Chapter 19

Developing Course and Laboratory Homepages for the World Wide Web

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Introduction

The web pages that you see when using a web browser like Netscape Navigator® or Internet Explorer® are written in a scripting language called *h*yper*t*ext *m*arkup *l*anguage (HTML). While this computer language is not difficult to learn and can be created using a simple text editor like Notepad, there are now available many easy-to-use HTML editors which operate in a *what you see is what you get* (WYSIWYG) format. The exercises described in the following pages will introduce you to HTML creation using an HTML editor called Netscape Navigator Gold®. This HTML editor is a variation of the common Netscape Navigator web browser that allows the user to create web pages in a fashion similar to using a word processor. Through the use of toolbars, a first-time user can create a simple web page in about thirty minutes.

Specific areas of web page content that we will address are the use of existing digital images, linking to other pages, and the use of the "mailto" command. Since all Netscape software is available to educators free of charge, you can download a free copy of Netscape Navigator Gold(from the Netscape web site at http://home.netscape.com. Just follow the link to "download" and then choose "Navigator Gold". A web site has been developed to help you in your web page creation efforts and is available from the ABLE hotsites page; click the button labeled web page creation. This page contains links to HTML tutorials, download sites for web browsers and their plug-ins, and other utility software that you might find helpful as you create your web page or site. In addition, a .pdf version of this document is available for download from this page. You may also want to look at the "sample" web page that was created to demonstrate some of the more common features found on web pages. This page is located at http://dauntless.smcvt.edu/able/page.html.

Digital Images

Digital or electronic image files can exist in a large number of formats (.bmp, .gif., .jpg, .pcx, .tga, .tiff, *etc*). Only two of these formats (.gif and .jpg) are functional with web pages. GIF files have the advantage that they can be made "transparent", they can blend-in with the web page's background color.   JPG files are more compressed than GIF files, and thus are smaller and download quicker.

When using newly created or borrowed digital images, often you will need to manipulate the image. You may want to change the size, contrast, or format of a digital image. The image editing application called Paint Shop Pro® allows you to open digital image files and carry-out extensive editing functions (Figure 19.1). Paint Shop Pro® is a shareware application which means that you can try it for 30 days at no charge and if you like it, pay a small registration fee. The previously mentioned web page creation help available from the ABLE hotsites page has a link for downloading this imaging software.
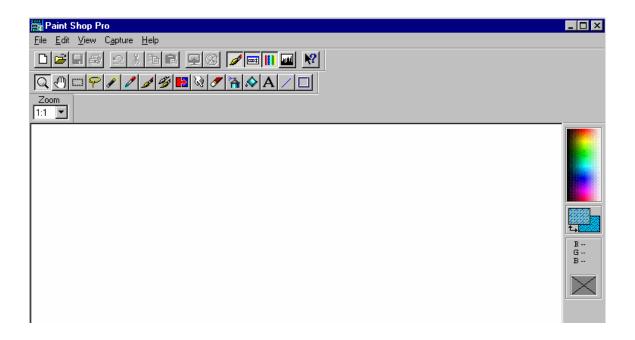
Figure 19.1. Paint Shop Pro® screen view.

Netscape Navigator Gold®.

Netscape Navigator Gold® is both a web browser and a WYSIWYG HTML editor, available in both the Mac and PC formats (Figure 19.2).

Figure 19.2. Toolbar view of Netscape Navigator Gold in editor mode.

Once you have downloaded the file to your computer, double-click on the file name and follow the prompts to complete the installation of the software on your machine. After installation, try creating a simple web page using the following directions.

1. Open Netscape Navigator Gold by double-clicking on its icon.

2. From *File*, choose, *new document*, and then *blank* (Figure 19.3).
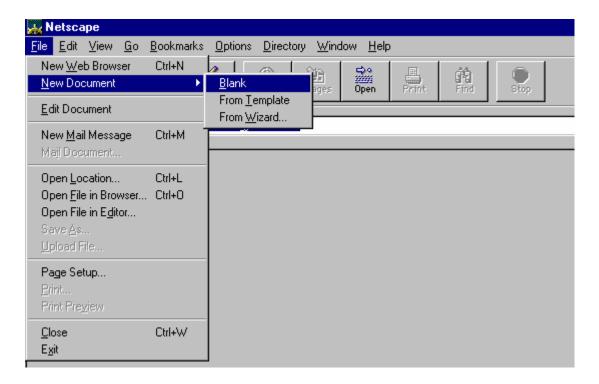

Figure 19.3. Creating a new web page from scratch.

