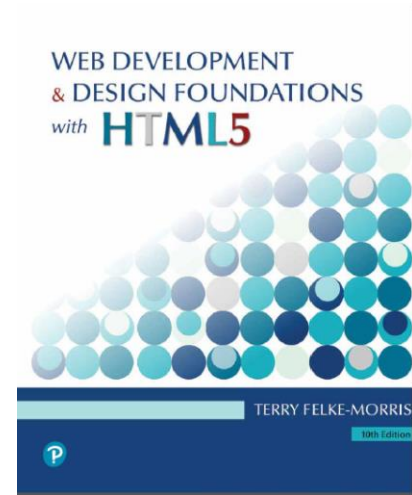# Web Development & Design Foundations with HTML5
10th Edition

CHAPTER 2
HTML BASICS

Learning Outcomes

In this chapter, you will learn how to ...
- Describe HTML, XHTML, and HTML5
- Identify the markup language in a web page document
- Use the html, head, body, title, and meta elements to code a template for a web page
- Configure the body of a web page with headings, paragraphs, line breaks, divs, lists, and blockquotes
- Configure text with phrase elements
- Configure a web page using structural elements including header, nav, main, footer, section, aside, and article elements
- Configure special characters
- Use the anchor element to link from page to page
- Create absolute, relative, and e-mail hyperlinks
- Code, save, and display a web page document
- Test a web page document for valid syntax

What is HTML?

HTML:
The set of markup symbols or codes placed in a file intended for display on a Web browser page.

The World Wide Web Consortium (http://w3c.org) sets the standards for HTML and its related languages.

HTML Elements

- Each markup code represents an HTML **element**.

- Each element has a purpose.

  Most elements are coded as a pair of tags:
  an opening tag and a closing tag.

- Tags are enclosed in angle brackets, "**<**" and "**>**" symbols.

What is HTML5 ?

Newest version of HTML/XHTML

Supported by modern browsers

Intended to be backwards compatible

Adds new elements

Adds new functionality
- Edit form data
- Native video and audio
- And more!

Source: W3C http://www.w3.org/html/logo/

Document Type Definition

Document Type Definition (DTD)

- doctype statement

- identifies the version of HTML contained in your document.

- placed at the top of a web page document

<!DOCTYPE html>

Example HTML5 Web Page

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Page Title Goes Here</title>
<meta charset="utf-8">
</head>
<body>
... body text and more HTML5 tags go here ...
</body>
</html>
```

Head & Body Sections

Head Section

Contains information that describes the web page document

  <head>

  …head section info goes here

  </head>
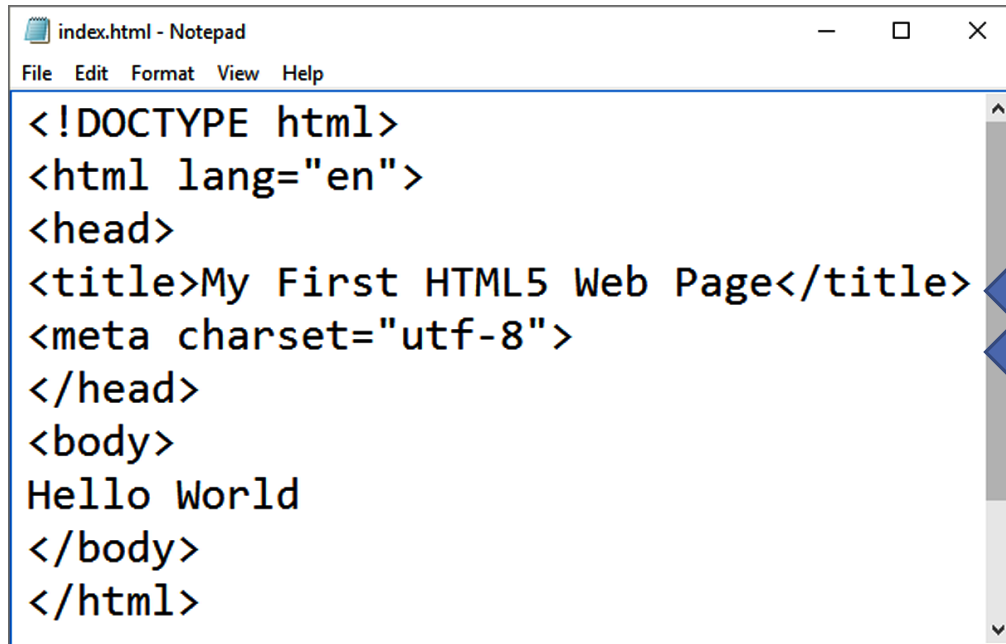
Body Section

Contains text and elements that display in the web page document

<body>

  …body section info goes here

  </body>

