

Part I

Creating Content with HTML

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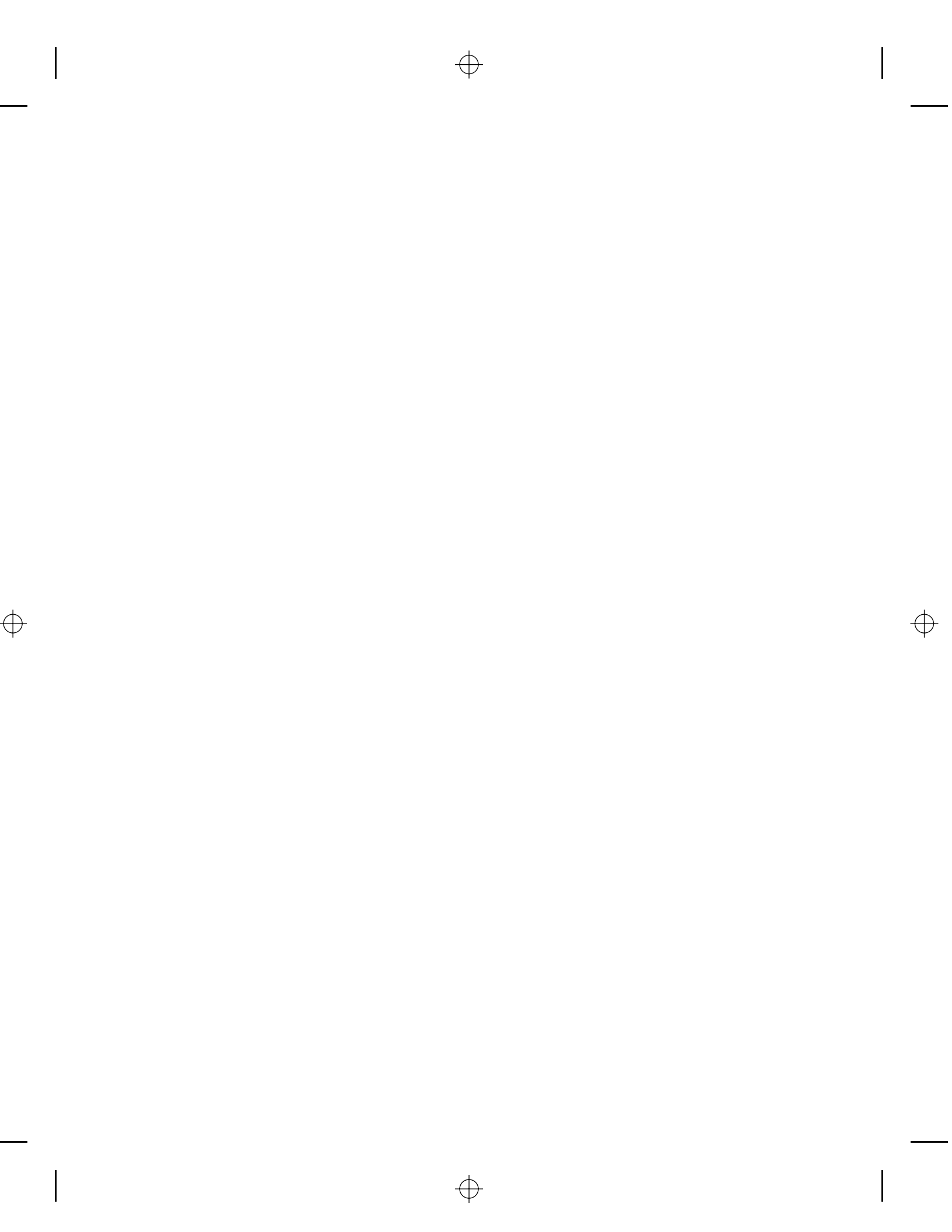
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CHAPTER

1

What Is a Markup Language?

The World Wide Web is a technology beast. If you have read this book's introduction, you should have at least a passing familiarity with how the Web started — its humble beginnings to bring cross-referenced textual documents to the masses via the connectivity of the Internet.

You are reading this book, so it's a good assumption that you are familiar with what the Web has become today — a collection of technologies capable of transporting numerous media across the Internet for consumption directly on your desktop.

