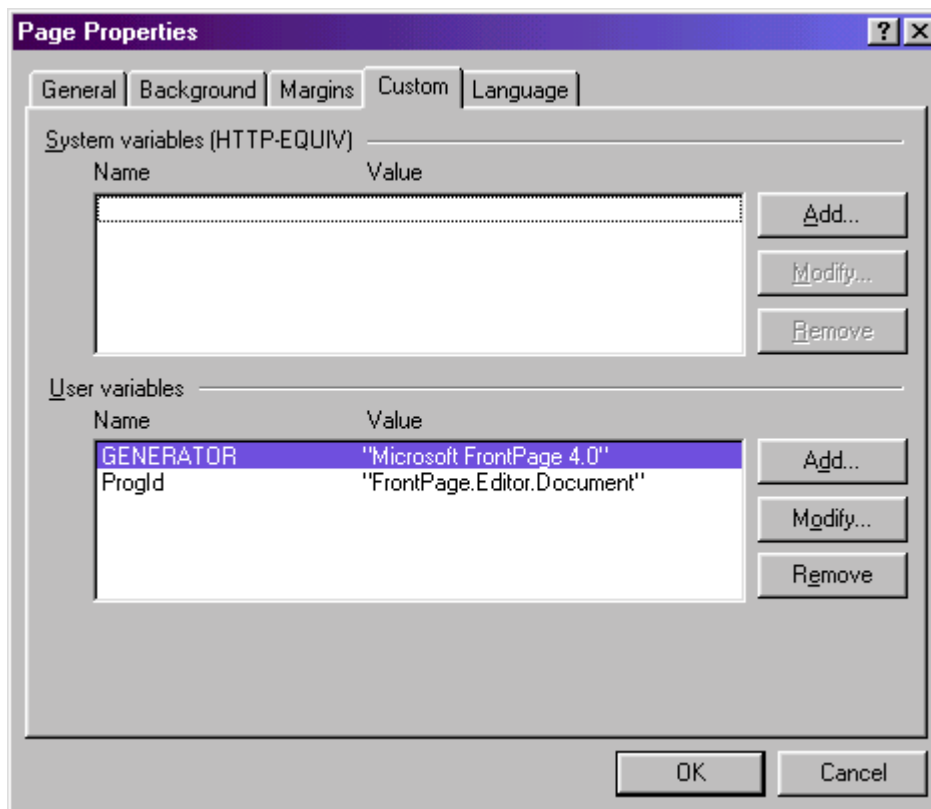
```
<META NAME="copyright" CONTENT="Copyright © 1997 Your Name or Company name. All rights reserved."></META>
```

```
<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta http-equiv="Refresh" content="5; url=tp.htm">
<meta name="AUTHOR" content="your name">
<meta name="COMPANY" content="Your Company">
<meta name="COPYRIGHT" content="Copyright 1999, your company name">
<meta name="DESCRIPTION" content="This is my company's web site. It contains informations about the company's products and services">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="KEYWORDS" content="product name, company name, service name, industry, country, province/state">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>XNU</title>
</head>
```

Adding or Modifying META Elements

In FrontPage, you can edit the META element by *{Right Clicking}* on your web page and selecting the option, "Page Properties." In the "Page Properties" dialog box, *{Click}* on the "Custom" tab. The following dialog box appears:

System Variables (HTTP-EQUIV): This section lists the Meta tags that use the HTTP-EQUIV element as the name portion of their name-value pairs. These Meta tags provide special instructions to a Web browser, such as a document's expiration date or a display-refresh value. In the case of a document's expiration date the Meta information instructs the cache to fetch a fresh copy of the document's information.



```
<META http-equiv="Expires" content="Tue, 20 Aug 1996 14:25:27 GMT">
```

The above results in: Expires: Tuesday, 20 Aug 1996 14:25:27 GMT which will instruct the proxy, and browser to remove this page from their respective caches on this day at this time.

You can also specify to the browser to refresh itself after a number of seconds and what URL to load using the display-refresh value.

Add: This button allows you to add a new Meta tag.
Modify: This button allows you to modify an existing Meta tag.
Remove: This button allows you to remove an existing Meta tag.

User Variables: This section lists the Meta tags defined by the user.
Examples include keywords, description, author, copyright etc.

Adding sound to an HTML page

Depending on the browser that the client is using you can embed background audio that will play when the page is loaded. This option should be used cautiously as it can add significantly to the amount of time required to download the page. The browser must first download the audio file and then start the player software or plug-in; this can seem to take an extremely long time over some connections.

<EMBED>

The <EMBED></EMBED> element is used to place background audio in a page, it is supported by Netscape Navigator, and some ActiveX extensions in Internet Explorer. The Embed element has the following attributes:

SRC:

defines the URL of the sound file.

CONTROLS:

You have your choice of several controls including console, small console, play button, etc.

AUTOSTART:

when set to true the sound will start once the sound file is downloaded.

HIDDEN:

when set to true it will hide the controls, default is false.

LOOP:

defines how many times the sound file will play.

VOLUME:

sets the default volume when playing begins.

HEIGHT:

in pixels depends on choice of controls.

WIDTH:


in pixels depends on choice of controls.

```
<EMBED SRC="file:///C:/WINDOWS/MEDIA/Musica%20Windows%20Exit.wav"  
WIDTH="145" HEIGHT="60" AUTOSTART="true" LOOP="2" VOLUME="100"  
CONTROLS="CONSOLE" HIDDEN="TRUE">
```

The following sound formats are supported: .WAV or .AU audio files, or .MID midi files.

Note: To fully utilize the attributes of <EMBED> in the FrontPage Editor, you will have to switch to the HTML View and edit the source.

Embedding Background Audio

1. In the FrontPage Editor, {Click} on the  Insert Plug In button.
2. In the Plug In Properties dialog box, {Click} on the Browse button and locate the audio file you want to embed in your document.
3. Go to: C:\fpfiles\special\ring.wav.
4. Save your work and preview it in your browser.

<BGSOUND>

The <BGSOUND></BGSOUND> element is used to place background audio in a page, it is supported by Internet Explorer. BGSound has the following the following attributes:

SRC:

defines the URL of the sound file.

LOOP:

defines how many times the sound file will play.

DELAY:

defines the delay between loops.

TITLE:

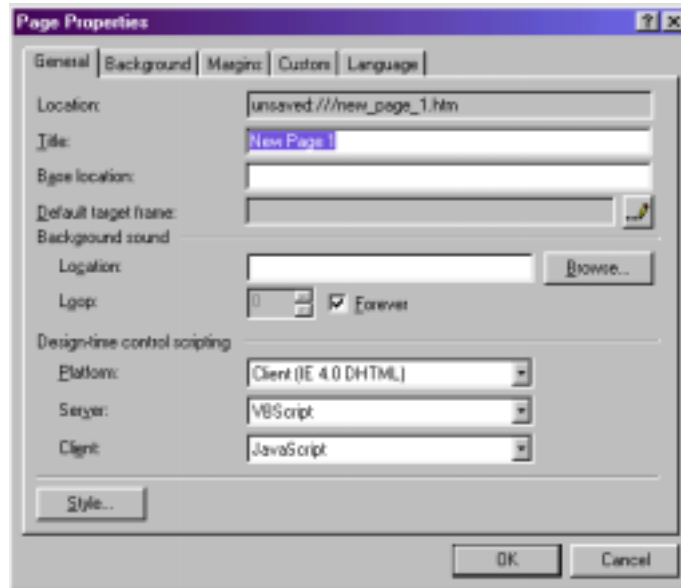
the text that describes the sound.

```
<BGSOUND SRC="file:///C:/WINDOWS/MEDIA/Jungle%20Windows%20Start.wav"  
LOOP="2" TITLE="Jungle theme" DELAY="5">
```

The following sound formats are supported: .WAV or .AU audio files, or .MID midi files.

Inserting a Background Sound

In the FrontPage Editor, locate the “File” menu and select the “Properties” option. To add a sound, {Click} on the “General Tab” if it is not already selected.



In the Background Sound section, select the location of sound by {Clicking} on the Browse button. You can choose to have the sound “Loop” a certain number of times, or place continuously.

<MARQUEE>

The <MARQUEE></MARQUEE> element defines text that is displayed in an animated region of the browser.

WIDTH:

of the marquee in pixels.

HEIGHT:

of the marquee in pixels.

LOOP:

defines how many times the text will travel through the space.

BGCOLOR:

defines the background color of the marquee.

BEHAVIOR:

defines how the text should move in the marquee.

SCROLLDELAY:

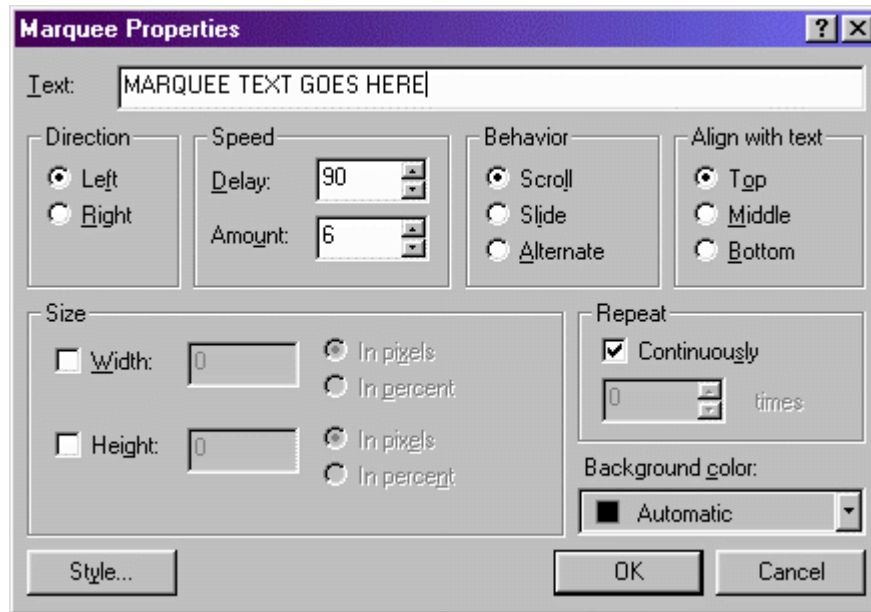
sets the number of milliseconds before refreshes.

```
<MARQUEE BGCOLOR="#FFFF00" HEIGHT="25" WIDTH="200" LOOP="2" SCROLLDELAY="5">Scroll  
this across the screen.</MARQUEE>
```

The Marquee element is currently only supported by Internet Explorer, Navigator will only display the text between the <MARQUEE> and </MARQUEE> tags.

