

**Chapter
1**

**HTML
TAGS**

*Get on the
Fast Track!*

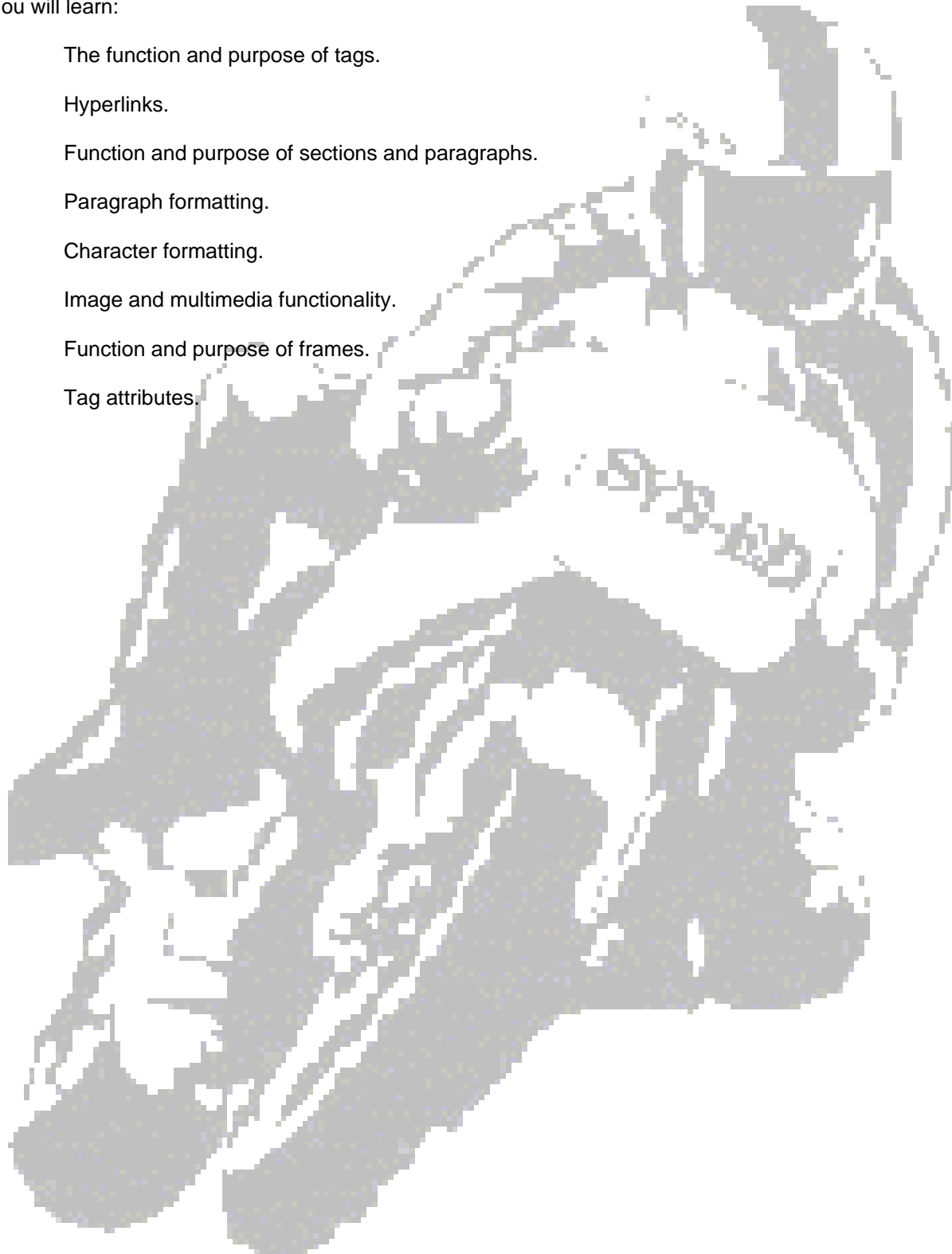


**SYS-ED/
COMPUTER
EDUCATION
TECHNIQUES, INC.**

Objectives

You will learn:

- C The function and purpose of tags.
- C Hyperlinks.
- C Function and purpose of sections and paragraphs.
- C Paragraph formatting.
- C Character formatting.
- C Image and multimedia functionality.
- C Function and purpose of frames.
- C Tag attributes.



1 What is HTML?

An HTML document is a text file containing the tags that web browsers use to:

- C format a document.
- C display multimedia objects.
- C create hyperlinks.

1.1 HTML Tags

An HTML document file contains many tags.

