

# Tutorial 1

## Getting Started with HTML5

# HTML, CSS, and Dynamic HTML

5<sup>TH</sup> EDITION



# Objectives

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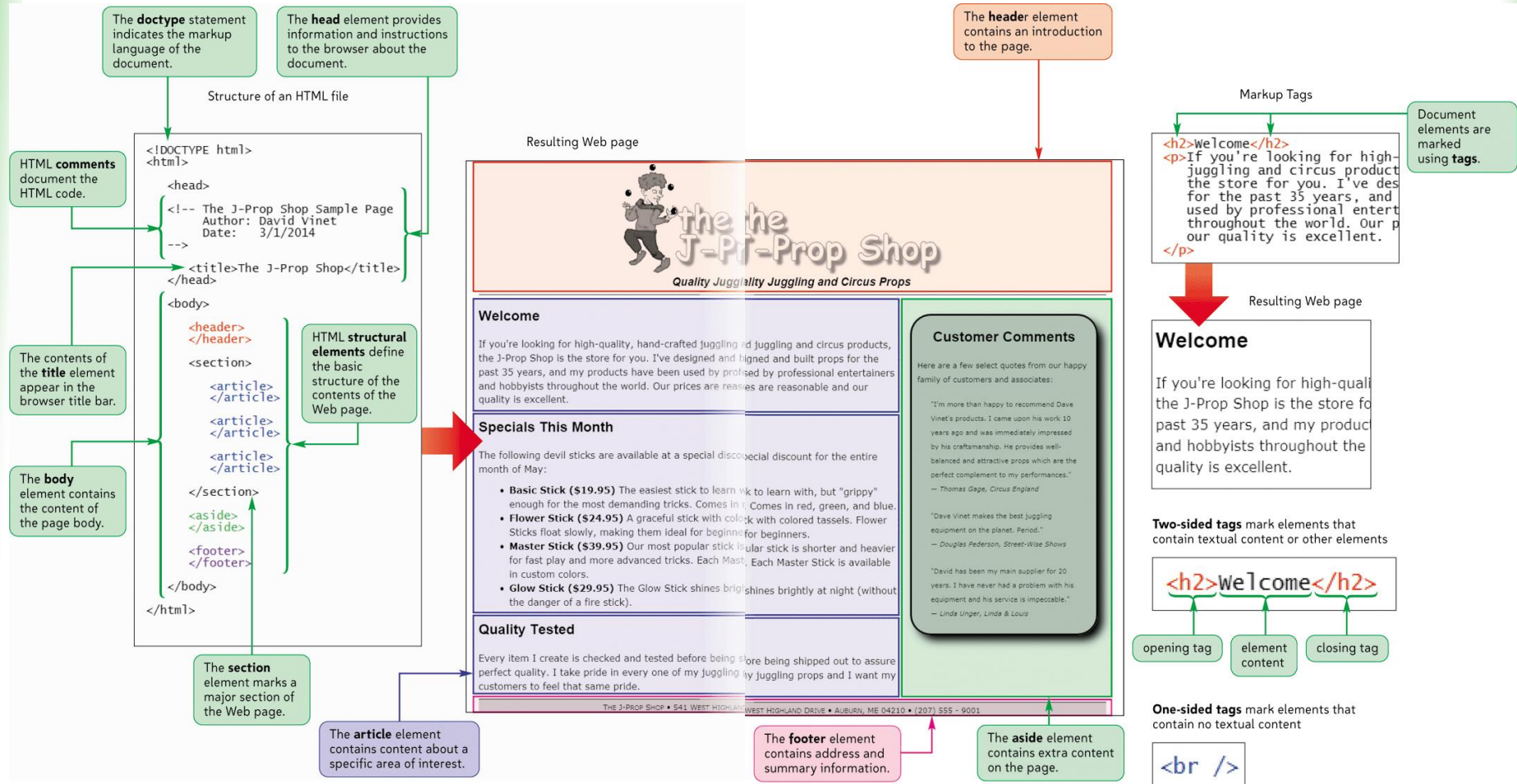
- “ Explore the history of the Internet, the Web, and HTML
- “ Compare the different versions of HTML
- “ Study the syntax of HTML tags and attributes
- “ Define a Web page head, body, and title
- “ Work with the HTML5 structural elements

