A Quick Guide to Creating Personal Web-Pages for Typists, Receptionists, and Executives

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Contents

1 Introduction

This quick guide shall enable the reader to create a well-structured and manageable personal web-page. However, it assumes the reader's knowledge of:

- operating a web-browser software program—such as LYNX or MOZILLA on a UNIX workstation
- viewing a web-page using a web-browser software program
- creating, moving, editing, and deleting files on a UNIX workstation
- editing a plain-text file using a text-editor software program—such as EMACS or VI on a UNIX workstation
- viewing, and optionally creating, image-files in PNG, JPEG, or GIF format

1.1 HTML

Hyper Text Markup Language, or HTML for short [1], allows one to mark up a web-page just as one marks up a sheet of paper using a pencil. These markings dictate how a web browser, such as LYNX or MOZILLA in UNIX, will display the web-page [1] just as the markings on an architect's blueprint dictate how construction workers will build a building.

Web-pages are analogous to the common textbook. For example, they may both contain:

- a title
- a table of contents
- chapters
- sections
- paragraphs
- words

These items may be written in a single web-page or divided into several web-pages just as they may be written in a single textbook or divided into several volumes.

1.2 Web-Page Files

A web-page file is a plain-text file, with a name such as "web-page.html", that can be created and edited using any software text-editor program such as EMACS or VI on a UNIX workstation. Consult your UNIX system administrator for manuals and other resources pertaining to these software text-editor programs.

Note that *web-page* and *web-page file* have different meanings. A web browser displays a web-page by processing the HTML markup contained in a web-page file.

A web browser ignores extra white-space[1] in a web-page file when processing it (See Figure 9 on page 7) [3]. Therefore, one can mark up a web-page file with plenty of space and indentation, alike Figure 4 on page 5, so that the web-page file is easy to read while editing.

1.3 HTML Tags

In a web-page file, the items listed in section 1.1 on the preceding page are marked up using HTML tags. HTML tags serve as boundary markers between different items. Each tag is composed of two boundary markers: the start marker and the end marker. For example, in separating the title from the table of contents, one would write:

1. a start boundary marker for the title
2. the title
3. an end boundary marker for the title
4. a start boundary marker for the table of contents
5. the table of contents
6. an end boundary marker for the table of contents

Figure 1 on page 5 shows a hypothetical HTML tag as it appears within a web-page file. Angled brackets, and the text enclosed within them, denote a single boundary marker of an HTML tag [3].

The first word within a boundary marker is considered the name of a HTML tag, while the remaining words are considered parameters which modify the behavior of the HTML tag [3] (See Figure 15 on page 10 and Figure 16).

The start boundary marker and end boundary marker must have the same name. However, there is one exception to this rule: the name of an end boundary marker is prefixed by a single forward-slash character [3]. Also, the end boundary marker cannot have any parameters, whereas the start boundary marker can have parameters [3].

For example, in Figure 1, the start boundary marker is "<my_tag>" and the end boundary marker is "</my_tag>". The start boundary marker has a parameter named "param" with an associated value defined as "value".

Note, however, that the HTML tag shown in Figure 1 is not part of the HTML. It is simply a hypothetical HTML tag used to illustrate the appearance of any HTML tag within a web-page file. In other words, within a web-page file, all HTML tags will appear like the tag shown in Figure 1 [3].

[1] Blank or empty space within a plain-text file, such as the space within these quotes: " ".

2 Structure

Just as textbook authors use a standard structure for writing their textbook, one must use a standard structure for marking up a web-page file with HTML. As a result, much of the standard structure of a web-page file marked up with HTML is similar to the standard structure of a textbook.

2.1 Binding

A standard textbook is always bound—often in hard coverings but sometimes in soft coverings. Likewise, a web-page file is always bound within a primary HTML tag named "html" (See Figure 2 on the next page) [3]. In other words, the primary HTML tag encloses all other HTML tags and plain-text in the web-page file [3].

In addition, the primary HTML tag must appear only once within the web-page file [3]. Otherwise, having multiple primary HTML tags in a single web-page file would be like having multiple bindings on a single textbook—rather silly and quite unnecessary.

2.2 Title

The title of a standard textbook is printed on its front cover and is usually the first thing one sees when picking up the textbook. Likewise, the title of a web-page appears atop a web browser and is the usually the first thing one sees when one encounters the web-page. Therefore, a HTML tag named "title" (See Figure 3 on the following page) is enclosed within a HTML tag named "head" (See Figure 4 on the next page) [3].

2.3 Contents

Within its bindings, a standard textbook contains many pages of text which compose the main body of the textbook. Similarly, the main contents of a web-page file are enclosed within a HTML tag named "body" (See Figure 5 on the following page) [3, 2].