Inserting the Marquee Element

The Marquee element can be inserted in a web page by *{Clicking}* on the “Insert” menu and choosing the option, “Components.... Marquee.” The Marquee Element dialog box appears allowing you to edit the marquee’s properties.



<BLINK>

The <BLINK></BLINK> element is supported by Navigator. It will cause text to blink. You can combine it with most text formatting for the desired effect. The element has no attributes.

```
<p><blink>This text blinks</blink></p>
```

Adding the Blink Element

To add the Blink element to an area of text, follow these steps:

1. Select an area of text and *{Right Click}* on the selection.
2. From the pop up menu, select the option “Font Properties.”
3. In the “Font Properties” place a check mark in the <BLINK></BLINK> box.

FrontPage Tip

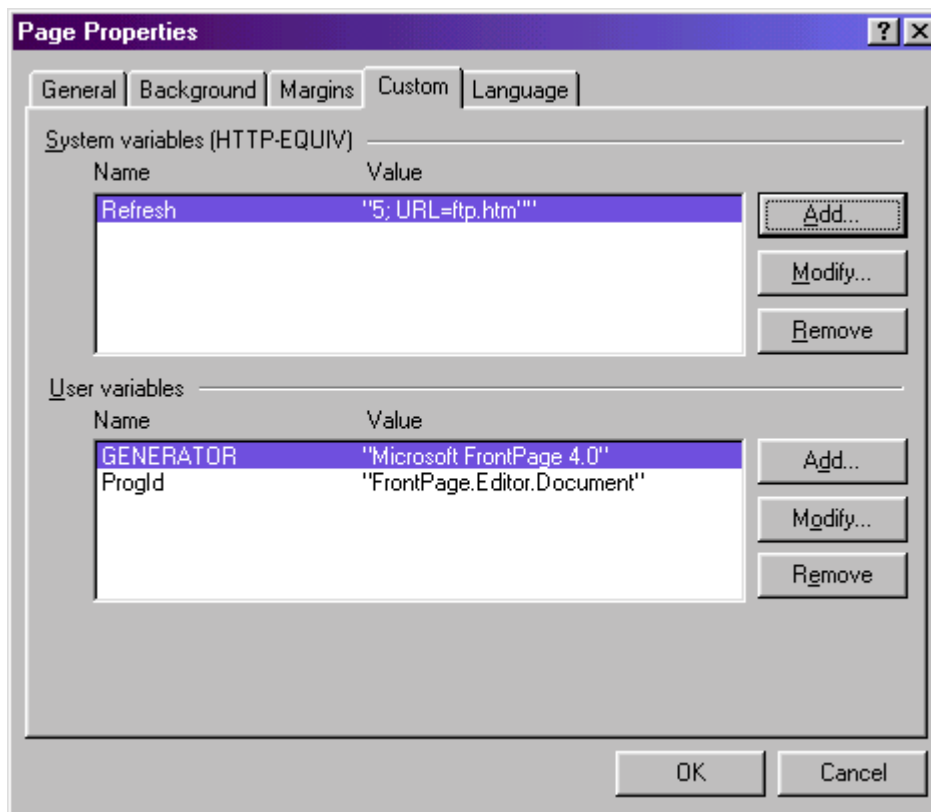
Use the `<BLINK></BLINK>` elements with caution as it is considered to be annoying by repeat visitors. Only use this element on a small area of text that changes regularly.

Chapter 12 – Exercise 1 – Adding Client Pull, Server Push

In this exercise, you are going to modify a series of html pages so that each page contains a META element that causes the browser to load another page in a specific period of time. The result will appear to be a single animated page.

Procedure

1. In FrontPage {Click} “Open” and locate the file called ft.htm in the following directory: C:\fpfiles\special\ft.htm
2. {Right Click} anywhere within this page and select “Page Properties” from the pop up menu. Within the “Page Properties” dialog box, {Click} on the “Custom” tab.
3. {Click} on the “Add” button in the Systems Variables section and in the Name field call it Refresh.
4. In the Value field, enter 5; URL=ftp.htm
5. The Custom Properties dialog box should look like the following:



6. {Click} the “OK” button.
7. Save the file.
8. Insert a META tag in ftp.htm that points to ftpg.htm and save the file.
9. Insert a META tag in ftpg.htm that points to frontpage.htm and save the file.
10. Preview the file ft.htm.

Chapter 12 – Optional Exercise

1. Create a new file to test the MARQUEE and BLINK. (Make the background page color white, name the file test or sample and save the file)
2. Add some of the other META tags to your homepage,
3. Add a MARQUEE element
4. Add a BLINK element
5. Make the text in both larger and colored
6. Save your file and view in both Navigator and Explorer
7. Experiment with some of the other attributes of the MARQUEE element

Review Questions

1. Where do the Meta tags go in the HTML Document?
2. Name three uses for the Meta element information.
3. How can you add sound to an HTML page?
4. How do you set the properties of the Blink element?

Summary

As a result of this chapter, you should be able to:

- Create animated pages using the Meta element
- Use the Meta element to add information to your pages that is relevant to Internet search engines and people viewing your source code
- Add background sound to an HTML page
- Add a Marquee
- Add Blinking text

Page Layout and Design Considerations

This chapter teaches you to use HTML elements in an effective manner to control page layout. You will also be introduced to different design considerations you have to make.

Objectives

Upon completing this section, you should be able to:

1. Use Technical Design Considerations in planning an HTML page or project
2. Discuss Effective Page Layout
3. Plan a successful web site
4. Create a web site that is easily navigated

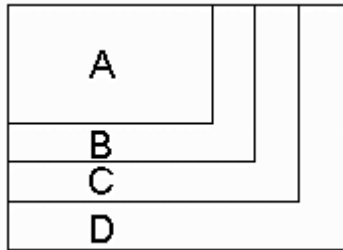
Prerequisites

- Multiple browsers to ensure that your page looks and functions identically in different browsers.

Technical Design Considerations

Screen Resolution

Screen resolution is dependent on the hardware and settings of the computer viewing your page. It is measured in pixels. When designing your pages you should make sure that they look good at the lowest resolution. The maximum **guaranteed** viewable area on a PC is 600 X 280. This takes into account that the browser is actually using some of the viewable space.



- A. 640 X 480
- B. 800 X 600
- C. 1024 X 768
- D. 1280 X 1024
- E. Others, Web TV

Color Depth

Another factor determined by the hardware of the surfer's computer is the number of supported colors. The video card or the current video settings can limit the color range. On a PC the video driver defaults to 16 colors and in many cases older video cards only support 16 colors. Designers should develop their graphics with a 216-color palette or the Netscape supported palette. Graphics should be viewed at 16 colors to ensure they look good.

- 16 colors
- 256 colors
- 216 colors

Reducing the colors used in graphics has the additional benefit of reducing the file size, allowing faster downloading.

Document Size vs. Download Time

Probably the biggest technical design consideration is the overall size of the page versus the time it takes to load on the surfer's computer. Several things affect the speed at which a browser receives your page. The primary one is the speed of the user's connection to the Internet; usually controlled by the surfer's modem speed. This factor is out of the control of the designer.

As a designer you should add up the following components to calculate the overall size of your web page:

- A. The size of the html page in bytes.
- B. The size of any graphics in bytes.
- C. The size of any embedded audio files in bytes.
- D. The size of any ActiveX objects or JAVA applets.

Page Size = HTML page + Graphics + audio + other (ActiveX and/or JAVA)

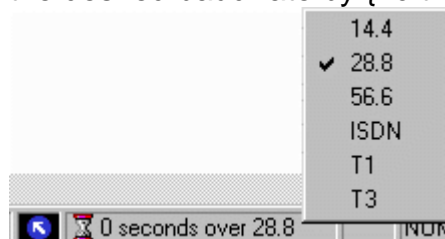
14.4 Kbps represents Kilobits per second or 14400 bps or (14400/8) 1800 Bps (bytes per second). A 50 KB (Kilo Byte) graphics file will take (50000/1800) 27 seconds to download. At 28.8 Kbps it will take half that time 13-14 seconds. At 33.3 Kbps it will take approximately 12 seconds.

Given that modem speed is a big limitation for most surfers you should not overload your pages. You should give the surfer the option to go to pages that are heavy with graphics, sound or JAVA applets. Recognizing that many people surf with their graphics off you will also want to ensure that you effectively use the Alt Text attribute for your graphics.

Technical Design Guidelines for Internet Applications

- Use plug-ins and applets sparingly
- Keep total page size less than 75KB (45 seconds @ 14.4)
- Let users choose to view graphics intensive pages
- Keep graphics less than 50KB (use thumbnails to give the user the choice to link to larger versions of the same image)
- Use interlaced graphics (don't use for backgrounds)

FrontPage gives you approximate or estimated download times. Select the desired baud rate by *{Left Clicking}* on the panel.



Page Loading – HTTP 1.0 Differences with HTTP 1.1

Many questions come up over how a page is loaded, and a lot of that can be answered by the way the protocol that transports the page from the server to the web client works.

1. The HTML page is retrieved. This is done through one connection to the server. The content of the page is then parsed by the browser for other elements that need to be downloaded like graphics, sound, ActiveX objects, or JAVA applets.
2. Separate connections to the server are created for the other elements in the page, and each element is downloaded individually. Each one of these connections would be considered a hit by the web server, and are entered into the web server log.
3. Since the TCP/IP protocol can have several connections open at once between the server and the web client, more than one element is downloaded at a time. This is why the status bar at the bottom of the browser shows the percentage of the file downloaded. The status alternates between different sizes as the information for each connection reaches the browser.

Future web servers and web client software will support HTTP 1.1, which has several enhancements over HTTP 1.0. The major enhancement is that only one connection will be established for the page and all the elements that need to be downloaded. This will reduce the number of connections that must be opened and maintained at the server and will decrease download time.

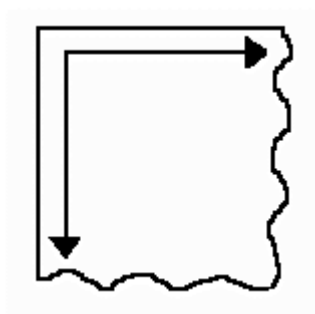
Browser Compatibility & Quirks

Web client software is written by a number of companies and as such there are a number of differences between the browsers in the way that they interpret standard HTML code.

One difference is the way in which the browsers draw tables. Internet Explorer will redisplay the table as new elements fill in the cells. Navigator 4 downloads all the elements before displaying the table and does not perform multiple redraws as the table fills with data.