However, it's important not to forget the Web's humble beginnings because the technologies used for the very first simple documents are still in use today, and must be understood. This chapter helps frame the reasons why.

IN THIS CHAPTER

What Are We Doing Here?

Understanding Hypertext

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What Are We Doing Here?

Why are we diving into technical topics instead of talking about how to create Web documents? Well, technically we are talking about how to create Web documents. The more you know about the technology behind the Web, the better prepared you will be to use the technology to your benefit, and the easier it will be to create Web documents.

Note

If you really do want to just dive into creating documents, check out Chapter 19, “Web Development Software,” which covers tools you can use to quickly create documents without knowing the underlying technology behind it all. However, keep in mind that such tools do not always accomplish the goal you desire and sometimes their results need manual tweaking — tweaking that you will learn to perform throughout the other chapters in this book. ■



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So back to the question: What are we doing here?

Answer: Web documents are created using several different technologies. The main technology is Hypertext Markup Language (HTML). HTML is responsible for telling a Web browser (e.g., Microsoft Internet Explorer, Mozilla Firefox, Opera, Mac Safari, Google Chrome, and so on) how text and other objects in a Web document should appear. Whether the text should be small, large, bold, underlined, or right or left justified is largely determined by the HTML embedded in a Web page.

As a consumer of Web pages, you rarely experience HTML directly; it's hidden from the end user by the browser. However, as a creator of content, you need to be intimately familiar with HTML and its uses, which is why we are starting from scratch and covering some basics first. Don't worry, the good stuff is right around the corner and we will get started creating actual content soon enough.

Understanding Hypertext

By its very nature, the Web and its content overcome many of the limitations of standard, linear text. This concept is best illustrated by a comparison of a book (in particular, a reference book) to the Web. For example, consider a cross-reference in a book. Accessing the cross-reference requires you to look up the page number, textual reference, or other object being referred to. On the Web, the reference is (usually) a single mouse click away.

Also, documents on the Web can be designed to vary depending on the user accessing them. Books, conversely, remain static objects no matter who is reading them.

The word “Hypertext” was created along with other Internet terms and technologies during the evolution of the Web. It was coined to describe documents that could change, redirect, and otherwise overcome the linearity of normal text. In short, “Hypertext” describes text on the World Wide Web.

Understanding Markup Instructions

Markup languages are not a difficult concept to grasp; most of you have “marked something up” at one point or another. For example, suppose you wanted someone to highlight a paragraph in this book. It would be fairly easy for you to instruct that person to do what you wanted — you could simply hand the person a highlighting pen, point to the paragraph, and ask the person to highlight it.

Note

Highlighting is only an example of what you might want to happen to a piece of text. You might want some text to be larger, bolder, underlined, or otherwise changed. Highlighting is used in this chapter as a simple, real-world example. ■



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Consider the paragraph shown in Figure 1-1, highlighted in Figure 1-2.

FIGURE 1-1

A simple paragraph

Welcome to On Target Games, the online home of the best-selling game, Vanguard Odyssey. Enjoy browsing the site and don't forget to check out the updates section.

FIGURE 1-2

The same paragraph, highlighted

Welcome to On Target Games, the online home of the best-selling game, Vanguard Odyssey. Enjoy browsing the site and don't forget to check out the updates section.

This is a relatively easy task to ask of someone and have executed, because you, and most other people, understand the concept of paragraphs. You point to a paragraph and the person doing the highlighting knows the boundaries — the beginning and the end of the text to be highlighted. If the individual were really dense or needed more explicit instructions, you could write the instructions on or near the paragraph, as shown in Figure 1-3.

Note

Writing explicit editing instructions in or around text is generally known as *marking up text*. ■

Notice how the instructions “bookend” the portion you want affected. In other words, the “begin” instruction appears before the text to be highlighted, while the “end” instruction appears afterward. This is an important concept in text markup.