The following sections describe HTML tags that can only be enclosed within the "body" HTML tag. For example, Figure 6 on the next page shows an invalid use of the "body" HTML tag [3], where the editor of the web-page file tried to enclose the "body" HTML tag within a heading HTML tag (See Section 2.3.1).

2.3.1 Headings

Textbooks have headings atop major units, chapters, sections, and paragraphs to help the reader navigate its content. Likewise, a web-page can have headings that help the reader navigate various sections within the web-page.

In a web-page marked up with HTML, there can be at most six levels of headings [3, 2, 1]. These headings are listed in Figure 7 on page 7.

```
<my_tag param=“value”>A hypothetical HTML tag.</my_tag>
```

Figure 1: The structure of a hypothetical HTML tag, whose name is “my_tag”, as it appears within a web-page file.

```
<html>The contents of a web-page file.</html>
```

Figure 2: The primary HTML tag in which the entire web-page file is bound, as it appears within a web-page file [3, 1].

```
<title>The title of this web-page.</title>
```

Figure 3: The “title” HTML tag, as it appears within a web-page file [3, 1].

```
<head>
    <title>The title of this web-page.</title>
</head>
```

Figure 4: The “head” and “title” HTML tags, as they appear within a web-page file [3, 1].

```
<body>The contents of this web-page.</body>
```

Figure 5: The “body” HTML tag, as it appears within a web-page file [3].

```
<h1>
    <body>The contents of this web-page.</body>
</h1>
```

Figure 6: An invalid use of the “body” and heading HTML tags, as they appear within a web-page file [3].

Each heading has a name in the form "hn", where n denotes the heading's importance [3, 2, 1]. For example, one might use the "h1" heading for the title of a chapter, the "h2" heading for the title of a section within a chapter, and the "h3" heading for the title of a paragraph within a section.

2.3.2 Paragraphs

Textbooks often break a large piece of continuous text into separate paragraphs for better organization of their content. Likewise, one can break a large piece of plain-text into separate paragraphs within a web-page by using the paragraph HTML tag [1, 3] shown in Figure 8 on the following page.

Since a web browser ignores extra whitespace in a web-page file [3], one must use the paragraph HTML tag to separate paragraphs. Otherwise, if one tried to separate paragraphs by placing line-breaks between them (See Figure 9 on the next page), the web browser would ignore the line-breaks and display both paragraphs as a single paragraph in the web-page [3].

2.3.3 Emphasis

Textbooks often present key words or phrases in bold face, italic face, or underline face to emphasize them. Likewise, one can emphasize key words or phrases in a web-page through the use of various emphasis HTML tags. Figure 10 on the following page shows a listing of these emphasis HTML tags as they appear within a web-page file.

These emphasis HTML tags can be nested[2] to achieve various styles of emphasis [3]. For example, one can have the web browser display a sentence in both bold face and italic face by nesting their respective HTML tags within the web-page file (See Figure 11 on page 8).

2.4 Comments

Just as textbook authors place comments on the bottom or side of the page, one can place HTML comments within a web-page file (See Figure 13 on page 8) [3]. A HTML comment may be placed anywhere within a web-page file—as long as it does not appear within a boundary marker of a HTML tag [3]. For example, Figure 12 on page 8 shows an invalid HTML comment placed in between the angled brackets of the start boundary marker of a "head" HTML tag.

Unlike textbook comments, however, HTML comments in web-page files are not displayed on a web-page by a web browser. Instead, a web browser ignores HTML comments in a web-page file [3]. In this manner, HTML comments can be used to write notes about the HTML markup or plain-text surrounding them. This is especially useful when more than one person is maintaining a web-page file; one can write notes within HTML comments to the other editors.

[2] To place a HTML tag within the content of another HTML tag [3, 2].

```
<h1>This is the most important heading.</h1>
<h2>This is the second-most important heading.</h2>
<h3>This is the third-most important heading.</h3>
<h4>This is the fourth-most important heading.</h4>
<h5>This is the fifth-most important heading.</h5>
<h6>This is the least important heading.</h6>
```

Figure 7: A listing of possible heading HTML tags, as they appear within a web-page file [3].

```
<p>This is a paragraph.</p>
<p>Here is another paragraph.</p>
```

Figure 8: Paragraph HTML tags, as they appear within a web-page file [3].

```
Paragraph 1.


Paragraph
    2.
```

in a web-page file, will appear as

```
Paragraph 1. Paragraph 2.
```

in a web browser.