Page layout

An HTML page starts in the top left corner and extends to the right and down with no fixed boundary.. This means a page can be infinitely long and wide. This bothers many designers as they are used to having boundaries to work with.



Keep in mind that people reading English are trained to start in the top left of a page and finish at the bottom right. It is a good idea to start the theme of the page in the top left or the top center of the page for this reason. Page navigation controls should be located at the bottom right hand side of the page to make it easy to select the next page or return to the previous page.

Page Layout Guidelines

1. In most cases your pages should not require the viewer to scroll to the right. The maximum width of a page should be 600 pixels in order to be displayed properly, regardless of the display resolution.
2. Recommended components of a home page:
 - i. E-mail address (E.g. webmaster@whatever.com)
 - ii. Mailing address
 - iii. Phone numbers (800 numbers plus local area code and number. Remember not everyone one in the world has access to your 800 number)
 - iv. Interactive component that encourages repeat visits by your target audience
 - v. Look, feel and message should reflect the organization
 - vi. Information that is relevant to the target audience
 - vii. Directions to what your target audience wants to know or do (PRE and/or Post Sale)
3. To control a page you may want to create a table with a maximum size of 600 pixels and contain the page inside the table.

4. When deciding to use a Background Image that has a distinct left side you should make sure it is 1280 pixels wide, because the browser tiles the background image, and anything smaller will appear again on the right of the page when viewed at high resolutions.
5. Use the DIV and CENTER element to control layout. (Div creates divisions within the document that do not have preformatted spacing associated with them, like paragraphs) You can control the alignment of objects with the alignment attribute of the DIV element. E.g. left for backgrounds that are on the left.
6. To create attractive looking forms you should use a table to control the layout of the form elements.
7. Web pages should use white space at the borders. This makes the pages easier to look at and to read. Printed pages usually have white space at the left and right hand sides; as well, at the top and bottom of the page. This effect can be achieved by centering the contents of the page.
8. Frames are good for keeping people in your site. Careful consideration must be given to using Frames, as they require Frames-capable browsers. Always remember to provide valuable information in the NoFrames section of the Frameset.
9. You should be consistent in your layout across multiple pages, people become comfortable with the format, and begin to expect it.
10. Bigger is better. If things are too small they will strain the viewer's eyes and it will not be comfortable for them. General text areas should be 10 pt. or larger as this approximates an experience similar to reading a newspaper.
11. You should vary sizes for texture. When everything is the same size it becomes very boring.
12. Blinking text should only be used in situations where the information is changing frequently.
13. Be sure to use case properly. Mix upper and lower case as required or for effect. Documents done in all UPPER case are hard to read.

Site Design Factors and Criteria

When developing a web site from scratch you should first answer the questions related to why people will be visiting the site in the first place. Is it for pre or post sale support, to purchase something, or find out more about the company? Your web site should be part of your business plan or marketing plan and there should be established goals and objectives for what it is to accomplish. Once you know what problem you are trying to solve with the web site you can start your design.

In general a site should be intuitive for the person visiting it. It should be very easy for them to contact your organization at any time and they should be able to locate the information they are looking for in three to five mouse *{Clicks}*.

1. The Home page should be simple and fast.
2. The Home page should answer some basic questions for the surfer:
 - i. Is this the organization I was looking for?
 - ii. Do they have what I am looking for?
 - iii. How can I contact them?
 - iv. How do I get what I want now?

Site Layout and Navigation

1. Navigation controls should be located across the top or the right hand side of the page. This will locate your navigation controls close to the browser's controls for movement and up and down scrolling.
2. As previously mentioned you should only have 3 to 5 mouse *{Clicks}* to move from start to destination. People do not like to hunt for an answer.
3. Create sub sites to simplify navigation, and for marketability. E.g. education.novell.com, insight.netscape.com.

Review Questions

1. What is the maximum guaranteed viewable area on a PC?
2. Give two reasons why you would want to reduce colors in graphics?
3. What components do you add together to find your page size?
4. How many Bytes per second can a 14.4 modem receive?
5. Name three methods of controlling the positioning of text and objects on a page?
6. What must you be check for when using a background image?
7. How many mouse *{Clicks}* are reasonable for surfers to make to get to the information they are after?

Summary

As a result of this chapter, you should be able to:

1. Use Technical Design Considerations in planning an HTML page or project
2. Discuss Effective Page Layout
3. Plan a successful web site
4. Create a web site that is easily navigated

Cascading Style Sheets

This chapter helps you make use of the latest power feature in HTML page creation and page control, Cascading Style Sheets.

Objectives

Upon completing this section, you should be able to:

1. Describe how to use a Cascading Style Sheet
2. Add an Inline Style
3. Add an Embedded Style Sheet

Prerequisites

Cascading Style Sheets are currently supported by:

- Netscape Navigator 4.0 or greater
- Microsoft Internet Explorer 3.0 or greater

Introduction to Cascading Style Sheets

In the past, Web Page designers have been frustrated by the lack of control they have over the appearance of a page. Cascading Style Sheets provide designers with increased control over how a web browser displays their pages.

For the experienced designer, Cascading Style Sheets will be a welcome feature that saves a lot of time normally spent on repetitive style formatting commands. With Cascading Style Sheets you can specify a particular font size in points or pixels, designate font face and style, and control spacing and indentation, etc.

There are three ways you can add Style Information to your web page:

1. Inline styles
2. Embedded style sheets
3. Linked style sheets

At the present time, Microsoft Internet Explorer (3.0) and Netscape Communicator 4.0 provide the most extensive support for Cascading Style Sheets.

The specifications for the evolving CSS standard can be found at the W3C Consortium's Web page at <http://www.w3.org/>.

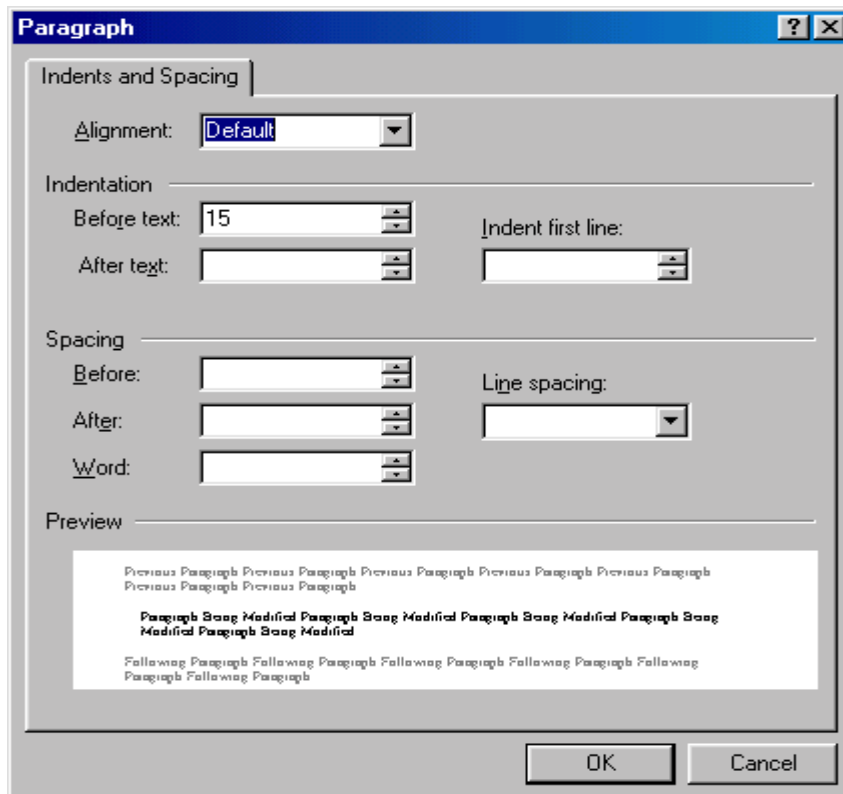
A cascading style sheet consists of one or more rules. There are two different types of rules:

1. Rules associating an element, a group of elements, an element in a particular context, or some combination of these with a set of style properties and values. This is the usual type of rule in a style sheet.
2. Rules used to set information about the style sheet such as its title, author, etc., as well as specifying imported style sheets and additions to the CSS standard.

Inline Styles

The first method of applying cascading style sheet properties and values to an element on a page is called inline styles. The style sheet properties are applied to content within the <BODY> </BODY> tags. For instance, you can designate that a certain paragraph in your document uses custom indentation settings by applying inline style sheet commands to that paragraph. Inline styles override both embedded and external style sheet properties.

When you select certain elements or formatting effects FrontPage will apply an inline style. {Right Click} in a paragraph and choose Paragraph... from the popup menu. Any settings that you make in the Indentation or Spacing fields will be written as CSS style commands and specified within the paragraph element as the value of the Style attribute.



HTML View:

```
<body>

<p>This is a normal Paragraph</p>
<p style="margin-left: 15">This paragraph has a style command applied as an
Inline CSS Style</p>
<p>This is a normal Paragraph</p>

</body>
```

Normal View:

This is a normal Paragraph

This paragraph has a style command applied as an Inline CSS Style.

This is a normal Paragraph

NOTE: The CSS standards allow the specification of style commands for paragraphs, other than indentation and spacing but FrontPage does not provide dialog boxes to insert those commands. To apply additional inline styles to elements in your pages you will have to add them using the HTML editor view.

An inline style is only valid for the one instance of the element in which it is applied.