```
index.html - Notepad                    —    □    ✕
File  Edit  Format  View  Help
<!DOCTYPE html>
<html lang="en">
<head>
<title>My First HTML5 Web Page</title>  ⬅  Title Element
<meta charset="utf-8">                   ⬅  Meta Element
</head>
<body>
Hello World
</body>
</html>
```

Figure 2.3

My First HTML5 Web Pa ✕   +   —   □   ✕

← → ↻ | ▭ ☆ | ☰ ⋯

Hello World
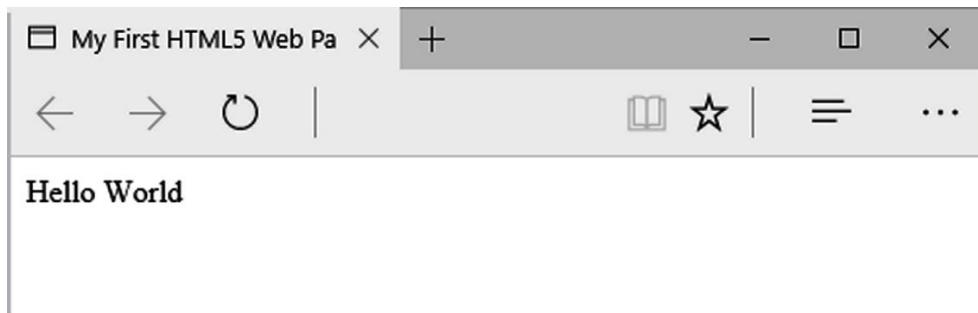
Figure 2.5

Heading Element

<h1>Heading Level 1</h1>

<h2>Heading Level 2</h2>

<h3>Heading Level 3</h3>

<h4>Heading Level 4</h4>

<h5>Heading Level 5</h5>

<h6>Heading Level 6</h6>

Heading Level 1

Heading Level 2

Heading Level 3

Heading Level 4

Heading Level 5

Heading Level 6

Paragraph Element

Paragraph element

<p> …*paragraph goes here…* </p>

◦ Groups sentences and sections of text together.

◦ Block Display – Configures empty space above and below

Line Break Element

Line Break element
◦ Stand-alone, or void tag

*…text goes here
This starts on a new line….*

◦ Causes the next element or text to display on a new line

Blockquote Element

Blockquote element

◦ Indents a block of text for special emphasis

<blockquote>

   …text goes here…
</blockquote>

◦ Block Display – Configures empty space above and below

Phrase Elements
Indicate the context and meaning of the text

Element	Example	Usage
\<b\>	bold text	Text that has no extra importance but is styled in bold font by usage and convention
\<em\>	emphasized text	Causes text to be emphasized in relation to other text; usually displayed in italics
\<i\>	italicized text	Text that has no extra importance but is styled in italics by usage and convention
\<mark\>	mark text	Text that is highlighted in order to be easily referenced (HTML5 only)
\<small\>	small text	Legal disclaimers and notices ("fine print") displayed in small font-size
\<strong\>	strong text	Strong importance; causes text to stand out from surrounding text; usually displayed in bold
\<sub\>	sub text	Displays a subscript as small text below the baseline
\<sup\>	sup text	Displays a superscript as small text above the baseline

Excerpted from Table 2.1

Proper Nesting

CODE:

`<p><i>Call for a free quote for your web development needs: <strong>888.555.5555 </strong></i></p>`

BROWSER DISPLAY:

*Call for a free quote for your web development needs: **888.555.5555***

HTML Lists

Unordered List

Ordered List
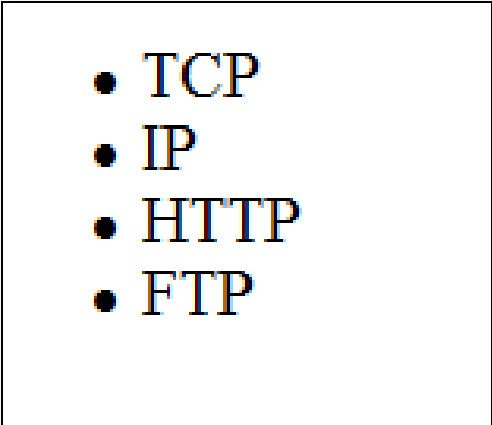
Description List

Unordered List

Displays a bullet, or list marker, before each entry in the list.

Contains the unordered list

Contains an item in the list

- TCP
- IP
- HTTP
- FTP

Unordered List Example