Figure 9: Extra white-space is ignored by a web-browser [3].

```
<b>This text shall appear in bold face in a web browser.</b>
<i>This text shall appear in italic face in a web browser.</i>
<u>This text shall appear in underline face in a web browser.</u>
```

Figure 10: Various emphasis HTML tags, as they appear within a web-page file [3].

```
<b>

    This sentence shall appear in bold face.


    <i>This sentence shall appear in both bold face
    and italic face when viewed in a web browser.</i>

</b>
```

Figure 11: Nested emphasis HTML tags, as they appear within a web-page file [3].

```
<he<!-- This is an invalid comment. -->ad></head>
```

Figure 12: An invalid HTML comment, as it appears within a web-page file [3].

```
<!-- This is a comment. -->
<!--

    This is a multi-line comment.
    <title>This HTML tag is ignored.</title>

-->
```

Figure 13: Valid HTML comments, as they appear within a web-page file [3]. Notice that HTML comments can span multiple lines within the web-page file.

2.5 Template

Now that we have seen the primary structure of a web-page file marked up with HTML, we can create a standard template (See Figure 14 on the following page) with which to create web-page files.

3 Organization

Just as a textbook is organized into several chapters, a large web-page can be organized into several smaller web-pages. For example, a large web-page file named "book.html" can be organized into smaller web-page files: "chapter1.html", "chapter2.html", "chapter3.html", and so on.

Once a large web-page is organized into several smaller web-pages, a person viewing them must have a way to navigate to and between each web-page. The following section on hyper links [1] describes how to provide such navigation.

3.1 Hyper Links

Just as one can refer to chapters in a textbook by flipping through its pages, one can refer to web-pages by following hyper links. A hyper link can be thought of as a single thread which connects two web-pages together. In this way, one can navigate from one web-page to another web-page by following a hyper link [1].

For example, Figure 15 shows several hyper links which allow one to navigate to various chapter web-pages. The "href" parameter of each hyper link's HTML tag specifies the web-page file of a chapter web-page [1, 3].

The process of following a hyper link depends upon the specific web browser used to display web-pages. Consult your system administrator for manuals and other resources pertaining to the specific web browser used to display web-pages on your workstation.

3.2 Pictures

Textbooks often have figures, diagrams, and photographs to visually emphasize the ideas they are trying to teach. Similarly, one can place pictures on a web-page to provide visual emphasis or aesthetic appeal.

For example, Figure 16 on the next page shows an image HTML tag [1, 3] which instructs a web browser to display a person's photograph along with a caption. The picture file containing the person's photograph is specified by the "src" parameter, while the picture's caption is specified by the "alt" parameter [3].

Pictures can also be nested within a hyper link [3]. For example, Figure 17 on page 11 shows a picture nested within a hyper link, which motivates the person viewing the web-page to follow the hyper link to learn more about the person shown in the photograph.

```
<!-- My Personal Web-Page -->
<html>
    <head>

        <title>The title of this web-page.</title>
    </head>
    <body>
        <h1>Chapter 1</h1>
        <p>The <b>first</b> paragraph of this chapter.</p>

            <h2>Section 1</h2>
            <p>The <b>first</b> paragraph of this section.</p>
            <p>The <b>second</b> paragraph of this section.</p>

            <h2>Section 2</h2>
            <p>The <b>first</b> paragraph of this section.</p>

        <h1>Chapter 2</h1>
        <p>The <b>first</b> paragraph of this chapter.</p>

        And so on...
    </body>
</html>
```

Figure 14: A standard template for a web-page file.

```
<a href="chapter1.html">Chapter One.</a>
<a href="chapter2.html">Chapter Two.</a>
<a href="chapter3.html">Chapter Three.</a>
```

Figure 15: Several hyper link HTML tags, which allow navigation to various chapter web-pages, as they appear within a web-page file [3].

```
<img src="photo.jpg" alt="My photograph."></img>
```

Figure 16: An image HTML tag, which displays a picture file named "photo.jpg" with a caption of "My photograph.", as it appears within a web-page file [1, 3].

```
<a href="about_me.html">

    <img src="photo.jpg" alt="My photograph."></img>
</a>
```

Figure 17: An image HTML tag nested within a hyper link, as it appears within a web-page file [1, 3].

4 Further Reading

Although this guide presents essential HTML tags necessary to create a well-structured personal web-page, it does not introduce advanced capabilities of HTML such as manipulating colors, displaying tables, and so on [3]. The reader is encouraged to explore these capabilities by examining the references listed below and by examining other guides to creating personal web-pages available on the Internet.

References

[1] NCSA, "A Beginner's Guide to HTML," [Online document], 2000 Jun 15, [cited 2 Feb 2005], Available HTTP: `http://archive.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimerPrintable.html`

[2] N. Miloslav, "'XHTML Basic' reference with examples," [Online document], 2005 Jan 20, [cited 2 Feb 2005], Available HTTP: `http://www.zvon.org/xxl/xhtmlBasicReference/Output/index.html`

[3] W3C HTML Working Group, "XHTML 1.0 - DTDs," [Online document], 2002 Sep 1, [cited 31 Jan 2005], Available HTTP: `http://www.w3.org/TR/xhtml1/dtds.html#a_dtd_XHTML-1.0-Strict`