

Adding links

Lesson 4

Hyperlinks connect the Web world Page 1 of 5

Visit almost any Web page and you'll find links to dozens of other pages. Many are to other pages on the same site, while some are links to other Web sites. You move from Web site to Web site with the click of a mouse button. The beauty of this system is that you never really know where the Web server that stores the Web pages you are requesting is located -- and, more importantly, you don't care. A link is a link is a link.

HTML links provide you with a way to create a link between your Web page and other Web pages in a standard way that all Web browsers understand. All hyperlinks are created equally, and are easily created.

A hyperlink is simply a URL -- or Web address -- attached to a piece of text or a graphic on a Web page. The Web browser clues you in that a piece of text or a graphic has a link attached by displaying it in a different way -- usually as colored, underlined text, or by changing your cursor when you move your mouse over the linked content. All you have to do to activate the link is click on it.

While you probably already know all about links and using them to traverse the Web, it's important that you stop and think about what they really are and how they really work before you begin to build links in your own Web page.

Three kinds of links

There are really three different kinds of hyperlinks:

- Links to other pages on your own site
- Links to pages on other Web sites
- Links to a specific spot on the same page

You'll use all three kinds of links as you build your Web pages. You will want to use hyperlinks to hook up the different pages on your Web site. You might want to link to other Web sites to point your users to other relevant information. Finally, you can use links to particular spots on the same page to help users navigate the page -- a technique that is particularly useful on longer Web pages. The point is that you rarely see Web pages that don't have hyperlinks. Remember that the World Wide Web is really a Web of interconnected resources. If you put up a page but don't connect it to the rest of the Web, you'll have a hard time getting visitors to your site. You also won't be able to take advantage of the many other Web pages that are out there to extend your site.

The right kind of link

You decide what kind of link to make (to the same page, the same site, or a different site) based on the kind of information to which you want to link. A same page link lets you build "back to top" navigation, while a same site link lets you connect several pages on your Web site. A different site link lets you connect your site to others on the Web.

The hazards of hyperlinks Page 2 of 5

Before you jump right into creating hyperlinks, there are a few common hyperlink hazards that are easily avoided if you know that they exist. If nothing else, you'll learn about all these issues with some time and experience, but it's less painful when you benefit from

Adding value with hyperlinks

someone else's experience.

Web addresses aren't like horseshoes and hand grenades

The URLs that you use to create hyperlinks in your Web pages must be right on target or your hyperlinks simply won't work. Remember that the myriad Web sites around the world host millions of documents, each one with a unique location somewhere on the Web. When you create a hyperlink you have to point to the exact location of the page you want to link to -- a close approximation won't get you anywhere.

A Web page's address is made up of many different elements, including:

- The Web site's main address, such as `http://www.w3.org` or `http://www.utexas.edu` (technically called a domain).
- The folder or series of folders in which the page resides (technically called a directory path).
- The page's file name: `home.html`, `default.html`, and `mypage.html` are all examples of file names.

Figure 4-1 breaks a real URL down into these different components.

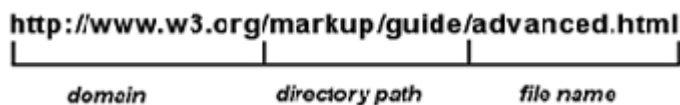


Figure 4-1: These are the components of a URL.

The URL in the figure is:

```
http://www.w3.org/markup/guide/advanced.html
```

This URL points to a file named `advanced.html` that lives in the `guide` directory, which in turn lives in the `markup` directory. If you change even one letter in the entire URL, as in the following code, the Web address is completely different.

```
http://www.w3.org/marku/guide/advanced.html
```

Instead of pointing to the `markup` directory, this second URL points to the `marku` directory. If the `marku` directory doesn't exist, the Web browser won't be able to find the Web page and your visitors will receive the message of doom:

```
404 File Not Found
```

You can do two things to avoid creating hyperlinks that point to Web pages or directories that don't exist:

- Always copy URLs carefully. If possible, use your Web browser's cut-and-paste function to copy an address without having to type a character at all.
- Always double-check each and every URL before you post your page to the Web for the world to see. A bit of testing on your end prevents dissatisfaction on the user's end.

You can't control other people's web pages

Hyperlinks let you enhance your own content by simply linking to someone else's content elsewhere on the Web. The key to using hyperlinks is to choose the pages you link to carefully and monitor them regularly to verify that their content is still fresh and relevant. If you do that, you not only provide users with your quality content, but you also help them find other sources of information. They'll return to your site because they know they can count on you to deliver good information and point them in the direction of other good resources.