3. Save this blank page by selecting *file*, *save as*, and then give the file a name and indicate a saving location. (The editor will not let you do any modifications until you save the page).

4. Give this blank page a title by selecting *properties*, *document* (Figure 19.4), and then the *general* tab (Figure 19.5). Note that this is the title that appears at the very top of the page (Figure 19.6) with the browser name and IS NOT the title of the page that appears in the body of the page nor the file name. This title is what will be displayed if the page is book-marked and is also used by many web search engines, so choose your title wisely.
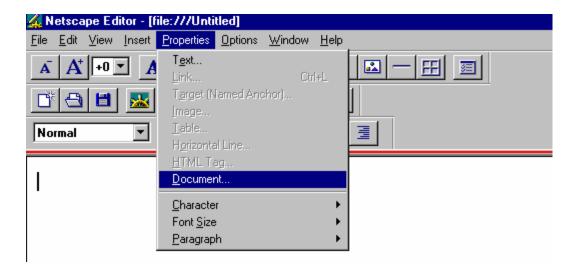
Figure 19.4. Opening the document properties dialogue box.

Figure 19.5. Giving your new web page a title.

Figure 19.6. The "title" of a web page is found at the top bar of the browser window.

5. After giving your page a title, choose the *appearance* tab under *properties|document* to select a background color for your page (Figure19.7).
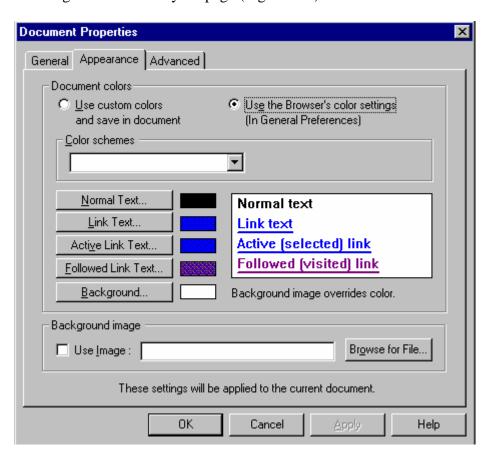

Figure 19.7. Selecting a background color for your web page.

6. Now you are ready to put some text in the body of your page. The header is what appears at the top of your page. You can select this font option from the box in the third row of the toolbar at the top of the page (Figure 19.8). In this same row are the settings for center, right, and left justification of text.
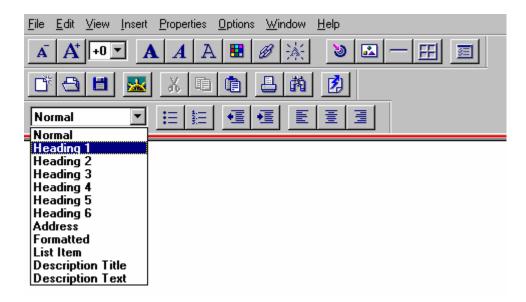
Figure 19.8. Choosing font style.

7. To insert a horizontal line, place your cursor where you would like the line, and then choose *insert*, *horizontal line*. There is a short-cut button for this feature in the top row of the toolbar (Figure 19.9).
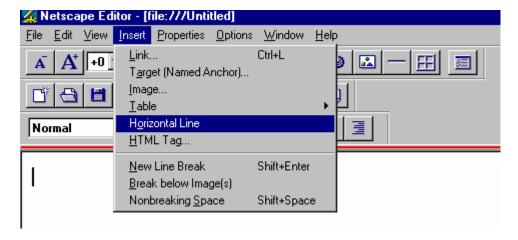

Figure 19.9. Inserting a horizontal line.

