

# Web Development & Design Foundations with HTML5 8<sup>th</sup> Edition

---

## CHAPTER 2 KEY CONCEPTS

# 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 new HTML5 header, nav, main, and footer 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

# DTD Examples

---

## XHTML 1.0 Transitional DTD

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
  http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd>
```

## HTML5 DTD

```
<!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>
```

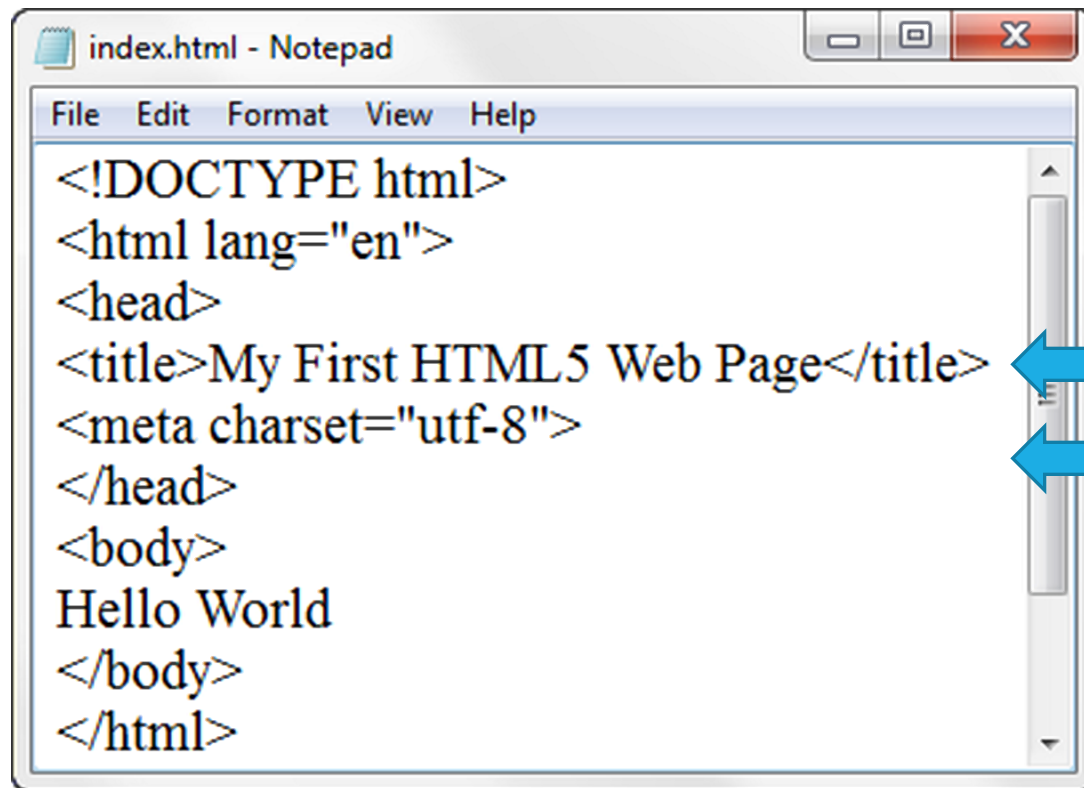
## Body Section

Contains text and elements that display in the web page document

```
<body>
```

*...body section info goes here*

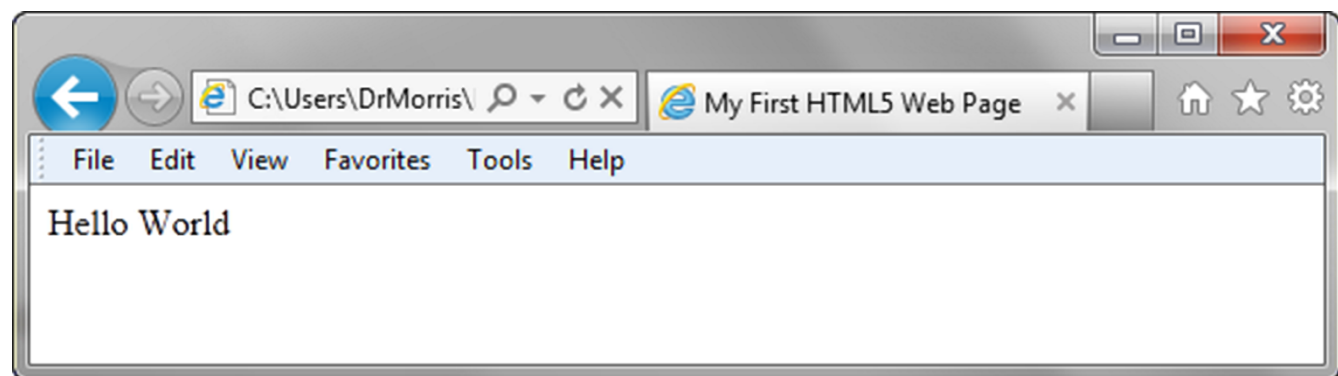
```
</body>
```



A Notepad window titled "index.html - Notepad" with a menu bar (File, Edit, Format, View, Help). The text content is as follows:

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>My First HTML5 Web Page</title>
<meta charset="utf-8">
</head>
<body>
Hello World
</body>
</html>
```