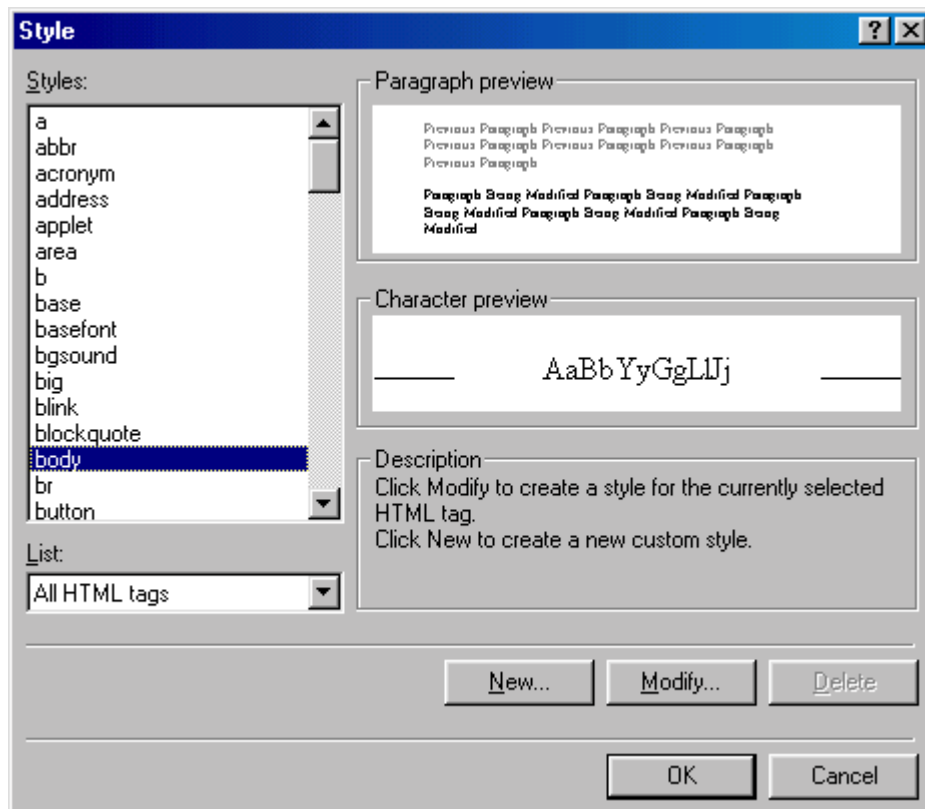
Embedded Style Sheets

Embedded Style Sheets make use of the <STYLE> </STYLE> element in the Head of the document. A required attribute of the Style element is the TYPE attribute and it must be set to a value of “text/css”. Again you will need to know exactly what you want to achieve and have all the formatting commands handy. Another disadvantage, like the Inline Style, is that it only applies to one document.

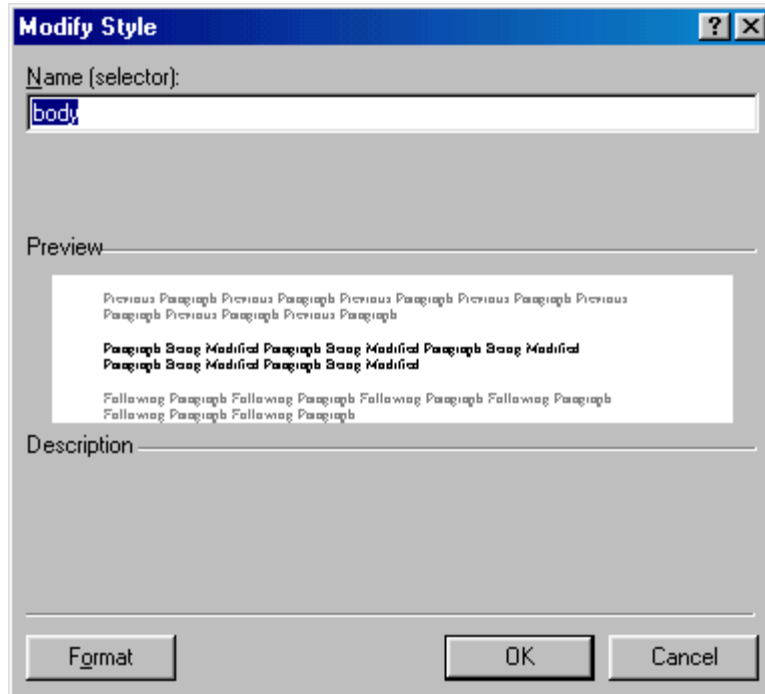
Creating an Embedded Style Sheet

An embedded style sheet is easily created in FrontPage by following these steps:

1. Switch to Normal View in the FrontPage Editor and {Click} on the “Format” menu.
2. Select the option “Style...” from the Format Menu.



- The style dialog box allows you to choose a page element from the list in the “styles:” window. You then can *{Click}* on the modify button to launch the Modify Style dialog box where you can associate style commands with the element that was selected.



- To apply a style, *{Click}* on the “format” button. A pop-out menu giving you options for “Font”, “Paragraph”, “Border”, “Numbering” and “Position” allows you to choose the type of style command to apply.
- You can apply multiple style commands to as many elements as you wish. When you *{Click}* the OK button on the Style dialog box FrontPage will create an embedded style sheet using the style element.
- You will need to add the type attribute to the code generated by FrontPage so that the HTML looks as follows:
`<STYLE TYPE="text/css">`

HTML View:

```
<html>

<head>
<meta http-equiv="Content-Language" content="en-us">
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>This is a normal Paragraph</title>

<style>
<!--
body      { background-color: #FFFFFF }
hl        { color: #008000 }
p         { color: #FF0000; font-size: 12pt; font-family: Verdana, Arial }
-->
</style>

</head>

<body>

<p>This is a normal Paragraph</p>
<p style="margin-left: 15">This paragraph has a style
command applied as an Inline CSS Style.</p>

<p>This is a normal Paragraph</p>

</body>

</html>
```

Normal View:

This is a normal Paragraph

This paragraph has a style command applied as an Inline CSS Style.

This is a normal Paragraph

Note that the STYLE defined in the HEAD section has made all the text the same font face and color. In addition, there is an Inline STYLE applied to the second paragraph.

NOTE: Some browsers are not CSS-compliant and will display the contents of the STYLE element in the document window. For this reason it is a good idea to surround an embedded style sheet with an HTML comment. This will cause the content to be ignored by non-CSS browsers, but still interpreted by CSS compliant browsers. FrontPage automatically inserts a comment around an embedded style sheet.

Linked Style Sheets

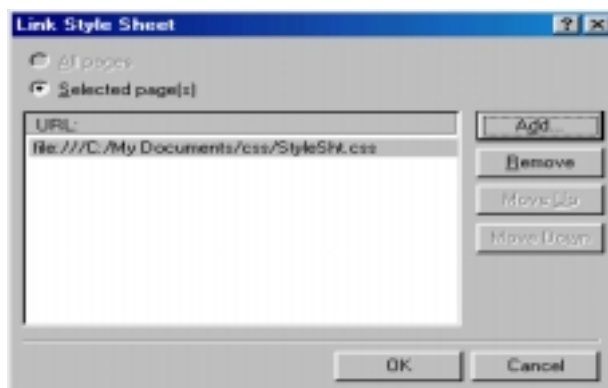
The preferred method of adding styles to a web page is to link a separate file that contains all of the formatting information. A style sheet file is a text file with a file extension of .css. This file can be linked to multiple HTML pages and you can link multiple style sheets to one document.

To create a linked style sheet:

1. Switch to Normal View in FrontPage and *{Click}* on the **File** menu.
2. Point to **New** and select **Page**
3. Select the Style Sheets Tab and select the appropriate style you want.
4. You can now create your own style by Clicking on the Format menu and then the Style Button.
5. In the Style Dialogue Box, you are able to create your own style as we did with creating embedded style sheets.
6. To create this file into an external Cascading Style Sheet, you have to save it with an extension of .CSS

To link a style sheet:

1. *{Click}* on the “Format” menu and select “Style Sheet Links”
2. In the “Link Style Sheet” dialog box *{Click}* on the “Add” button
3. Navigate to the style sheet that you wish to link to or enter the URL and *{Click}* OK
4. The style sheet should now be listed in the dialog box; *{Click}* OK



CLASSES AND IDS

Cascading style sheets let you associate a CLASS or an ID attribute with a set of style properties and values, so that you can format a particular element instance in a certain way.

In a style sheet a CLASS will start with a dot and an ID will start with a number symbol:

```
.classname = CLASS  
#idname    = ID
```

Style commands can be attached to a CLASS or ID incidence in the document the same way they are attached to elements.

```
<style>  
<!--  
.intro { background-color: rgb(128,128,0); color: rgb(255,255,0) }  
.sales { background-color: rgb(0,255,0); color: rgb(0,0,0) }  
-->  
</style>  
  
<body>  
<h2 class="intro">Section 1</h2>  
<p class="intro">kjhkj kjh kjh kjh kjhk jhkjhkj hkjh kjh kjh</p>  
<h2 class="sales">Section 2</h2>  
<p class="sales">kjhkj kjh kjh kjh kjhk jhkjhkj hkjh kjh kjh</p>  
</body>
```

CLASSES

A class is simply a group of elements, possibly scattered throughout a document, all of which have the same value for their CLASS attribute.

To utilize a class, you set the CLASS attribute of as many elements as you wish to the same value.

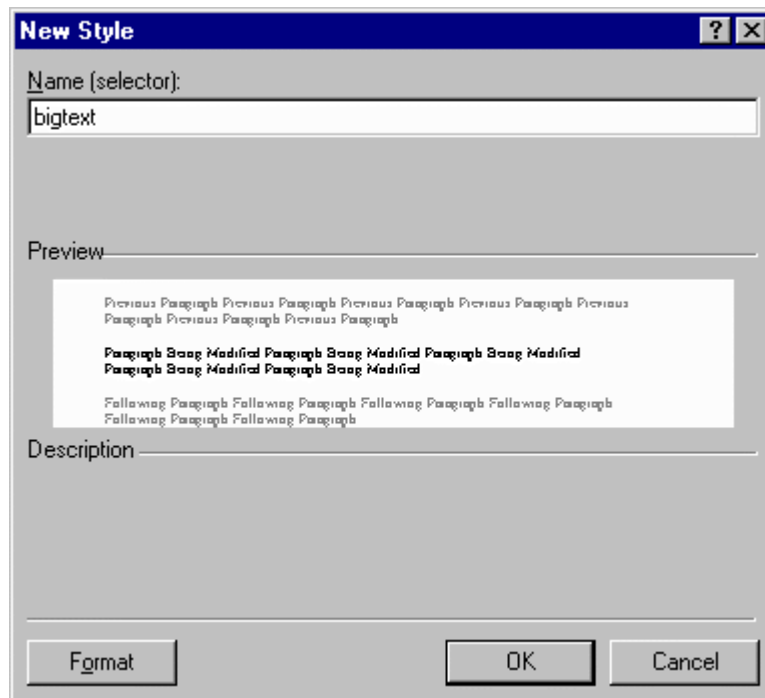
IDs

While many elements can have the same CLASS attribute value, only one element in any document can have a particular ID attribute value. IDs are intended to be unique identifiers for elements in a document.

Defining Classes

To define a CLASS you follow much the same procedure as creating an embedded Style Sheet except you do not attach a Style attribute to an element, rather you create a CLASS and name it appropriately:

1. Switch to Normal View in the FrontPage Editor and *{Click}* on the “Format” menu.
2. Select the option “Style...” from the Format Menu.
3. Select “New”.
4. The “New Style” Dialog box pops up. Name your Style.