```
<ul>
   <li>TCP</li>
   <li>IP</li>
   <li>HTTP</li>
   <li>FTP</li>
</ul>
```

- TCP
- IP
- HTTP
- FTP

Ordered List

Displays a numbering or lettering system to itemize the information contained in the list

Contains the ordered list

◦ type attribute determines numbering scheme of list, default is numerals

Contains an item in the list

Ordered List Example

```
<ol>

  <li>Apply to school</li>

  <li>Register for course</li>

  <li>Pay tuition</li>

  <li>Attend course</li>

</ol>
```

1. Apply to school
2. Register for course
3. Pay tuition
4. Attend course

Description List

Useful to display a list of terms and descriptions or a list of FAQ and answers

- ◦ <dl>
  Contains the description list

- ◦ <dt>
  Contains a term/phrase/sentence
  Configures empty space above and below the text

- ◦ <dd>
  Contains a description of the term/phrase/sentence
  - ◦ Indents the text
  - ◦ Configures empty space above and below the text

Description List Example

```
<dl>

   <dt>IP</dt>

      <dd>Internet Protocol</dd>

   <dt>TCP</dt>

      <dd>Transmission Control Protocol</dd>

</dl>
```

IP
    Internet Protocol
TCP
    Transmission Control Protocol

Checkpoint

1. *Describe the features of a heading element and how it configures the text.*

2. *Describe the difference between ordered lists and unordered lists.*

3. *Describe the purpose of the blockquote tag.*

Special Characters

- Display special characters such as quotes, copyright symbol, etc.

Character	Code
©	©
<	<
>	>
&	&

Also see Table 2.3

Div Element

Configures a structural block area or "division" on a web page with empty space above and below.

Can contain other block display elements, including other div elements

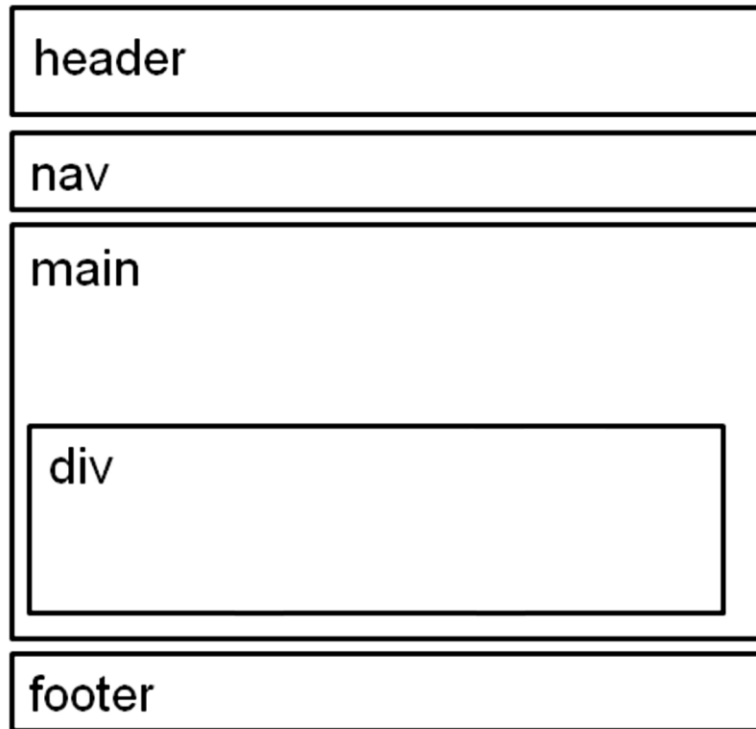`<div>Home Services Contact</div>`

HTML5 Structural Elements

header

nav

main

div

footer

Figure 2.20

header Element
<header></header>
Contains the web page
    document's headings

nav Element
<nav></nav>
Contains web page
    document's main navigation

main Element
<main></main>
Contains the web page
    document's main content

footer Element
<footer></footer>
Contains the web page
    document's footer

HTML5 Structural Elements

Figure 2.21