# Objectives

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- “ Mark page headings, paragraphs, block quotes, and addresses
- “ Create unordered and ordered lists
- “ Apply an external style sheet to a Web page
- “ Run a JavaScript program
- “ Mark text-level elements including strong and emphasized text
- “ Insert inline images and line breaks
- “ Insert special characters from extended character sets

# The Structure of an HTML5 Document



# Exploring the History of the World Wide Web

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- “ A **network** is a structure linking computers together for the purpose of sharing information and services
- “ Users typically access a network through a computer called a **node** or **host**
- “ A host that provides information or a service is called a **server**

# Exploring the History of the World Wide Web

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- “ A computer or other device that receives a service is called a **client**
- “ One of the most commonly used designs is the **client-server network**
- “ If the computers that make up a network are close together (within a single department or building), then the network is referred to as a **local area network (LAN)**

# Exploring the History of the World Wide Web

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- “ A network that covers a wide area, such as several buildings or cities, is called a **wide area network (WAN)**
- “ The largest **WAN** in existence is the **Internet**
- “ Today the Internet has grown to include an uncountable number of networks and hosts involving computers, mobile phones, PDAs, MP3 players, gaming systems, and television stations

# Exploring the History of the World Wide Web

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- “ Timothy Berners-Lee and other researchers at the CERN nuclear research facility near Geneva, Switzerland laid the foundations for the **World Wide Web**, or the **Web**, in 1989
- “ They developed a system of interconnected **hypertext** documents that allowed their users to easily navigate from one topic to another
- “ **Hypertext** is a method of organization in which data sources are interconnected through a series of **links** or hyperlinks that users can activate to jump from one piece of information to another



# Web Pages and Web Servers

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- “ Each document on the World Wide Web is referred to as a **Web page**
- “ Web pages are stored on **Web servers**, which are computers that make Web pages available to any device connected to the Internet
- “ A **Web browser** retrieves the page from the Web server and renders it on the user’s computer or other device
- “ The earliest browsers, known as **text-based browsers**, were incapable of displaying images

# Introducing HTML

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- “ A Web page is a text file written in **Hypertext Markup Language**
- “ A **markup language** is a language that describes the content and structure of a document by identifying, or **tagging**, different elements in the document

# The History of HTML

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- “ The first popular markup language was **Standard Generalized Markup Language (SGML)**
- “ In the early years of HTML, Web developers were free to define and modify HTML in whatever ways they thought best

# The History of HTML

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- “ A group of Web designers and programmers, called the **World Wide Web Consortium**, or the **W3C**, created a set of standards or specifications that all browser manufacturers were to follow
- “ The **W3C** has no enforcement power
- “ The recommendations of the **W3C** are usually followed since a uniform approach to Web page creation is beneficial to everyone

# The History of HTML

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- “ Older features of HTML are often **deprecated**, or phased out, by the W3C. That does not mean you can't continue to use them—you may need to use them if you are supporting older browsers
- “ Current Web developers are increasingly using **XML (Extensible Markup Language)**
- “ **XML** is a metalanguage like SGML, but without SGML's complexity and overhead

# The History of HTML

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- “ **XHTML (Extensible Hypertext Markup Language)** is a stricter version of HTML and is designed to confront some of the problems associated with the different and competing versions of HTML
- “ **XHTML** is also designed to better integrate **HTML** with other markup languages such as **XML**

# The History of HTML

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- “ **XHTML 2.0** began development, but work was halted in 2009
- “ **HTML5** was developed as the next HTML specification, and the de facto standard for the next generation of HTML

# The History of HTML

**Figure 1-1** Versions of HTML

| Version   | Date           | Description   |
|-----------|----------------|---|
| HTML1.0   | 1989           | The first public version of HTML.   |
| HTML 2.0  | 1995           | Added interactive elements including Web forms.   |
| HTML 3.0  | 1996           | A proposed replacement for HTML 2.0 that was never widely adopted.  |
| HTML 3.2  | 1997           | Included additional support for Web tables and expanded the options for interactive form elements and a scripting language.   |
| HTML 4.01 | 1999           | Added support for style sheets to give Web designers greater control over page layout and appearance, and provided support for multimedia elements such as audio and video. Current browsers support almost all of HTML 4.01. |
| XHTML 1.0 | 2001           | A reformulation of HTML 4.01 in the XML language in order to provide enforceable standards for HTML content and to allow HTML to interact with other XML languages.   |
| XHTML 1.1 | 2002           | A minor update to XHTML 1.0 that allows for modularity and simplifies writing extensions to the language.   |
| XHTML 2.0 | discontinued   | The follow-up version to XHTML 1.1 designed to fix some of the problems inherent in HTML 4.01 syntax. Work on this version was discontinued in 2009 due to lack of browser support.   |
| HTML 5.0  | In development | An update to HTML 4.01 that provides support for a variety of new features including semantic page elements, column layout, form validation, offline storage, and enhanced multimedia.  |
| XHTML 5.0 | In development | A version of HTML 5.0 written under the XML language; unlike XHTML 2.0, XHTML 5.0 will be backward compatible with XHTML 1.1.   |