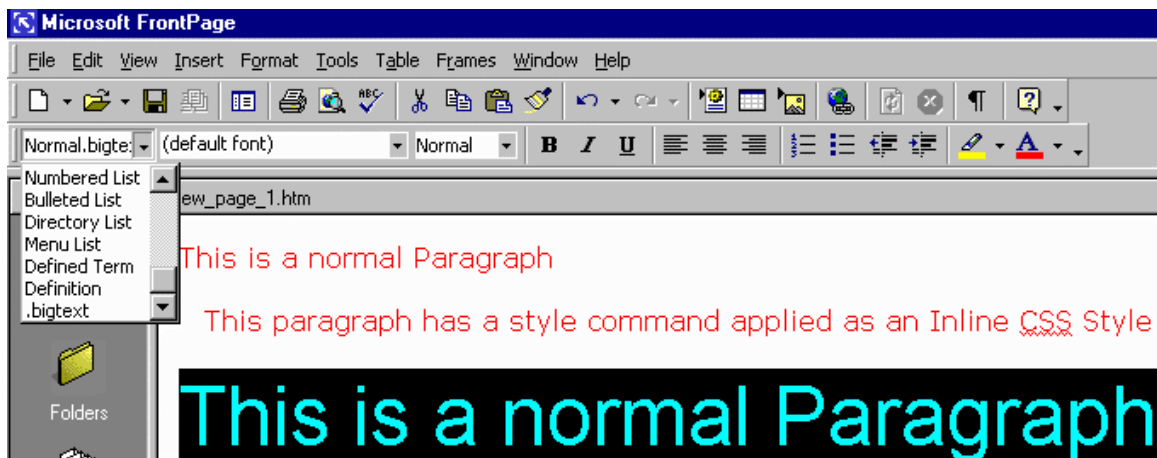
5. To define a style, *{Click}* on the “format” button. A pop-out menu giving you options for “Font”, “Paragraph”, “Border”, “Numbering” and “Position” allows you to choose the type of style command to apply.
6. To finish this process *{Click}* OK.

Applying New Styles

When you create new styles using either Classes or IDs FrontPage adds the Class or ID name to the Style list that you can access through the dropdown Style Menu on the Formatting Toolbar.

You can easily apply the styles to portions of your document:

1. Select the content you want to apply the style to.
2. *{Click}* the Style dropdown menu.
3. Select the new style from the list.



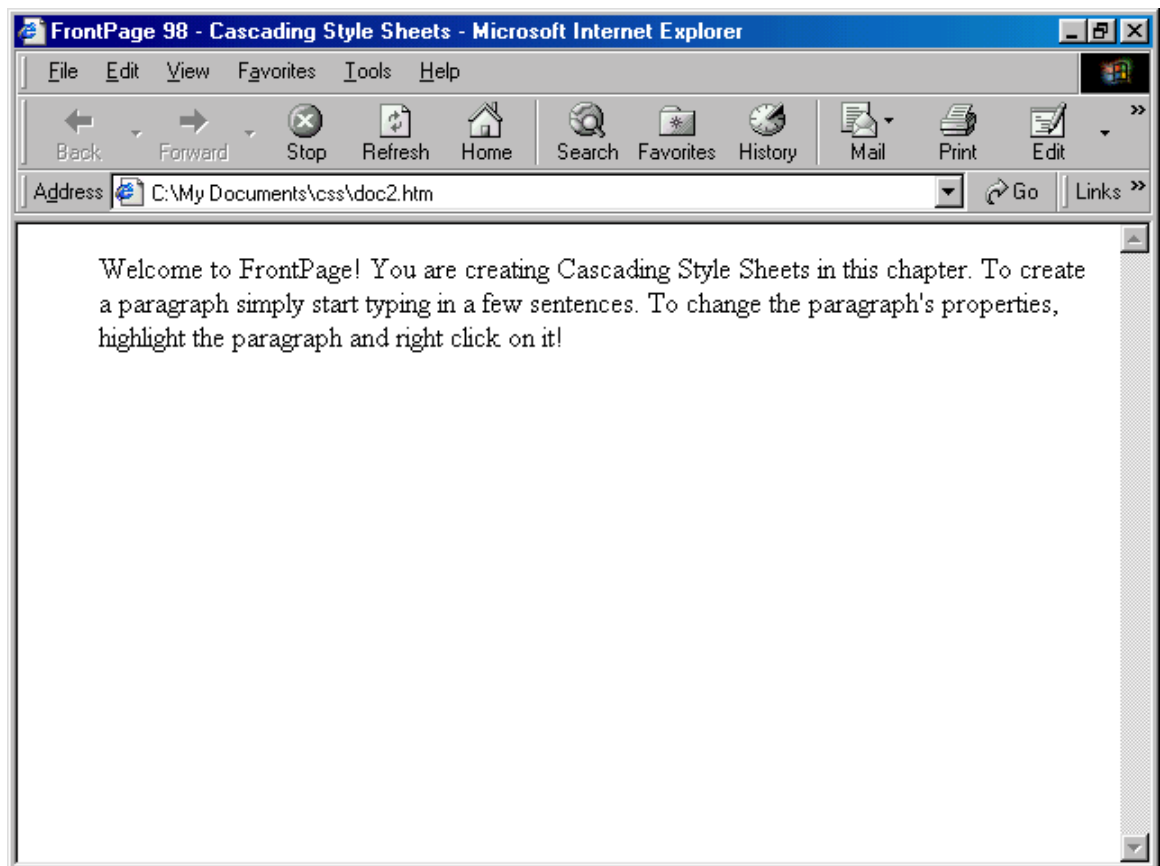
Chapter 14 – Exercise 1 – Inline Styles

In this exercise, you will add an Inline Style to a document.

Procedure

1. Open C:\Fpfiles\css\doc2.htm
2. *{Right Click}* in the paragraph and select “Paragraph”
3. In the indentation section enter a setting of 35 in the “Before text” field
4. *{Click}* “OK.”
5. Save your work and preview your page in either Explorer or Netscape

Your work should look similar to the following:



Chapter 14 – Exercise 2 – Embedded Styles

In this exercise, you will add an Embedded Style Sheet to a document.

Procedure

1. Open C:\Fpfiles\css\doc3.htm
2. Go to the Format menu and select “Style” from the list of options.
3. Select the H2 element from the styles list
 - {Click} modify then Format then Choose Font
 - {Click} on the color dropdown
 - Choose the green color square
 - {Click} OK
 - {Click} OK
4. In the “List” dropdown select “All HTML Tags”
5. Select the P element from the styles list
 - {Click} modify then Format then Choose Font
 - Set the color to red
 - Set the size to 12pt
 - In the “Font” field type “Garamond, serif”
 - {Click} OK on all dialog boxes
6. Save and preview your document in Internet Explorer or Navigator v4.
Your code should look similar to this:

```
<html>
<head>
<title>FrontPage 98 - Cascading Style Sheets</title>
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<style>
<!--
h2      { color: #008000 }
p      { color: #FF0000; font-size: 12pt; font-family: Garamond, serif }
-->
</style>
</head>

<body>

<h2>This H2 is green</h2>

<p>The text in this paragraph is red, size 12 points and belongs to the Garamond, serif
font family.</p>

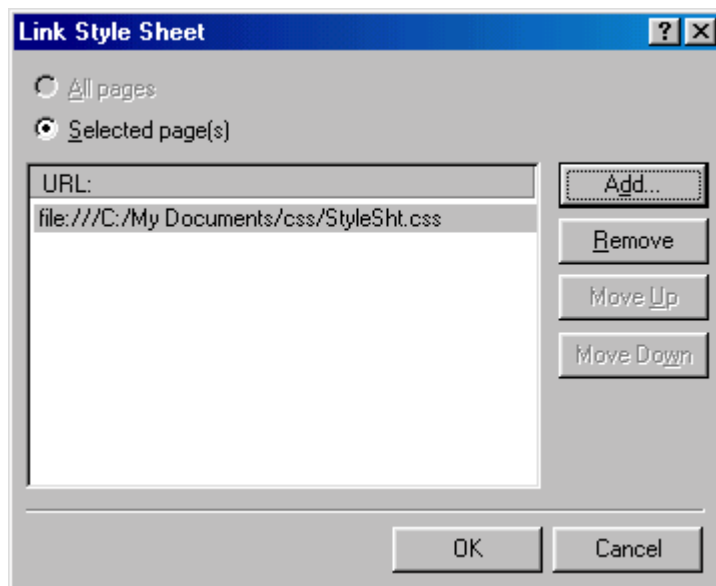
<p>&nbsp;</p>
</body>
</html>
```

Chapter 14 – Exercise 3 – Linked Style Sheets

In this exercise you will link a style sheet to a document

Procedure

1. Open C:\Fpfiles\css\Doc3.htm.
2. Choose “Style Sheet Links” from the Format menu
3. {Click} on the “Add” button
4. Navigate to find the file C:\Fpfiles\css\StyleSht.css and {Click} OK
5. {Click} OK on the “Link Style Sheet” dialog box



6. Save and preview your document in the browser.

Review Questions

1. What are three ways to add style information to your web pages?
2. Give two disadvantages of Embedded Style Sheets.
3. How is a Style Sheet linked to an HTML document?

Summary

As a result of this chapter, you should be able to:

- Describe how to use a Cascading Style Sheet
- Add an Inline Style
- Add an Embedded Style Sheet

15

JAVA and JavaScript Introduction

In this chapter you are introduced to what JAVA is, and how to add JAVA applets to your web pages. You are also introduced to JAVA Script and how to add it to your web pages.