FIGURE 1-3

Explicitly designating the area to be highlighted by marking up the paragraph

Begin highlight here

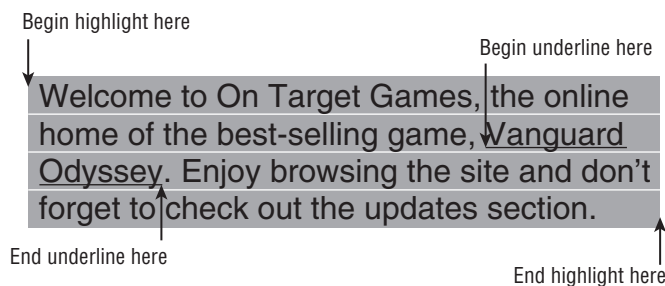
↓
Welcome to On Target Games, the online home of the best-selling game, Vanguard Odyssey. Enjoy browsing the site and don't forget to check out the updates section.
↑
End highlight here

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You might want more formatting to be done to the text. For example, suppose you wanted “Vanguard Odyssey” underlined. Specifying that additional formatting could resemble the paragraph shown in Figure 1-4.

FIGURE 1-4

Multiple formatting instructions might appear close to one another, or even nested within one another.



Understanding Markup Language

On the Web, you aren't dealing with humans; you are dealing with computers and software — namely, Web browsers. You create content specifying how the browser should display it (highlighting certain pieces of text, and so on). When the browser displays the page, it applies the appropriate formatting accordingly so the user sees the text and document as you intended. You need a way to mark up the text so the browser understands it.

In the early 1990s, a new programming-like language was created, Hypertext Markup Language, or HTML. Don't let the word programming scare you — it is used here to put the word “language” in context; it's not really programming, as you will see. The language was created to provide a way for users to mark up documents so Web browsers could display certain elements of the document in italics, underlined, and so on.

Several requirements must be considered when telling a computer how to format text. A short list of the requirements includes the following:

- The instructions should follow a stringent set of guidelines.
- The instructions should be included in the textual document.
- The instructions should be invisible to the end user.

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- The instructions should tell the display device (usually a Web browser) where to start and end, and how to apply the formatting specified.

Note

The first item in the preceding list, requiring a “stringent set of guidelines,” is very important. As with most programming languages, a strict set of guidelines and syntax is necessary to ensure that the programmers (Web designers) create programs (Web pages) that the computers (Web browsers) can understand. Throughout this book, I will continually stress the standards created by organizations such as the World Wide Web Consortium (W3C), the folks behind the World Wide Web and its related standards. ■

Essentially, a *markup language* is a systematized and standardized markup instruction set.

Consider how such a language would work. As in the earlier example about highlighting, instructions could be appended to the paragraph similar to that shown in Figure 1-3. However, because the Web page needs to be in electronic text form only (no handwriting allowed!), the document would end up resembling something like this:

```
Begin Highlight Here Welcome to On Target Games, the online home of
the best-selling game, Begin Underline Here Vanguard Odyssey End
Underline Here. Enjoy browsing the site and don't forget to check out
the updates section. End Highlight Here
```

It's difficult to tell where the text and markup begin and end when the markup is used in this way. It would be much better if the markup instructions were delimited by something so that you, and the Web browser, could tell where and what they were.

Thankfully, in HTML the markup instructions are indeed delimited. They are enclosed in angle brackets — more commonly known as “less than” and “greater than” signs (< and >). Furthermore, the directives don't need the words “begin” or “end.” The beginning marks simply contain a keyword corresponding to what the markup should accomplish, and the ending marks include a slash (/). For example, the underlining markup directive is simply “u” (for underline) and it appears as shown in the following text:

```
Welcome to On Target Games, the online home of the best-selling game,
<u>Vanguard Odyssey</u>. Enjoy browsing the site and don't for-
get to check out the updates section.
```

The <u> designates the beginning of the underline and the </u> designates the end. This paragraph rendered in a Web browser would resemble what is shown in Figure 1-5.

Similarly, in HTML, bold is represented by “b” (and), italic by “i” (<i> and </i>), and so on. Other markup instructions and directives have similar tags. These tags are inserted into Web pages, and the Web browser reads the page and uses the tags to properly format the text and other items on the page.

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FIGURE 1-5

The paragraph in a Web browser



Summary

What does all this mean? There are some basic technologies underneath the surface of the Web to which you must pay attention. HTML is the backbone of these technologies, and knowing it is the key to successful Web design. Understanding markup concepts is key to understanding proper HTML use.