8. To insert an image, *choose insert, image*. This will cause a dialogue box to appear (Figure 19.10), from which you can browse to find the location of the image file you would like to insert. From this dialogue box, you can also set other properties like alternative text (in case someone is using a text-based web browser that cannot view images), image alignment, and how much space you want between your image and any adjacent text.
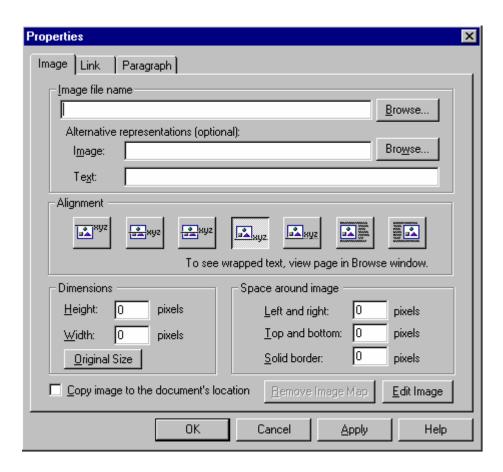
Figure 19.10. Inserting an image into your web page.

9. To insert a link, choose *insert*, *link*, and fill in the information in the resulting dialogue box (Figure 19.11). You can also carry-out this function by clicking on the chain link button on the top row of the toolbar. You will need to specify the active words (*link source*) that people will click on to get to the link and the path (*link to*) for the browser to follow. This path can be a local file (choose the browse option to find it), or type in the URL. This dialogue box is also how you would insert a *mailto* command. For the *link source* box, enter your email address, and in the *link to* box, type mailto:your email address. It is considered good style for the web page creator to include his/her email address at the bottom of each page so people can contact them if they have questions.
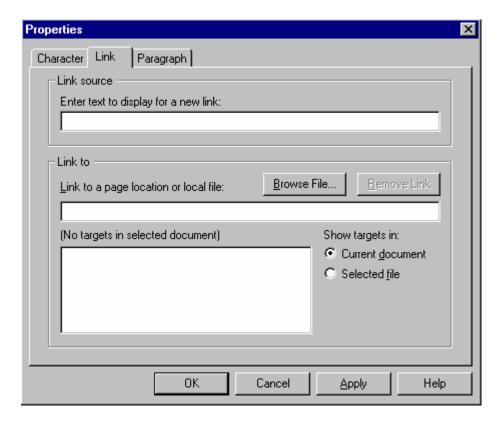
Figure 19.11. Inserting a link and defining the path.

10. Other *web etiquette* practices, in addition to including *mailto* commands on each page, include such things as a *last updated on month/day/year* entry for each page. This will help the reader judge how current the information on your pages is.

11. We have coversed the basics of web page creation. We would encourage you to test the various buttons available in the Navigator Gold® toolbar to see what they do. If you ever make a mistake, you can select "undo" under the edit command or just close the file without saving. For further study, visit your local bookstore and explore their computer offerings. There are several books available specifically for Navigator Gold® which you might find helpful.

Talking to a Web Server
Once you have created a web page, the HTML file must be uploaded or mounted on a WWW type server before the file can become publicly available. The most common way to "talk" with a web server is through the use of the file transfer protocol (FTP). There are a variety of FTP clients available that you can download for installation on your machine. One currently popular version is ws_FTP®, which is available from http://*shareware.com*. A link to this site exists on the web site mentioned at the beginning of this chapter (web page creation help from ABLE hotsites page). Some items that will be common to all FTP clients: instead of using http:// in front of the computer name to which you want to connect, use FTP://computer name. When transferring files from one machine to another, use the binary transfer mode.

Conclusions

With the opening of the ABLE discussion page available through the ABLE homepage, we hope participants will make use of this tool as a means to continue discussion on web page creation for their biology courses. Pedagogical issues as well as how-to questions are encouraged.

Web page creation is not an inherently difficult process. Because of the availability of HTML editors utilizing WYSIWYG (what you see is what you get), anyone can create a web page. You will only become proficient if some effort is put into the process. As a word of warning, though, web page creation can become all consuming. So, fire-up your computer and lets create some web pages!