```
<body>

  <header> document headings go here </header>

  <nav> main navigation goes here </nav>

  <main> main content goes here </main>

  <footer>  document footer information goes here </footer>

</body>
```
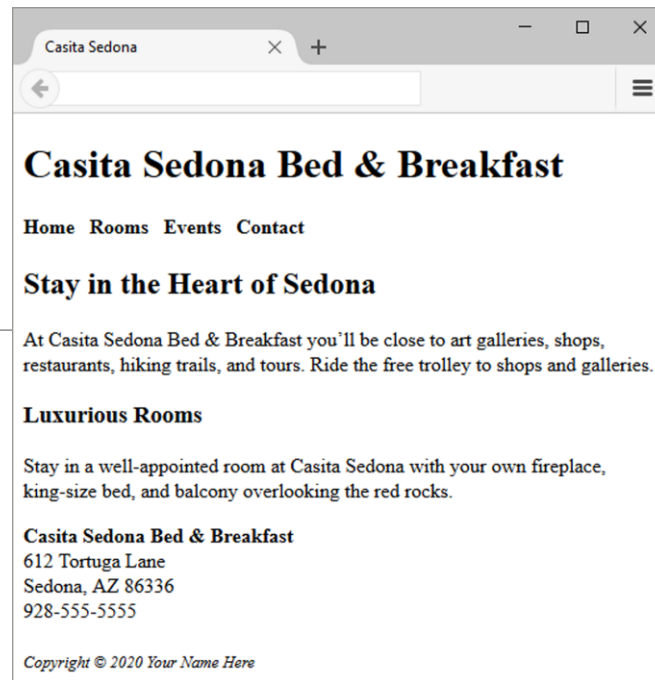
More Structural Elements

Aside Element
- block display; contains a sidebar, a note, or other tangential content

Section Element
- contains a "section" of a document, such as a chapter or topic
- block display

Article Element
- contains an independent entry, such as a blog posting, comment, or e-zine article that could stand on its own
- block display

Time Element
- represents a date or a time
- could be useful to date articles or blog posts
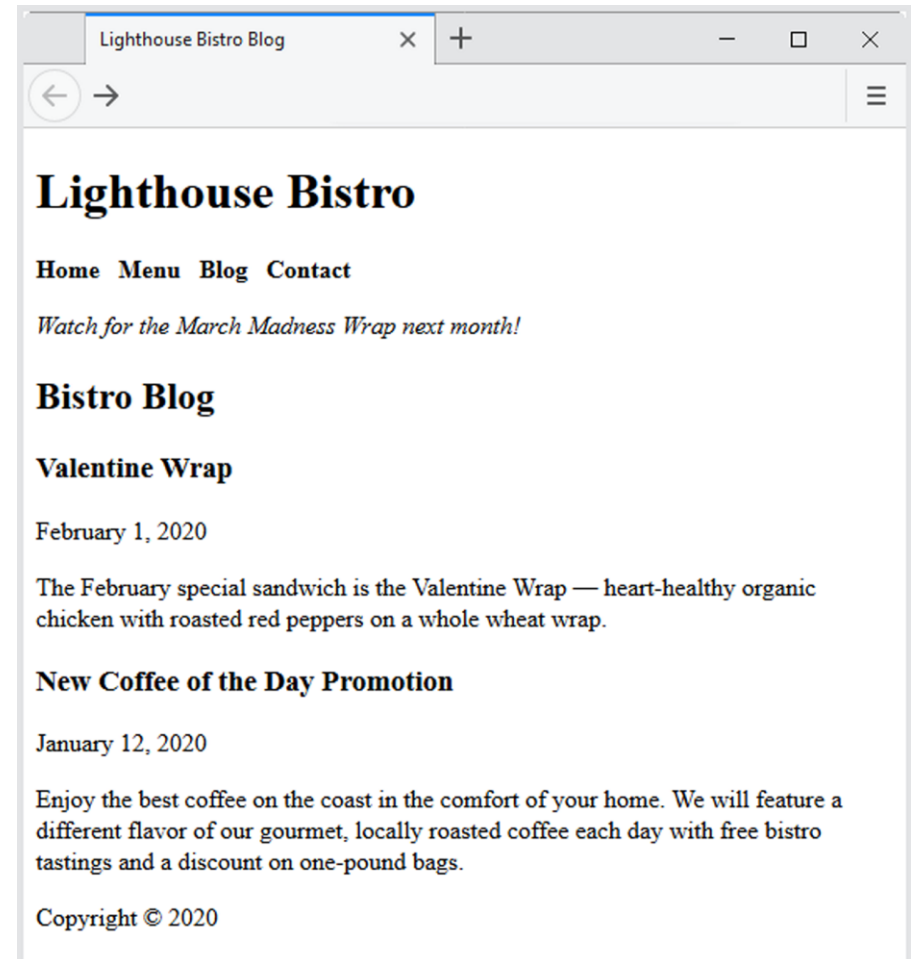- inline display

Figure 2.22

A Element (Anchor Element)

➤ Specifies a hyperlink reference (href) to a file

➤ Text between the $<a>$ and $$ is displayed on the web page.

Contact Us

➤ href Attribute
  • Indicates the file name or URL

Opening a Link in a New Browser Window

The target attribute on the anchor element opens a link in a new browser window or new browser tab.

`<a href="https://google.com" target="_blank">Search Google</a>`

HTML5 Block Anchor

Configure block display elements within a hyperlink