Characteristics of tags:

- C A tag defines a format to apply or an action to take.
- C A tag can have one or more attributes and values.
- C A tag starts with a less than (<) sign and ends with a greater than (>) sign.
- C Tag and attribute names are not case-sensitive.

1.2 Paired Tags

Some tags consist of a start tag, an end tag and the data characters enclosed by the two tags. An end-tag consists of the tag name immediately preceded by a slash (/).

Some tags require a matching end-tag; others omit the end tag if the result is clear and unambiguous.

Example:

This is a simple HTML document:

```
1 <HTML>
2 <HEAD>
3   <TITLE>Simple HTML Document</TITLE>
4 </HEAD>
5
6 <BODY>
7   <P>A very simple HTML document.
8 </BODY>
9 </HTML>
```

Tag	Purpose
<HTML>...</HTML>	<p>An HTML document starts with an HTML tag. This marks the file as an HTML document.</p> <p>The matching end tag (</HTML>) is the last tag in the file.</p>
<HEAD>...</HEAD>	<p>The HEAD tag marks beginning of the document header.</p> <p>Typically, the TITLE tag appears here.</p>
<TITLE>...</TITLE>	<p>Browsers display this tag in its title bar.</p>
<BODY>...</BODY>	<p>The BODY tag appears at the start of the content of the document.</p> <p>The BODY tag encloses the body text, images, and multimedia objects.</p>
<P>	<p>The P tag adds a new paragraph with a carriage return and line feed.</p> <p>The ending P tag is typically omitted, meaning the scope of the tag extends to the next tag that affects paragraphs. In most situations, the the next tag will be </BODY> tag.</p>

2 Hyperlinks

HTML supports hyperlinks. The A tag, or anchor, maps text or a graphic to another document or to a location within the current document.

A hyperlink is defined by a clickable "hotspot", which is text or an image and a reference.

To create a hyperlink, the text or image is enclosed with the anchor tags, and the HREF= attribute is set to the destination address.

Example:

```
1      <P>Click <A HREF="//www.sysed.com/">here</A> to visit the Sys-Ed
2      web site.
```

The address for the Web site is enclosed in double quotation marks. The double quotation marks are optional, unless the attribute value contains any spaces.

2.1 Naming a Hyperlink Destination

A hyperlink destination can be created within a HTML document by using the NAME= attribute.

<A...> tag is used to relate text or a graphic to a name. This allows for the creation of hyperlinks that jump to locations within the document rather than to other documents.

Example:

```
1      <A NAME="mainframe"></A><H2>Mainframe Courses</H2>
2      ...
3
4      <P>For information on Sys-Ed Mainframe courses see <A
5      HREF="#mainframe">Mainframe Courses</A>
```

The code creates a destination and creates a hyperlink to that destination.

3 Sections and Paragraphs

3.1 Section Heading

The typical HTML document consists of one or more text paragraphs organized into sections.

Characteristics of section headings:

- C The beginning of a section is marked by using the <Hn>...</Hn> tags.
- C The value of n determines the size and style of the text in the heading to indicate section level.
- C The <Hn> allows for seven levels.
- C The level number replaces n (H1, H2, H3, and so on).
- C The end tag is always required; it marks the end of the section heading.

Example:

This code creates a first level section heading:

```
1 <H1>Welcome to HTML class!</H1>
```

By default, section headings are left-aligned. The default alignment can be overridden and the heading centered by using the ALIGN= attribute.

Example:

```
1 <H2 ALIGN=CENTER>Introduction to HTML</H2>
```

3.2 Paragraph Format

The <P> tag creates simple paragraphs.

Other tags, such as <BLOCKQUOTE>, <LISTING>, <PLAINTEXT>, <PRE> and <XMP>, can be used for creating paragraphs which apply a different size and style for the text.

- C The <PRE> tag can be used for displaying characters in a fixed-width font rather than the variable-width font used for simple paragraphs.
- C The <BLOCKQUOTE> tag can be used to slightly indent the paragraph text from both the left and right margins to make the paragraph stand out.

A style can be applied to a sequence of paragraphs by enclosing the paragraphs with a <ADDRESS>, <BLOCKQUOTE>, or <CENTER> tag.

Example:

```
1     <CENTER>
2     <P>This paragraph is centered.
3
4     <P>And this paragraph is centered too.
5     </CENTER>
```

This code demonstrates how to center a sequence of simple paragraphs.

An alternate technique for centering individual paragraphs is to use the ALIGN= attribute with the <P> tag and setting the attribute value to <CENTER>.