While you can carefully check the Web addresses you use to build hyperlinks, you can't be responsible for what actually lives on the Web pages you point to if they reside on someone else's Web site. One thing you quickly discover about the Web is that it is easy to build and update Web pages. This means that information included on a Web page today may not be there tomorrow.

This isn't normally a problem, because you usually make hyperlinks to Web pages that support your Web content in a general way, so it won't matter if the exact page content changes. However, Web sites can be hacked into, and sometimes they change owners. It's entirely possible that a site that holds quality content today won't hold that same content in a month or two.

While you can't be responsible for what others do with their Web pages, your page visitors will hold you responsible for directing them to the sites that you link to. Visitors expect you to be knowledgeable about the outside Web pages to which you link. To maintain the quality of your own site, including the references that you make with hyperlinks, it's a good idea to visit the pages you link to every few weeks to verify that their content is still fresh and relevant.

Hyperlinks can be high maintenance

Web pages come and go on a regular basis. Web sites are continuously maintained and reworked to better deliver content. Often, a site grows out of its original file structure and requires a brand new one to support a changing content base. What this means to you as a page builder is that Web pages you point to may disappear when you least expect them to, so that -- again -- when a user tries to visit a missing page, he or she gets the dreaded 404 error.

Before you run away screaming, imagining that you'll have to manually check each and every hyperlink you create, be assured that there are a variety of tools available that do the checking for you. Good HTML editors like HomeSite and BBEdit have a link checking utility built right in. After you have a tool to do the actual grunt work, your role in link-checking activities is twofold:

- Remember to run your link-checking program regularly.
- Chase down any broken hyperlinks that your program reports and either delete them from your site or update them.

Despite the need to manage them, hyperlinks are still a key part of your Web page content and you'll want to use them as often as your content permits.

Linking to other pages Page 3 of 5

So you're hyped up about hyperlinks and want to add them to your Web page? There's not much in the HTML world that is simpler. Remember that a hyperlink is just a Web address -- or URL -- attached to a chunk of text on your Web page. Users need to have something to click on to activate the link: that's the chunk of text associated with the URL.

The HTML element that you use to create hyperlinks is called the anchor element because you anchor the URL to content on your page. The most basic syntax for this element is:

```
<a href="URL">text</a>
```

The importance of quotation marks

Most browsers don't care if you use quotation marks around your

The tag `<a> . . . ` tags indicate to the browser that the text it surrounds should be displayed as a hyperlink (usually underlined and in a different text color) and the `href=` attribute lets the browser know what Web page to open when the user clicks on the text.

This code example anchors the URL `http://www.w3.org/` to the text `Visit the World Wide Web Consortium's Web site`:

```
<a href="http://www.w3.org/">
Visit the World Wide Web Consortium's Web site
</a>
```

Figure 4-2 shows how a browser displays this bit of code.

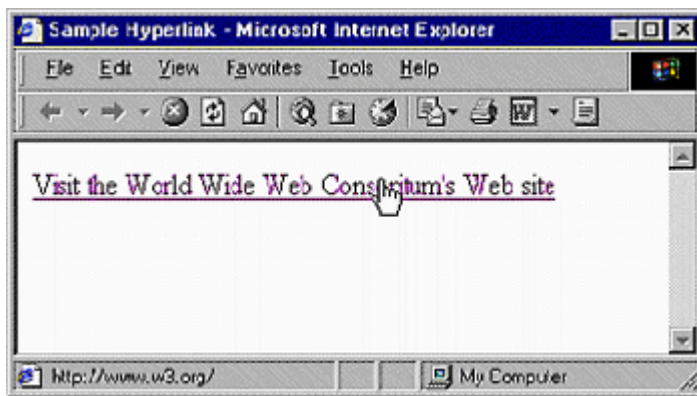


Figure 4-2: Web browser's display of a hyperlink created with an anchor tag.

The URL value for the `href` attribute is one that must be in quotation marks or even the most forgiving browser will garble your page. See the sidebar for more information on this important topic.

Linking to pages on your site

The hyperlink in this example points to a Web page on another Web site. Things are a bit different if you want to point to a Web page that is within your own Web site. First of all, there's no need to include the Web site domain information, because you're linking to your own site. Web browsers know that if they don't see the `http://www.mysite.com/` in a URL they should look for the requested file within the same site as the page that includes the link.