Title Element  
Meta Element



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

# 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***



Unordered List

Ordered List

Description List

*formerly called a definition list*

# Unordered List

---

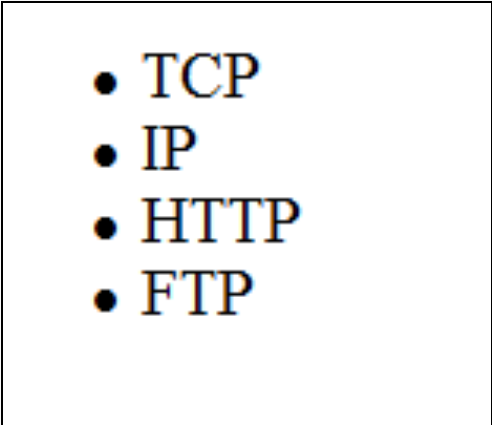
Displays a bullet, or list marker, before each entry in the list.

`<ul>`

Contains the unordered list

`<li>`

Contains an item in the list

- 
- TCP
  - IP
  - HTTP
  - FTP

# Unordered List Example

---

**<ul>**

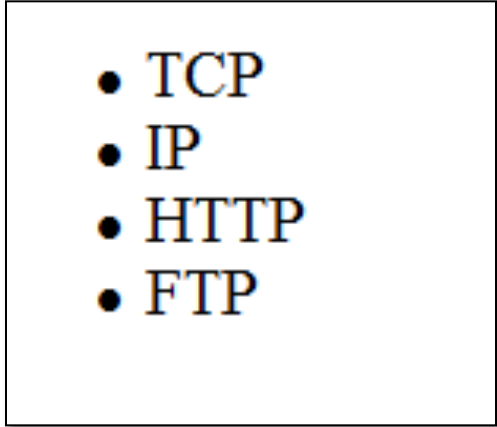
**<li>TCP</li>**

**<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

`<ol>`

Contains the ordered list

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

`<li>`

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
©	&copy;
<	&lt;
>	&gt;
&	&amp;
	&nbsp;

# Div Element

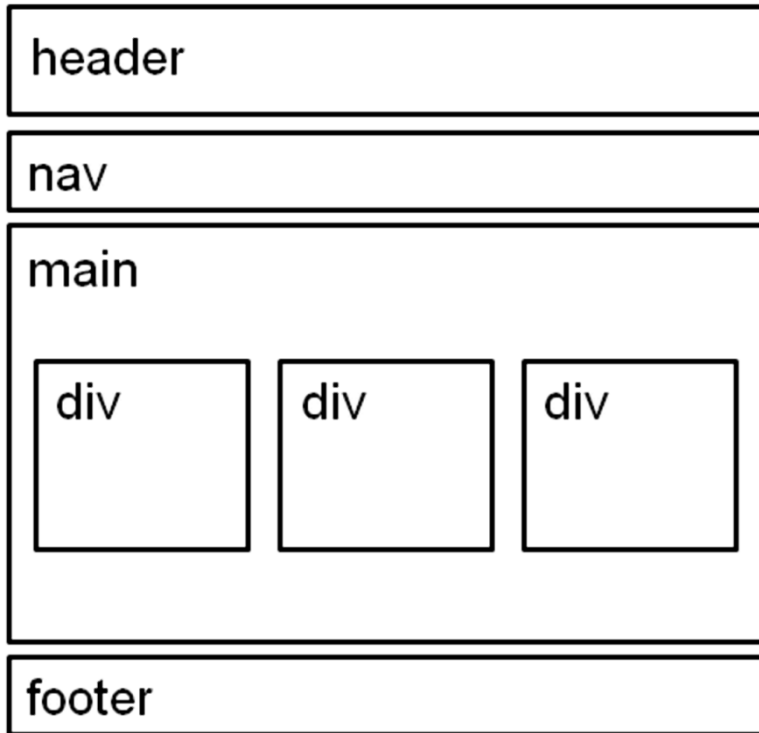
---

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 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>`