Example:

```
1     <P ALIGN=CENTER>This paragraph is centered.
```

4 Character Formatting

A variety of tags can be used for setting the size and style of the text characters.

Tag	Purpose
	Makes text bold.
	Makes text bold.
<I>	Makes text italic.
	Makes text italic.
<S>	Strike text.
<STRIKE>	Strike text.
<U>	Underlines text.

Example:

This code sets words and phrases in paragraphs to bold and italic:

```
1     <P>This <B>word</B> is bold; this <I>word</I> is italic.  
2  
3     <P><STRONG>This phrase is bold</STRONG>; <EM>this is italic</EM>.
```

Character formatting can be applied to a sequence of paragraphs by enclosing the paragraphs with a character formatting tag.

Example:

This code sets all the text in a sequence of paragraphs bold.

```
1     <B>  
2     <P>This text is bold.  
3  
4     <P>And this text is bold too.  
5     </B>
```

Although this technique can be used with simple paragraphs, some tags "block" the effect of the character formatting tags. For example, all the text in a table can not be made bold by enclosing it in a tag.

4.1 Character Size and Position

Superscripts and subscripts can be created by using the <SUP> and <SUB> tags. These tags reduce the size of the text and align it at the top or bottom of the current line of text.

The size of the text can be changed by using tags such as <BIG> and <SMALL>, or by using the SIZE= attribute with the <FONT...> tag.

Example:

```
1 <P>Use the <BIG>LARGE</BIG> machine for business, the
2 <SMALL>TINY</SMALL> machine for personal items.
```

This code increases the size of the word "LARGE" and reduces the word "TINY":

4.2 Changing the Font

If the tag is used for changing text size, either a fixed or relative size can be set.

- C A fixed size is a number in the range 1 through 7.
- C A relative size is a positive or negative number, preceded by the plus (+) or minus (-) sign, that indicates a size that is relative to the base font size, as set using the <BASEFONT> tag.

Example:

```
1 <BASEFONT SIZE=3> This sets the base font size to 3.
2 <FONT SIZE=+4> Now the font size is 7.
3 <FONT SIZE=-1> Now the font size is 2.
```

This code demonstrates the effect of using relative sizes.

The FACE= attribute also can be used with the <FONT...> tag to set the facename of the font used for text. Typical facenames are "Arial", "Times New Roman", and "Courier New".

However, the facename of any font installed on the device on which the HTML document is being viewed can be used.

Example:

```
1      <H1><FONT FACE="ARIAL">Welcome to HTML class!</FONT></H1>
```

This code sets the "Arial" font for the text in the section heading.

If the given font is not available, the browser uses a default font.

To increase the chances that the appropriate font of choice is applied to the text, more than one facename can be specified in a tag. In this case, the browser will check for each font (in the order given) before using the default font.

Example:

```
1      <FONT FACE="Arial, Lucida Sans, Times Roman"> This text will be in either  
2      Arial, Lucida Sans, or Times Roman, depending on which fonts you have  
3      installed on your system.</FONT>
```

5 Images and Multimedia

Images, sounds, and video clips can be embedded in a HTML document by using the and <BGSOUND> tags.

Simple animation can be applied to text by using the <MARQUEE> tag.

The tag is used for inserting images into a document. In the tag, image source--typically a GIF or JPEG file, and the image attributes--such as the width and height, alignment are specified.

Example:

This code inserts the image of the earth.

```
1 <IMG SRC="TheEarth.gif" WIDTH=46 HEIGHT=46 ALT="Picture of the Earth">
```

C The SRC= attribute specifies the name of the image file.

C The ALT= attribute specifies the text to be displayed if the user chooses not to view images.

When an IMG tag is placed in text, the browser aligns the surrounding text with the bottom of the image. The text can be aligned with the top or middle of the image by using the ALIGN= attribute to set the alignment to TOP or MIDDLE.

In this case, the image keeps its position within the surrounding text.

5.1 Image Alignment

The ALIGN= attribute can be used to have the text flow around the image.

Setting this attribute to LEFT aligns the image with the left margin and wraps all subsequent text around the right side of the image. Similarly, setting it to RIGHT wraps all subsequent text around the left side.

When LEFT or RIGHT alignment is used, the
 tag can be used with the CLEAR= attribute to stop wrapping and force all remaining text below the image.

Example:

```
1 <IMG SRC="TheEarth.gif" ALIGN=LEFT> Here's some text to the right  
2 of a picture.  
3 <BR CLEAR=LEFT>Here's some text beneath the picture.
```

5.2 Inserting Video Clips

The tag can be also used to insert video clips, such as .avi (Audio Video Interleave) video files, in a document.