Objectives

Upon completing this section, you should be able to:

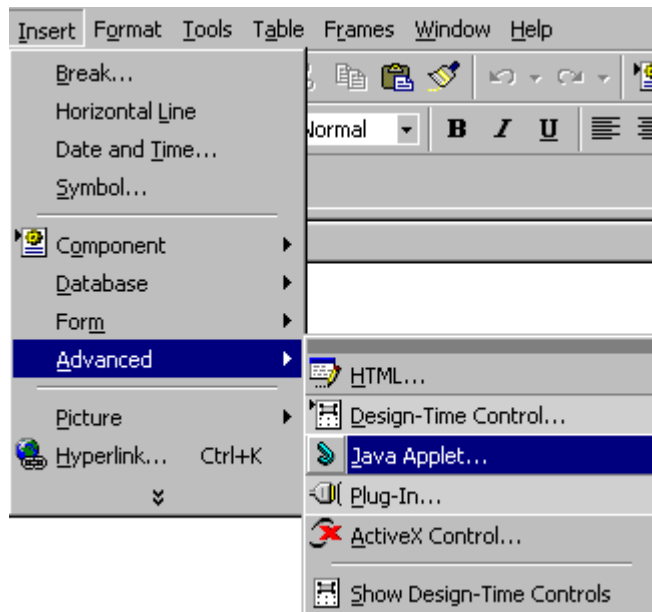
1. Describe JAVA
2. Add a JAVA Applet to a page
3. Describe JavaScript
4. Add JavaScript to an HTML page

Prerequisites

- Internet Explorer 3.0 or greater (IE 3.0 Supports JAVA with limited support for JavaScript)
- Navigator 2.0 or greater
- JAVA is Platform Independent

JAVA

JAVA, developed by Sun Microsystems, is a powerful, cross-platform and device-independent programming language. An applet, for those not familiar with the term, is the name of mini-applications created with the Java programming language. The creation of applets is beyond the scope of this course. In FrontPage there is a menu option that allows you to insert a Java applet into a page.



That brings up the following dialog box:



The options presented in the “Java Applet Properties...” dialog box refer to the properties, and sub-elements of the <APPLET> tag.

<APPLET>

Designates a Java applet. Instead of containing the code required to perform a task, this tag contains a reference to the code needed to perform the task.

The Applet element has one sub-element; the <PARAM> element that tells the applet how to behave or operates.

Applet has the following attributes:

CODEBASE:

Directory or folder where the applet(s) are located.

CODE:

Defines the compiled applet that is to be loaded.

WIDTH:

Determines the width of the area reserved for the applet in the browser
Measured in pixels.

HEIGHT:

Determines the height of the area reserved for the applet in the browser.
Measured in pixels.

<PARAM>

This tag passes a parameter to the applet. It has two attributes:

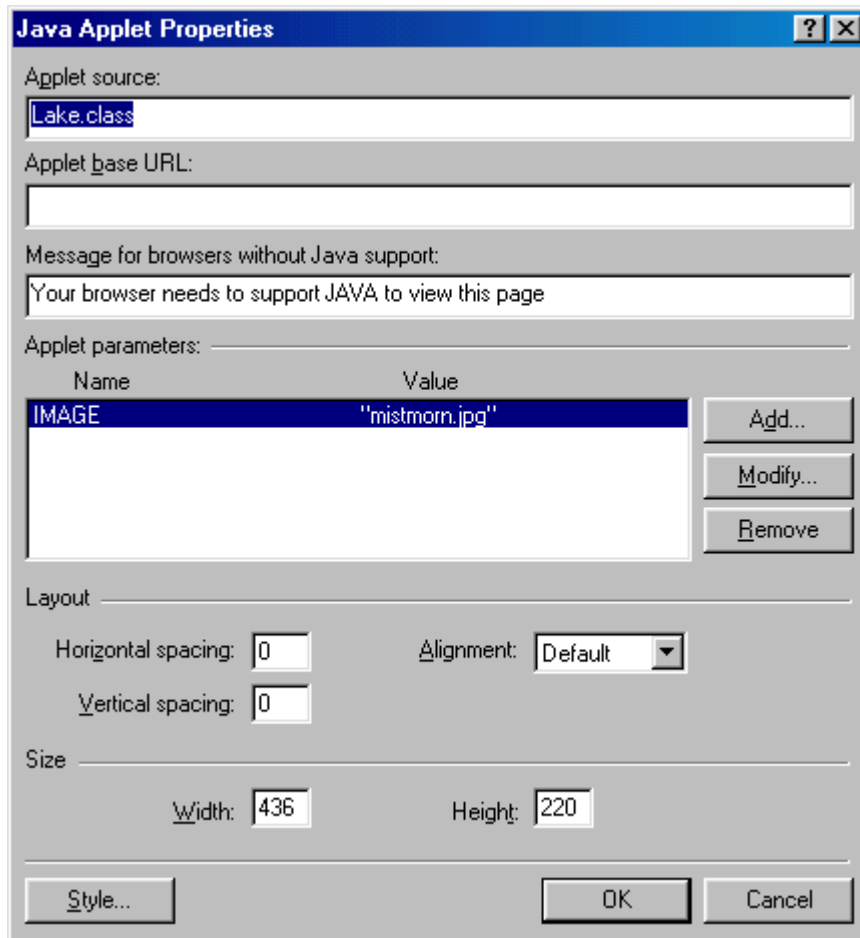
NAME:

Names the parameter for recognition by the applet.

VALUE:

Defines a value for the parameter named by the NAME attribute. All data is passed to the applet as a string variable.

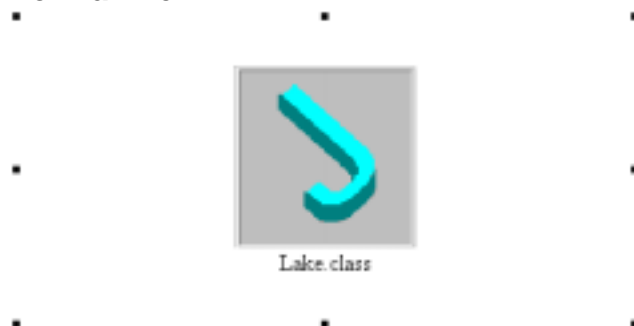
The following dialog box allows you to enter the <APPLET> elements attributes, and add the necessary <PARAM> elements required by the JAVA application.



HTML View:

```
<applet width="436" height="220" code="Lake.class" >  
<param name="IMAGE" value="mistmorn.jpg">Your browser needs to support JAVA to view this page  
</applet>
```

Normal View:



When using JAVA in your pages, it is important to be aware that JAVA support is not universal. If, like many authors, you are showcasing your use of JAVA on the page, it is advisable to include text in the document that alerts viewers to this fact. This is especially true when the applet itself is the centerpiece of the document.

JavaScript

JavaScript is a programming language that allows scripting of events, objects and actions to create Internet applications. It uses two elements the `<SCRIPT>` `</SCRIPT>` and `<!--` the comment `-->`. The script element lets the browser know what type of script it is with the `LANGUAGE` attribute. The comment encloses the actual JavaScript code so that browsers that don't support scripting ignore the code.

Since JavaScript is embedded in the HTML page it is interpreted by the browser when the page is loaded. This contrasts to JAVA applets that are compiled programs downloaded from the web server to the browser and run inside the browser. The easiest way to add JavaScript to your web pages is to type it in the HTML View.

```
<SCRIPT LANGUAGE="JavaScript"><!-- beginning of script
function add_2_num() {
  var a_str = document.Form1.Text1.value;
  var b_str = document.Form1.Text2.value;
  var a_int = parseInt(a_str);
  var b_int = parseInt(b_str);
  var c = 0;
  c = a_int + b_int;
  alert("The answer is: " + c );
}
<!-- end of script --></SCRIPT>
<FORM NAME="Form1">

  <P> A = <INPUT TYPE="TEXT" NAME="Text1"><BR> B = <INPUT TYPE="TEXT" NAME="Text2"><BR>
  <INPUT TYPE="BUTTON" NAME="Button1" VALUE="A + B =" ONCLICK="add_2_num()"></P>
</FORM>
```

The above code takes two numbers from the textboxes, converts them from letters to numbers, adds them together and pops up the result.

Result:

A =

B =



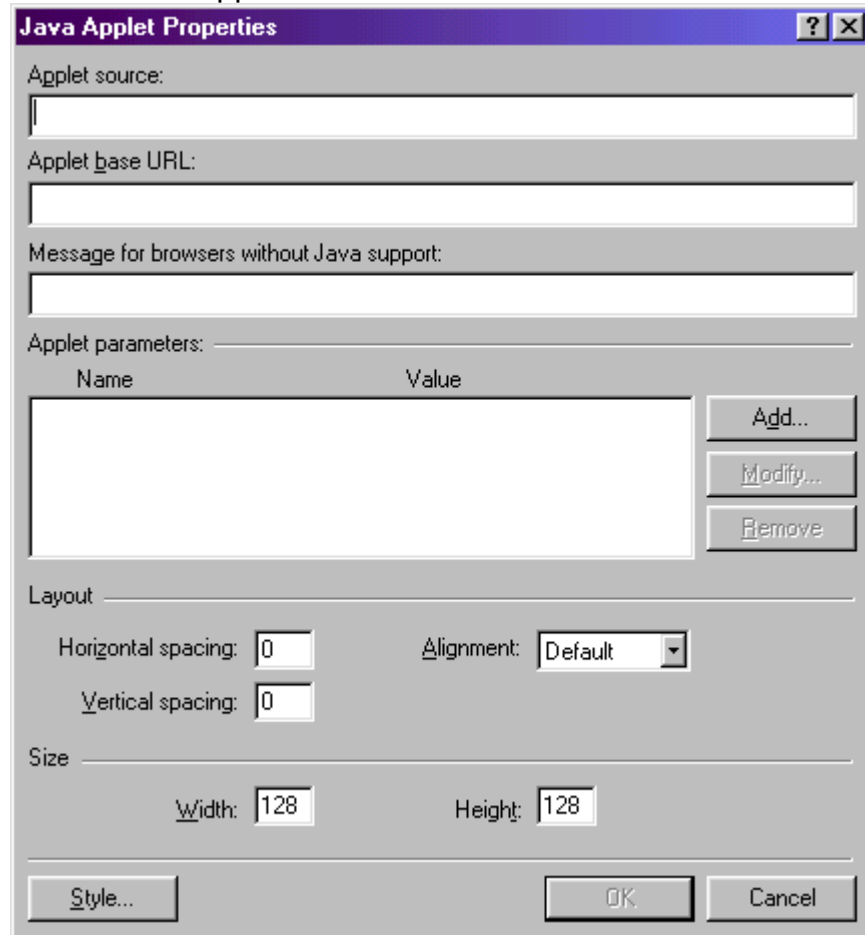
Actual JavaScript programming is outside the scope of this course. Scripts are available for download from a variety of sources. To use JavaScript in FrontPage you must enter it into HTML View. Alternately, you can use FrontPage's DHTML Effects to add predefined JavaScript to your page.

Chapter 15 - Exercise 1 - Inserting a JAVA Applet

In this exercise, you will insert into your homepage, a JAVA applet that displays the time on an analog clock.