# HTML and Style Sheets

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- “ HTML marks the different parts of a document, but it does not indicate how document content should be displayed by browsers
- “ For this reason, the exact appearance of each page element is described in a separate document known as a **style sheet**
  - Internal style sheets specify the appearance of different HTML elements

# Tools for Creating HTML Documents

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- “ Basic text editor such as Windows Notepad
- “ Other software programs that enable you to create documents in different formats, such as Microsoft Word or Adobe Acrobat, include tools to convert their documents into HTML for quick and easy publishing on the Web
- “ Web publishing software manages all of the code and extended features of your site

# Entering Elements and Attributes

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- “ An HTML document is composed of **elements** that represent distinct items in the Web page, such as a paragraph, the page heading, or even the entire body of the page itself
  - Elements are marked by one or more **tags**
- “ A **two-sided tag** is a tag that contains some document content. General syntax for a two-sided tag:

**<element>content</element>**

# Marking Elements with Tags

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- “ A two-sided tag’s opening tag (<p>) and closing tag (</p>) should completely enclose its content
- “ Elements can contain other elements
  - . Tags cannot overlap

**<p>Welcome to the J-Prop Shop</p>**

# Adding an Attribute to an Element

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” To add an element attribute, use the format

```
<element attribute1="value1"  
attribute2="value2"  
...>content</element>
```

where *attribute1*, *attribute2*, etc. are the names of attributes associated with the element, and *value1*, *value2*, etc. are the values of those attributes

# White Space and HTML

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- “ HTML file documents are composed of text characters and **white space**
- “ **White space** is the blank space, tabs, and line breaks within the file
- “ HTML treats each occurrence of **white space** as a single blank space
- “ You can use **white space** to make your document more readable

# Exploring the Structure of an HTML File

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```
<html>  
  <head>  
    head content  
  </head>  
  <body>  
    body content  
  </body>  
</html>
```

# The Structure of an HTML File

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- “ An HTML document is divided into two main sections: the **head** and the **body**
- “ The **head element** contains information about the document, for example the document title or the keywords
- “ The content of the **head** element is not displayed within the Web page



# The Structure of an HTML File

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- “ The **body element** contains all of the content to appear on the Web page
- “ The **body element** can contain code that tells the browser how to render the content

# Converting an HTML Document into XHTML

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- “ There is considerable overlap between HTML and XHTML
- “ You can convert an HTML file into an XHTML file by replacing the opening `<html>` tag with the following three lines of code:
  - . `<?xml version="10" encoding="UTF-8" standalone="no" ?>`
  - . `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 10 Strict//EN" "http://www3org/TR/xhtml1/DTD/xhtml1-strict.dtd">`
  - . `<html xmlns=http://www3org/1999/xhtml>`

# The Document Type Declaration

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- “ Prior to the opening `<html>` tag, many HTML files also include a **Document Type Declaration**, or **doctype**, to indicate the type of markup language used in the document

```
<!DOCTYPE html>
```

# Defining the Page Title

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**Figure 1-4** Specifying the page title

```
<!DOCTYPE html>
<html>
  <head>
    <title>The J-Prop Shop</title>
  </head>
  <body>
  </body>
</html>
```

text will appear in  
browser title bar  
or on browser tab

# Adding Comments

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- “ The **comment tag** adds notes to your HTML code

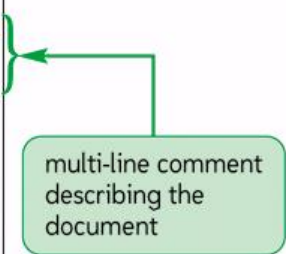
`<!-- comment -->`

- “ Comments can be spread over several lines
- “ Comments are useful in documenting your HTML code for yourself and others

# Adding Comments

Figure 1-5 Adding comments to the HTML file