The name of the clip is specified by using the DYN SRC= attribute.

Example:

```
1 <IMG DYN SRC="TheEarth.avi" SRC="TheEarth.gif" WIDTH=46 HEIGHT=46  
2 LOOP=INFINITE ALIGN=RIGHT>
```

The LOOP= attribute specifies how often the video clip plays. In this example, the clip plays continuously.

Attributes such as CONTROLS and START= can be used to give the user some control over when and how the clip plays.

The SRC= attribute ensures that Internet Explorer displays an image even if the given video clip is not available.

Image can be used as a hotspot for a hyperlink by enclosing the IMG tag with the A tag.

By default, browsers draw a border around the image to mark it as a hotspot, but the border can be suppressed by setting the BORDER= attribute in the tag to zero.

5.3 Background Sounds

Background sounds can be added to a document by using the <BGSOUND> tag. With this tag, the address of a sound file, such as a .WAV, .AU, or MIDI file can be specified.

The LOOP= attribute sets how often the file plays.

Example:

```
1 <BGSOUND SRC="boing.wav" LOOP=5>You will hear a boinging noise five  
2 times in a row.
```

5.4 Marquee

A line of text can be made to scroll by using the <MARQUEE> tag. This tag automatically scrolls the text, to the left or right, whenever a user views your document.

For text to be animated it must be enclosed in the tag and the attributes set for scroll direction, type and amount.

Example:

```
1 <MARQUEE DIRECTION=RIGHT BEHAVIOR=SCROLL SCROLLAMOUNT=10  
2 SCROLLDELAY=200>This is a scrolling marquee.</MARQUEE>
```

The text "This is a scrolling marquee." scrolls from the left margin to the right.

After it disappears beyond the right margin, it starts again at the left. The text moves 10 pixels after each 200 millisecond delay.

6 Frames

Frames are used for formatting, organizing and structuring HTML documents. Frames provide the capability for creating compound documents that the user can view within the main window.

The <FRAMESET> and <FRAME> tags are used to divide the main window into rectangular frames. Then for each frame, an HTML document is specified that contains the content to fill the frame.

Example:

```
1 <HTML>
2 <HEAD>
3   <TITLE>Two Equal Frames</TITLE>
4 </HEAD>
5 <FRAMESET COLS="50%,*">
6   <FRAME SRC=x.htm>
7   <FRAME SRC=y.htm>
8 </FRAMESET>
9 </HTML>
```

The COLS= attribute in the FRAMESET tag specifies the width of the frames.

- C The width of the first frame is 50% of the main window.
- C The width of the second frame, given as an asterisk, is relative to the first --meaning it spans whatever is left of the main window.

This document does not contain a <BODY> tag. This is because documents that define frames do not contain content. Instead, the SRC= attribute in each FRAME tag specifies a document.

In the preceding example, the X.HTM and Y.HTM files provide the content.

6.1 Nested Frames

The main window can be divided into rows, as well as columns, by using the ROWS= attribute.

The <FRAMESET> tags can be used for independently dividing individual rows into rows and columns by nesting <FRAMESET> tags.

Example:

This code demonstrates how to divide the main window into two rows in which the last row is divided into two columns.

```
1      <HTML>
2      <HEAD>
3          <TITLE>Nested Frames</TITLE>
4      </HEAD>
5      <FRAMESET ROWS="10%,*">
6          <FRAME SCROLLING=NO SRC=z.htm>
7          <FRAMESET COLS="50%,*">
8              <FRAME SRC=x.htm>
9              <FRAME SRC=y.htm>
10         </FRAMESET>
11     </FRAMESET>
12 </HTML>
```

- C The SCROLLING= attribute is used in the first FRAME tag to prevent the scroll bar from being displayed.
- C By default, Internet Explorer displays the scroll bar only if the entire content of the frame does not fit within the frame.
- C Setting SCROLLING= to NO always prevents the scroll bar.

6.2 Tag Attributes

The FRAME tag has attributes for setting the width and height of margins within the frame and whether the frame has a border. An important feature of the <FRAME> tag is the NAME= attribute. This attribute is used to assign a unique name to the frame, and this name can be used when creating hyperlinks to direct documents into the frame.

The FRAMESET tag has attributes to set the spacing between frames and whether the frames in the set have borders. To create such a hyperlink, the TARGET= attribute is used in the <A> command.

Example:

This tag creates a hyperlink that displays the X.HTM file in a frame named CONTENT.

```
1 <A HREF="x.htm" TARGET="CONTENT">List of Components</A>
```