```
<a href="http://www.w3.org/TR/html-markup">

<h1>HTML5 Reference</h1>

<p>Bookmark this site for a handy HTML5 reference.</p>

</a>
```

Absolute & Relative Hyperlinks

Absolute link
- Link to a different website

Yahoo

Relative link
- Link to pages on your own site

Home

E-Mail Hyperlink

Automatically launch the default mail program configured for the browser

If no browser default is configured,

a message is displayed

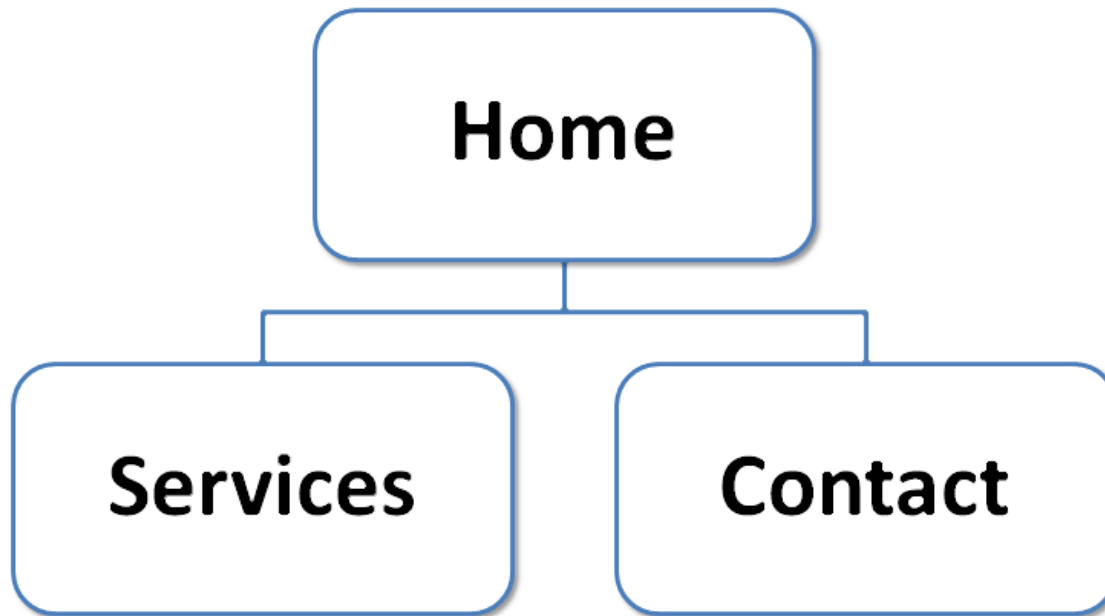me@gmail.com

Hyperlinks

Hands-On Practice

Figure 2.24

Checkpoint

1. *Describe the purpose of special characters.*

2. *Describe when to use an absolute link.*
    Is the http protocol used in the href value?

3. *Describe when to use a relative link. Is the http protocol used in the href value?*

Writing Valid HTML

Check your code for syntax errors
- Benefit:
  - Valid code →
    more consistent browser display

W3C HTML Validation Tool
- http://validator.w3.org

Summary

This chapter introduced you to HTML.

You will use these skills over and over again as you create web pages.