So if you want to link to a page on your site called `toc.html`, all you need to do is use this bit of HTML code:

```
<a href="toc.html">Table of Contents</a>
```

There are a few things you'll have to add to the file name if the file lives in a different directory on your Web site. But, because you usually don't have to worry about file paths and such when you're building your first Web page, there's no need to get into the gory details right now.

attribute values or not, and will display your Web pages properly one way or the other. However, earlier in the course, you learned that it's just good practice to put quotation marks around your attribute values. If you insist on not using quotation marks except where absolutely necessary - and I promise this practice will come back to haunt you one day -- know that there are some places you must use them if you don't want problems. In the case of hyperlinks, you must put quotation marks around the values of the `href=` and `name=` attributes, or your pages will break.

Besides linking from one page to another -- on and off your Web site - you can build hyperlinks that point to other places on the same Web page where the link appears. These are often called intradocument links. The most common use for these links is to help users navigate through large Web documents. When a user clicks on an intradocument link at the top of a page, for example, the browser window immediately scrolls to a specific spot in the document.

To build an intradocument link you need two things:

- A marker in the document to identify the spot to which you want to link.
- A hyperlink that points to the marker.

You use the anchor element for both parts of the intradocument link -- marking the spot as well as pointing to it. The next two sections show you how.

The name marks the spot

If your hyperlink doesn't point to another Web page, it must point to something. That something is fondly referred to as a spot, and you use an anchor tag and the `name=` attribute to mark the spot, like this:

```
<a name="contact"></a>Contact Us
```

Notice that the anchor tag does not surround the phrase Contact Us. Instead, it simply sits beside the text. Remember that you're only marking a spot for future reference, not trying to make the phrase Contact Us do anything when a user clicks on it.

If you were to put the anchor tag around the text, Contact Us would look like a hyperlink but wouldn't function as one, because the anchor tag doesn't have an `href=` attribute. You don't want to confuse your site visitors by building faux hyperlinks, so always put your spot markers next to text, not around it.

The pound sign points to the spot

Once you mark a spot, you need to create a link to it, using a standard hyperlink, like this:

```
<a href="#contact">Contact Information</a>
```

Notice three important things about this hyperlink:

- The anchor tag surrounds the text Contact Information. This means the browser will display underlined and colored text and users can click on it to activate the hyperlink.
- The value of the `href=` attribute begins with a pound sign (`#`). The pound sign is a signal to the browser that it needs to look on the same page to find the place to which the link points, instead of trying to find a different Web page.

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- The characters after the pound sign -- **contact** -- match the characters in the anchor tag that marks the spot (``). Once the browser sees the pound sign, it looks for spot in the document whose name matches the characters following the pound sign.

When a site visitor clicks on the Contact Information hyperlink, the browser immediately scrolls through the Web page and brings the spot marked with `` to the top of the browser window. It's actually a cool effect, and one you get to try later in this lesson.

Linking to e-mail addresses Page 5 of 5

There's another type of hyperlink that you can add to your Web pages: a link to an e-mail address. You've probably seen this type of link before in a Web page. When you click on a hyperlink to an e-mail address, the Web browser automatically launches an e-mail program such as Outlook Express or Eudora and opens a new message with the hyperlink's e-mail address in the To: field.

The code for adding an e-mail address to a hyperlink looks like this:

```
<a href="mailto:name@server.com">E-mail me</a>
```

So to e-mail Steve Jobs at Apple, the link might be:

```
<a href="mailto:stevej@apple.com">E-mail Steve</a>
```

Notice that the anchor element works the same way for an e-mail hyperlink as it does for a regular hyperlink. The element surrounds the text on which users need to click to activate the link and the anchor tag (`<a> . . . `) uses the `href=` attribute to hold the e-mail address. The only difference is that an e-mail hyperlink needs to include the word `mailto`, followed by a colon, before the actual e-mail address. Nothing could be simpler.

For an e-mail hyperlink to work, the user must have e-mail software, have their browser configured to launch the e-mail tool, and have an e-mail account from which they can send e-mail. Most browsers automatically look for an e-mail application when installed, and almost everyone who surfs the Web has an e-mail address, so it's fairly safe to include e-mail hyperlinks in your documents.

Moving on

Hyperlinks are right up there with paragraphs in terms of importance to Web pages. You'll find yourself building link after link into your pages -- after all links are what make the Web world go round. In the assignment for this lesson you get a chance to test your linking skills by adding several links to the ACME Widgets Web page. If you have questions about how links work or how to build them in HTML be sure to visit the message board to get help from your instructor and fellow students. If hyperlinks clicked for you immediately share your understanding with other students who might be struggling.

Images are up next in the course and you build them in much the same way you do hyperlinks. So before you move on be sure to complete the assignment and quiz so you have a good grounding in linking when you move onto images.