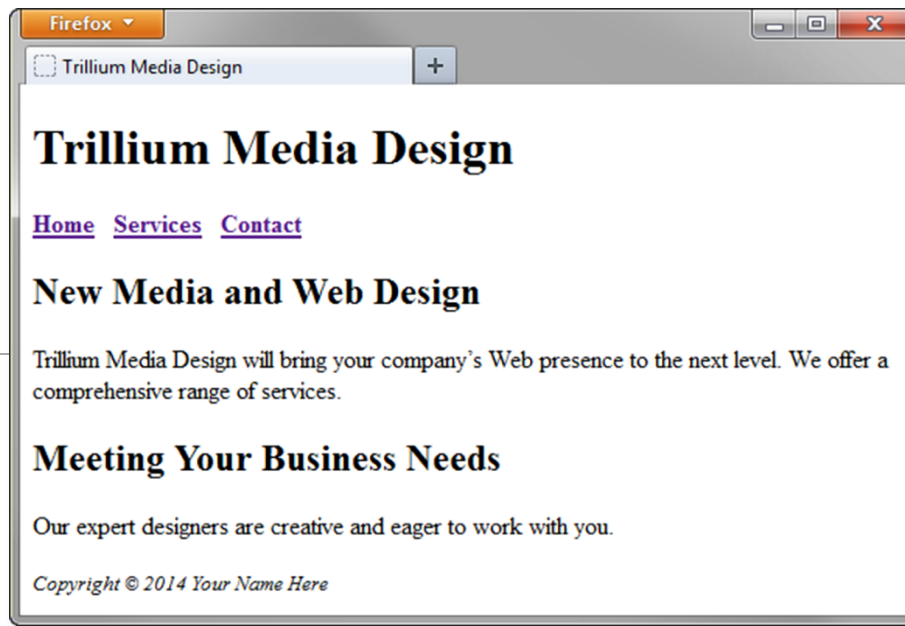
Contains the web page  
document's main content

## footer Element

`<footer></footer>`

Contains the web page  
document's footer

# HTML5 Structural Elements



<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>

# Anchor Element

---

- Specifies a hyperlink reference (href) to a file
- Text between the `<a>` and `</a>` is displayed on the web page.

**`<a href="contact.html">Contact Us</a>`**

- href Attribute
  - Indicates the file name or URL

# Absolute & Relative Hyperlinks

---

## Absolute link

- Link to a different website

**`<a href="http://yahoo.com">Yahoo</a>`**

## Relative link

- Link to pages on your own site

**`<a href="index.htm">Home</a>`**

# E-Mail Hyperlink

---

Automatically launch the default mail program configured for the browser

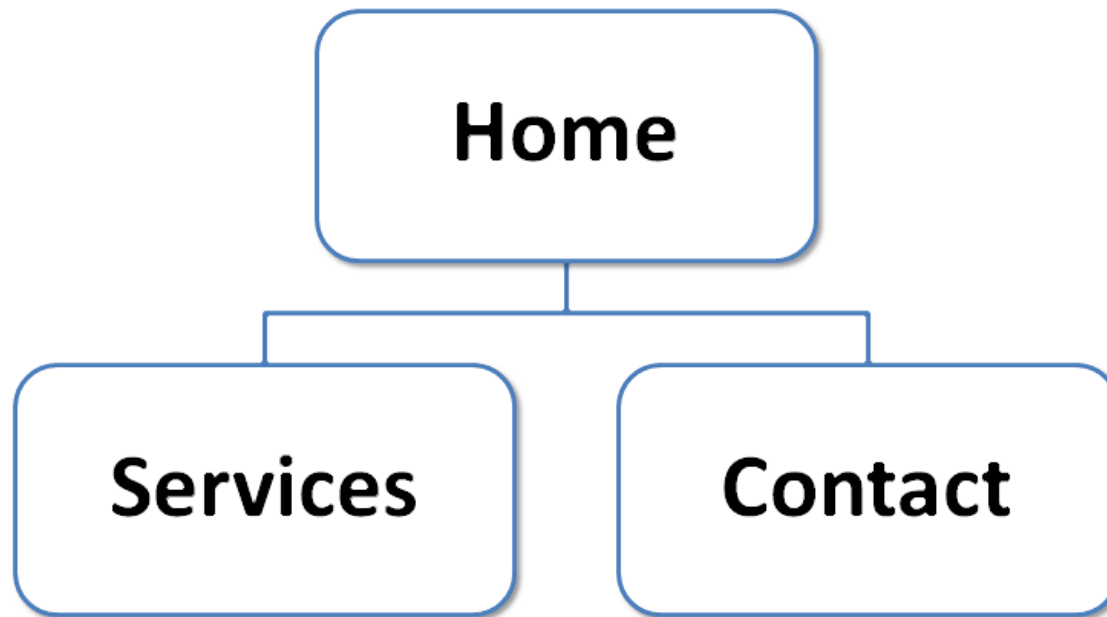
If no browser default is configured,  
a message is displayed

**`<a href="mailto:me@gmail.com">me@gmail.com</a>`**

# Hyperlinks

---

## Hands-On Practice





# 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.