Procedure

1. Place your cursor where you would like to insert the JAVA Applet.
2. Select "Java Applet" located on the Insert → Advanced menu



The screenshot shows the "Java Applet Properties" dialog box. It has a purple title bar with a question mark and a close button. The dialog contains several sections:

- Applet source:** A text input field.
- Applet base URL:** A text input field.
- Message for browsers without Java support:** A text input field.
- Applet parameters:** A table with two columns: "Name" and "Value". To the right of the table are three buttons: "Add...", "Modify...", and "Remove".
- Layout:** A section with "Horizontal spacing" (input: 0), "Vertical spacing" (input: 0), and "Alignment" (dropdown: Default).
- Size:** A section with "Width" (input: 128) and "Height" (input: 128).

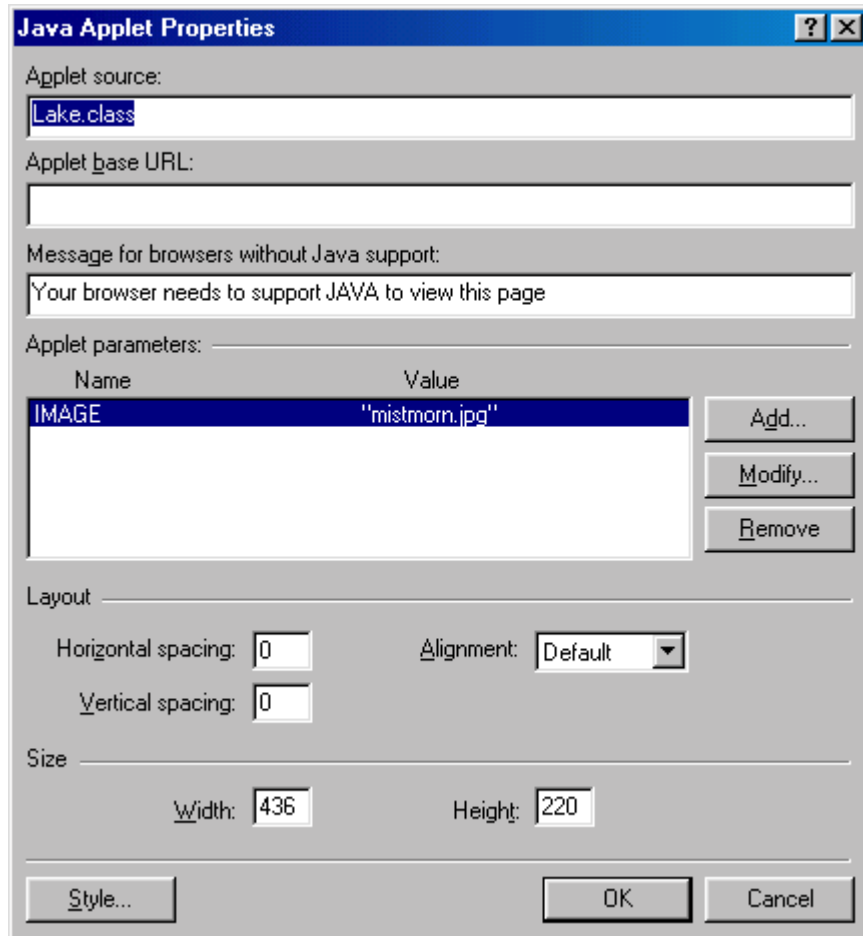
At the bottom of the dialog are three buttons: "Style...", "OK", and "Cancel".

3. Type the filename into the Applet Source field Lake.class
4. Add the message: Your browser needs to support JAVA to view this page.

5. Add a parameter with the name IMAGE and the value mistmorn.jpg.



6. Change the width to 436 and height to 220.



7. {Click} OK. Save the file in c:\fpfiles\java\ and Preview it. **It is important that the .class and .jpg and .htm file all be in the same directory to work!**

Chapter 15 – Optional Exercise

1. Add the JavaScript from the previous page to an html page.

Review Questions

1. Who created the JAVA programming language?
2. What does the PARAM element do?
3. Why is the actual JavaScript code placed within a comment element?

Summary

As a result of this chapter, you should be able to:

- Describe JAVA
- Add an APPLETT to a web page
- Describe JavaScript
- Add JavaScript to an HTML page

ActiveX Objects and VBScript

Introduction

In this chapter you learn about ActiveX and add an object to a web page.

Objectives

Upon completing this section, you should be able to:

1. Describe ActiveX
2. Add and ActiveX object to a web page
3. Describe VBScript
4. Add some VBScript to an HTML page

Prerequisites

- Internet Explorer 3.0 or greater
- Navigator 3.0 or greater with Plug-in (For ActiveX support, Navigator does not support VBScript)
- ActiveX currently requires Windows 95 or Windows NT operating systems

ActiveX Support

The OBJECT element lets you insert a program called an Internet Control into an HTML page. ActiveX is a Microsoft standard for Internet Controls and is subject to change independent of the W3C and the HTML standard.

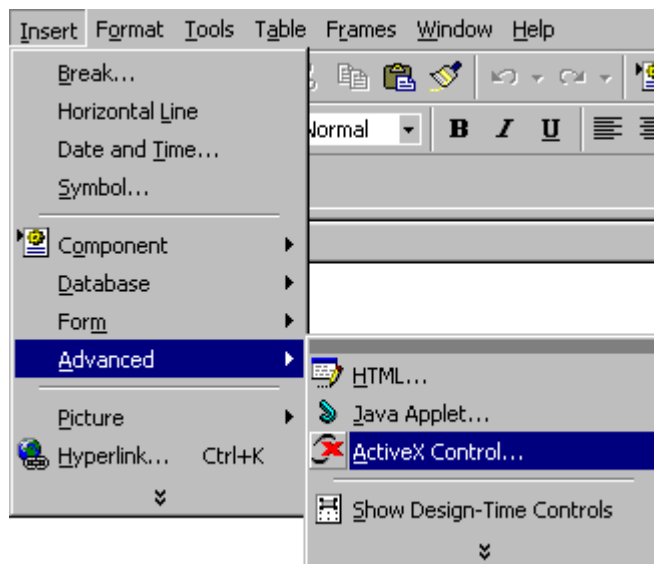
ActiveX controls (formerly known as OLE controls) are component objects designed to be reused within applications. There are many ActiveX controls in existence developed by Microsoft and by third-party developers. You can use these controls in Web page development.

In this section, you learn how to add ActiveX to an HTML page by using the <OBJECT> tag. You will also learn about the <PARAM> tag, which makes it possible to set the objects properties. This section focuses primarily on ActiveX controls, but the technique used to insert the controls is the same as that used for other types of objects.

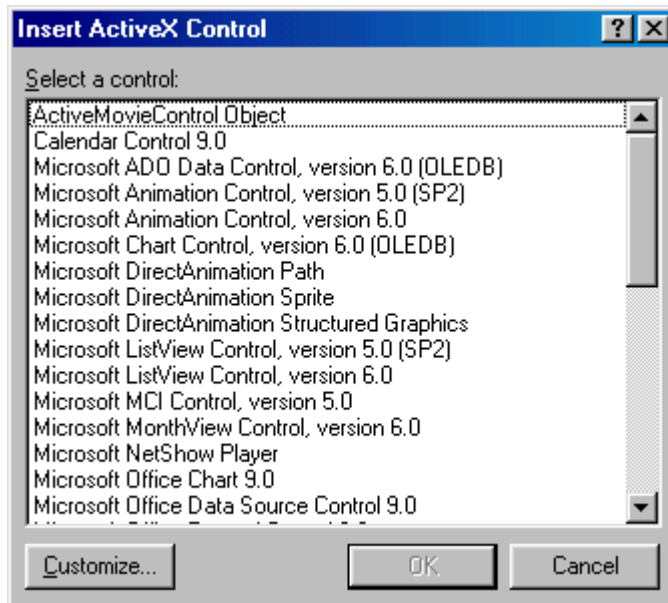
The <OBJECT> tag is a new element of HTML 3.0 that provides a standard way to add new types of media to an HTML page.

Adding an ActiveX Control

To add an ActiveX Control to your page, select the “ActiveX Control...” option from the Insert → Advanced menu.



This will produce a selection box full of options.



These options are the controls that are available on your computer. You can select the control you wish to use on your page and {Click} OK.

Warning not all of the controls listed are for use on web pages, some are components of other software products. If we select the “Calendar Control 9.0”, there will be an active calendar on the web page.

Normal View:



HTML View:

```
<object classid="clsid:8E27C92B-1264-101C-8A2F-040224009C02" id="Calendar1" width="288" height="192">
  <param name="_Version" value="524288">
  <param name="_ExtentX" value="7620">
  <param name="_ExtentY" value="5080">
  <param name="_StockProps" value="1">
  <param name="BackColor" value="-2147483633">
  <param name="Year" value="1999">
  <param name="Month" value="9">
  <param name="Day" value="3">
  <param name="DayLength" value="1">
  <param name="MonthLength" value="2">
  <param name="DayFontColor" value="0">
  <param name="FirstDay" value="1">
  <param name="GridCellEffect" value="1">
  <param name="GridFontColor" value="10485760">
  <param name="GridLinesColor" value="-2147483632">
  <param name="ShowDateSelectors" value="-1">
  <param name="ShowDays" value="-1">
  <param name="ShowHorizontalGrid" value="-1">
  <param name="ShowTitle" value="-1">
  <param name="ShowVerticalGrid" value="-1">
  <param name="TitleFontColor" value="10485760">
  <param name="ValueIsNull" value="0">
</object>
```

ActiveX Controls are added to web pages using the <OBJECT> element, and the <PARAM> sub-element.

<OBJECT>

The <OBJECT> tag has a number of parameters that define the object, its location, and how it is presented on the HTML page.

CLASSID:

ActiveX controls, which are binary files, are installed on a user's computer and registered in the system registry with a unique class ID. The CLASSID parameter of the <OBJECT> tag contains a URL that uniquely identifies the object. Referencing the class ID of the registered control in the <OBJECT> tag inserts it into the HTML page and then the control displays itself.

ActiveX controls are identified by a URL that uses a class ID identifier. The format for this URL is:

```
"clsid:12345678-1234-1234-1234-123456789012"
```

This example shows the <OBJECT> tag for the Calendar control. The CLASSID is the only parameter that is required by the <OBJECT> tag.

```
<OBJECT classid="clsid:8E27C92B-1264-101C-8A2F-040224009C02">
```

The class ID for an ActiveX control is placed in the registry when a control is installed. There are a number of tools you can use to retrieve this value.

- **® Registry Editor (RegEdit)** This tool enables you to change settings in your system registry. You can also use it to view and copy the class ID for an object.
- **® OLE Viewer** This utility is installed with the Win32 Software Development Kit (SDK). You can select the Copy HTML <object> Tag to Clipboard command from the Object menu to copy the tag and the class ID to the Clipboard.
- **® ActiveX Control Insertion Device** This utility can also build the <OBJECT> tag for you and copy it to the Clipboard.

ID:

The ID parameter in the <OBJECT> tag is synonymous with the NAME parameter for standard controls. You can use the ID to refer to the object from VBScript.

CODEBASE:

This parameter is a URL that points to a file containing the implementation of an object. (It is explained in detail in the next topic.)

NAME:

This parameter is required when the object is on a form and needs to be included with other form fields when information is sent to the server.

WIDTH, HEIGHT, ALIGN, HSPACE and VSPACE:

These parameters affect the way an object is positioned and sized within an HTML page.

CodeBase

If the object specified by the CLASSID parameter is not available on the user's computer the browser will use the CODEBASE parameter to determine where the object is located on the Internet server and download the files required to render the object. As with all files that can be downloaded, you should provide the user with the option of downloading the object and an alternative to the object if possible.

For example, the browser will try to locate an ActiveX control on the local computer by first searching the registry. If the control is not registered the browser will download the object from the location specified in the CODEBASE parameter.

Specifying the CODEBASE URL

The CODEBASE parameter for the <OBJECT> tag contains a URL pointing to the implementation files for a given object. This URL is critical for downloading components because it must specify all files necessary to implement a particular object.

This example downloads an ActiveX control by referencing the .ocx file:

```
<OBJECT
  ID="NewControl"
  CLASSID="clsid:123-1234-123-123-"
  CODEBASE="http://server/control.ocx">
</OBJECT>
```

HTML authors can set the CODEBASE parameter to point to one of three file types, which are typically supplied by the developer of the control.

- ® **Portable executable file** - This is a single executable file, such as an .ocx file or DLL, that is downloaded, installed, and registered by the browser.
- ® **.CAB (cabinet) file** - This file contains one or more files, all of which are downloaded together in a compressed cabinet.
- ® **.INF file** - This file specifies various files that need to be downloaded and set up for the .ocx to run.

VBScript

VBScript is a programming language that allows scripting of events, objects and actions to create Internet applications. It uses two elements the <SCRIPT> <SCRIPT> and <!-- the comment ->. The script element lets the browser know what type of script it is with the LANGUAGE attribute. The comment encloses the actual VBScript code so that browsers that don't support scripting ignore the code.

Since the VBScript is embedded in the HTML page it is interpreted by the client when the page is loaded and activated on an event like pressing a button. It is very handy for taking the output of one ActiveX control and passing it as input to another ActiveX control. To use VBScript in your HTML documents with FrontPage we suggest you use HTML View.

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

<SCRIPT LANGUAGE="VBScript">
<!-- beginning of script
Sub add_2_num()
  a_str = document.Form1.Text1.value
  b_str = document.Form1.Text2.value
  a_int = CInt(a_str)
  b_int = CInt(b_str)
  c = 0
  c = a_int + b_int
  MsgBox "The answer is: " & c
End Sub
<!-- end of script --></SCRIPT>
<FORM NAME="Form1">
  <P> A = <INPUT TYPE="TEXT" NAME="Text1"><BR>
    B = <INPUT TYPE="TEXT" NAME="Text2"><BR>
    <INPUT TYPE="BUTTON" NAME="Button1" VALUE="A + B =" ONCLICK="add_2_num()">
  </P>
</FORM>
</BODY>
```

The above code takes two numbers from the textboxes converts them from letters to numbers, adds them together and pops up the result.




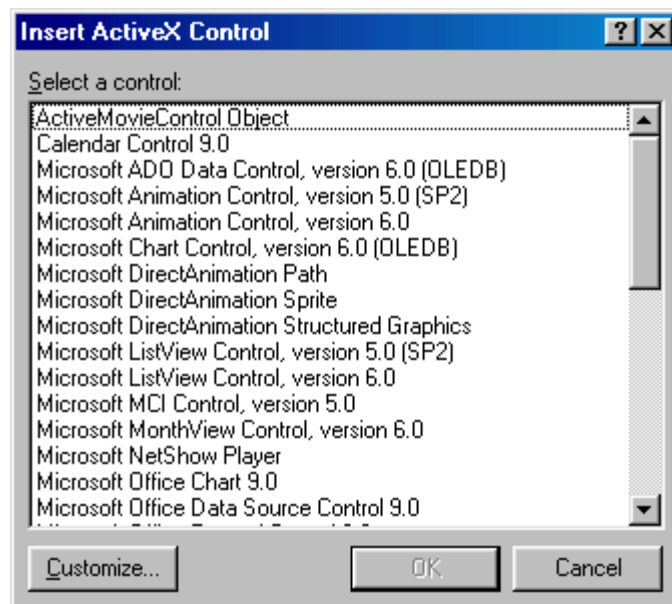
Actual VBScript programming is outside the scope of this course.
Note: VBScript is currently not supported in Navigator.

Chapter 16 – Exercise 1 – Adding an ActiveX Object

In this exercise you will add the Calendar control to a page and view it in Microsoft's Internet Explorer 3.0.

Procedure

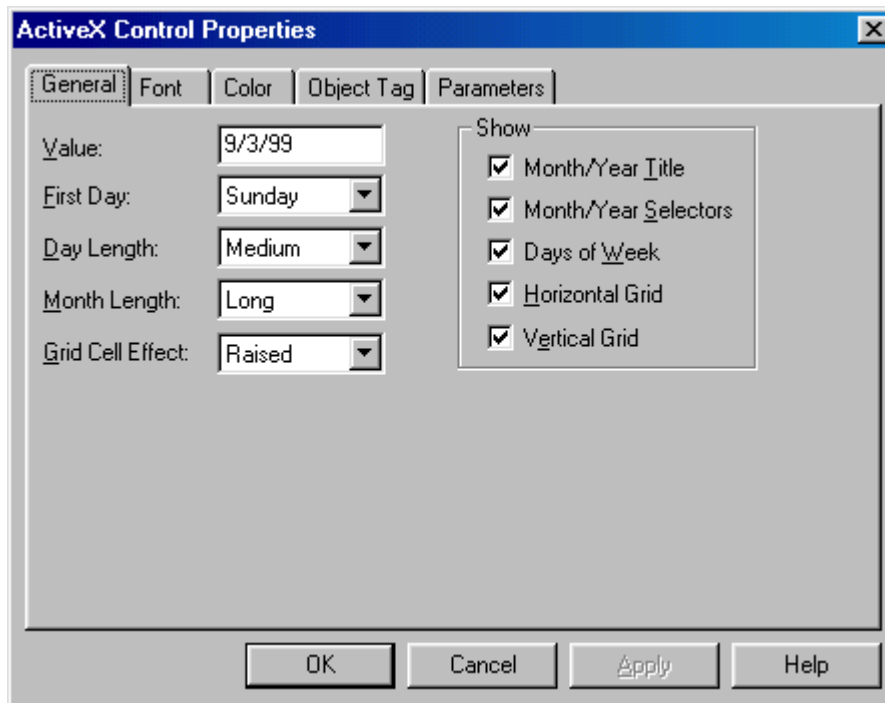
1. Open the page ActiveX.htm in from the C:\Fpfiles\activex directory in your **Internet Explorer browser**. You will be creating a page similar to this (You may need to adjust your browser settings to a lower security level in order to get the page to work.)
2. Start a new document, or continue working with your existing document.
3. {Click} on the ActiveX icon.  From the Insert Menu and then the Advanced Options.
4. Choose the Calendar Control from the drop down list.



5. The Active-X Object is now inserted in your FrontPage Document.

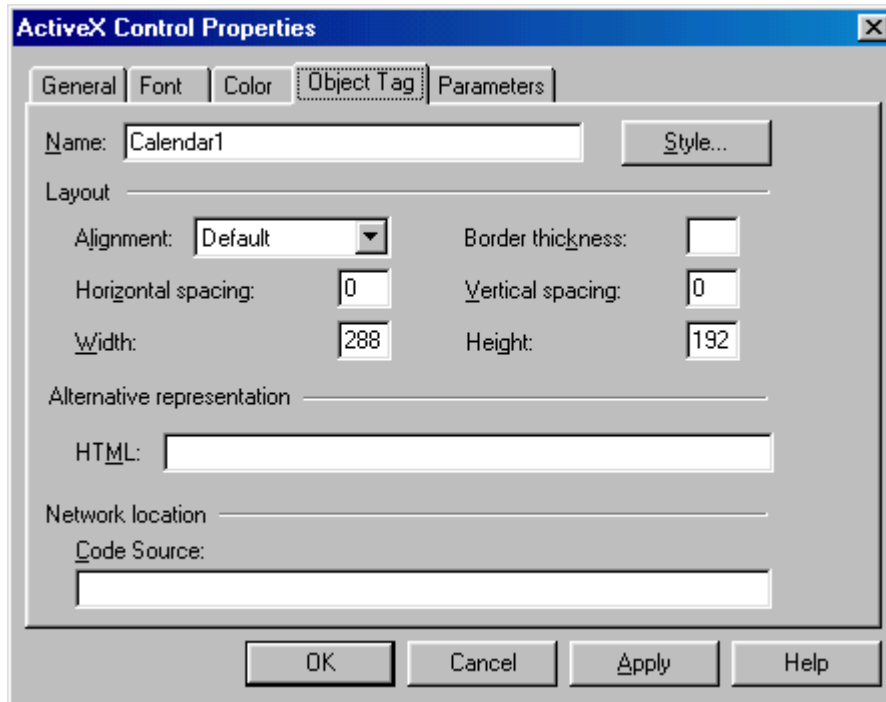
To change the properties for the Active-X Object just inserted, Right *{Click}* on the Object and *{Click}* on Active-X Control Properties, or *{Click}* on the Object and Press ALT-ENTER

Active-X Control Properties – General, Color, Font



The General, Color and Font options vary from object to object. In this case, we are given the options that relate to the Calendar Control.

Active-X Control Properties – Object Tag



The Object Tab contains the Name of the object. The Layout options enable you to set the Objects alignment, horizontal/vertical spacing, the width and the height of the object. You are also given the option of entering the alternate representation which links to another HTML document. Finally, you can set the code base of where the Object is located.

Preview your document in Internet Explorer. It should look similar to the following:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2
3	4	5	6	7	8	9

Review Questions

1. What element is used to support ActiveX controls?
2. Why should you specify the codebase attribute?

Summary

As a result of this chapter, you should be able to:

- Describe ActiveX
- Add an ActiveX object to a web page

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