```
<!DOCTYPE html>
<html>
  <head>
    <!-- The J-Prop Shop Sample Page
         Author: David Vinet
         Date: 3/1/2014
    -->
    <title>The J-Prop Shop</title>
  </head>
  <body>
  </body>
</html>
```



multi-line comment describing the document

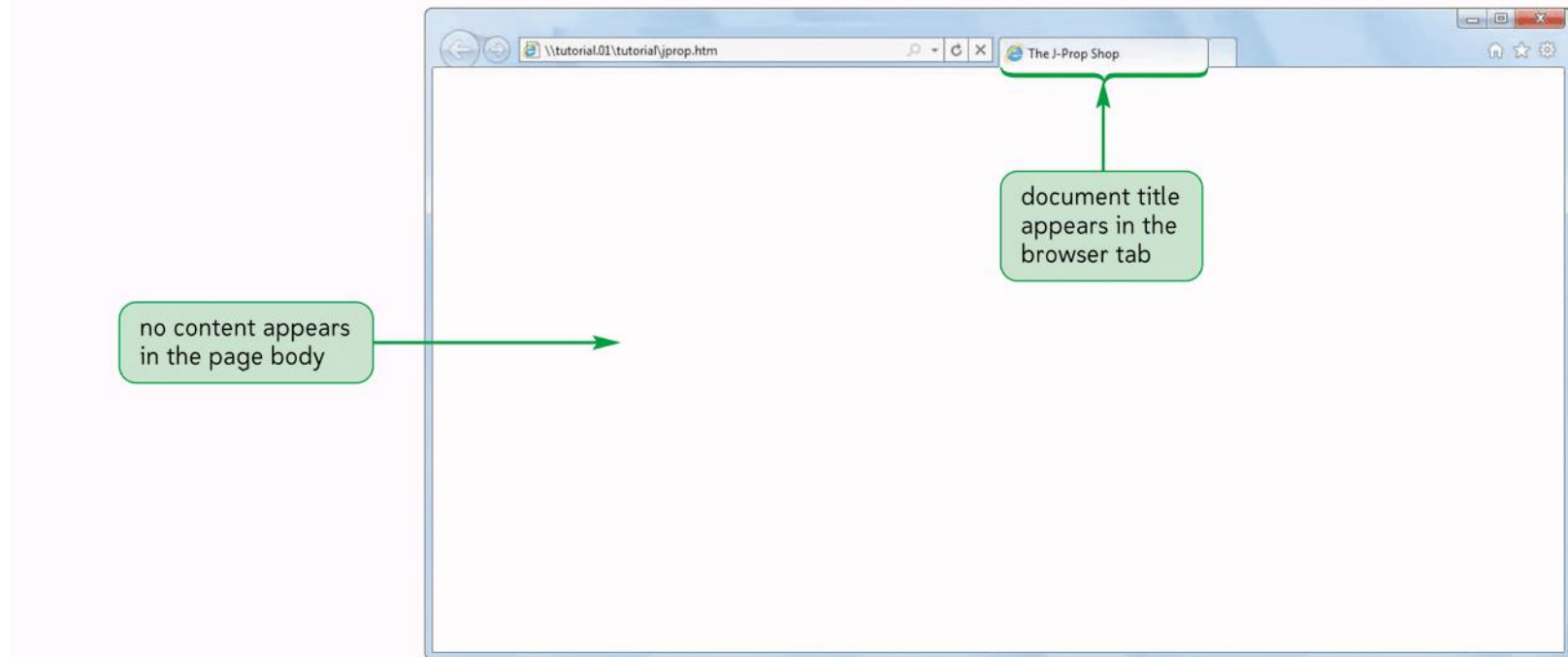
# Displaying an HTML File

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- “ As you continue modifying the HTML code, you should occasionally view it with your Web browser to verify that you have not introduced any errors
- “ You may want to view the results using different browsers to check for compatibility

# Displaying an HTML File

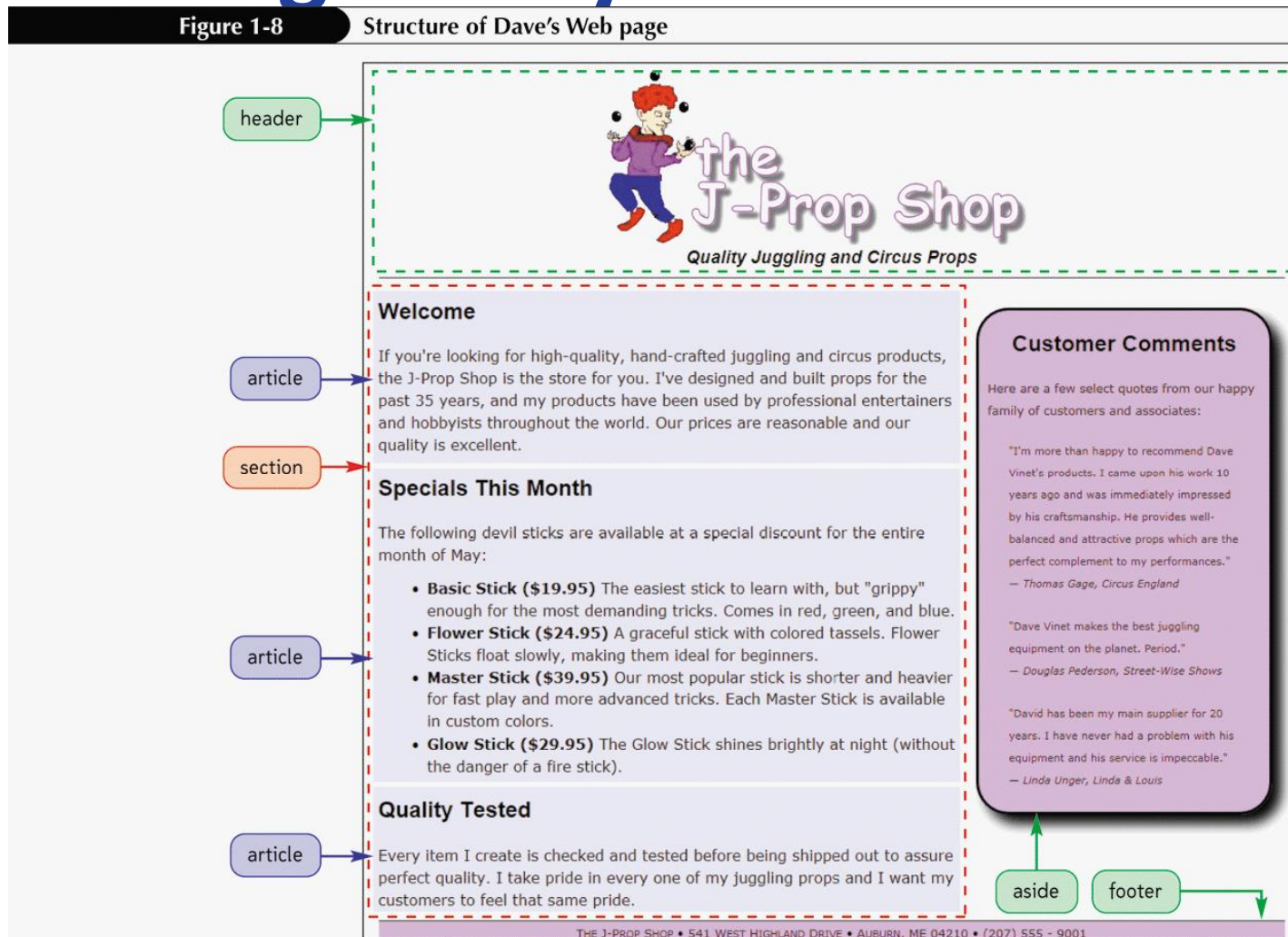
Figure 1-6 Viewing the initial HTML file in a Web browser





# Defining the Structure of the Page Body

Figure 1-8 Structure of Dave's Web page



# Defining the Structure of the Page Body

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**Figure 1-9** HTML5 structural elements

| Structural Element | Description  |
|--------------------|--|
| article            | A subsection covering a single topic                                       |
| aside              | Content containing tangential or side issues to the main topic of the page |
| footer             | Content placed at the bottom of the page                                   |
| header             | Content placed at the top of the page                                      |
| nav                | A navigation list of hypertext links                                       |
| section            | A major topical area in the page   |

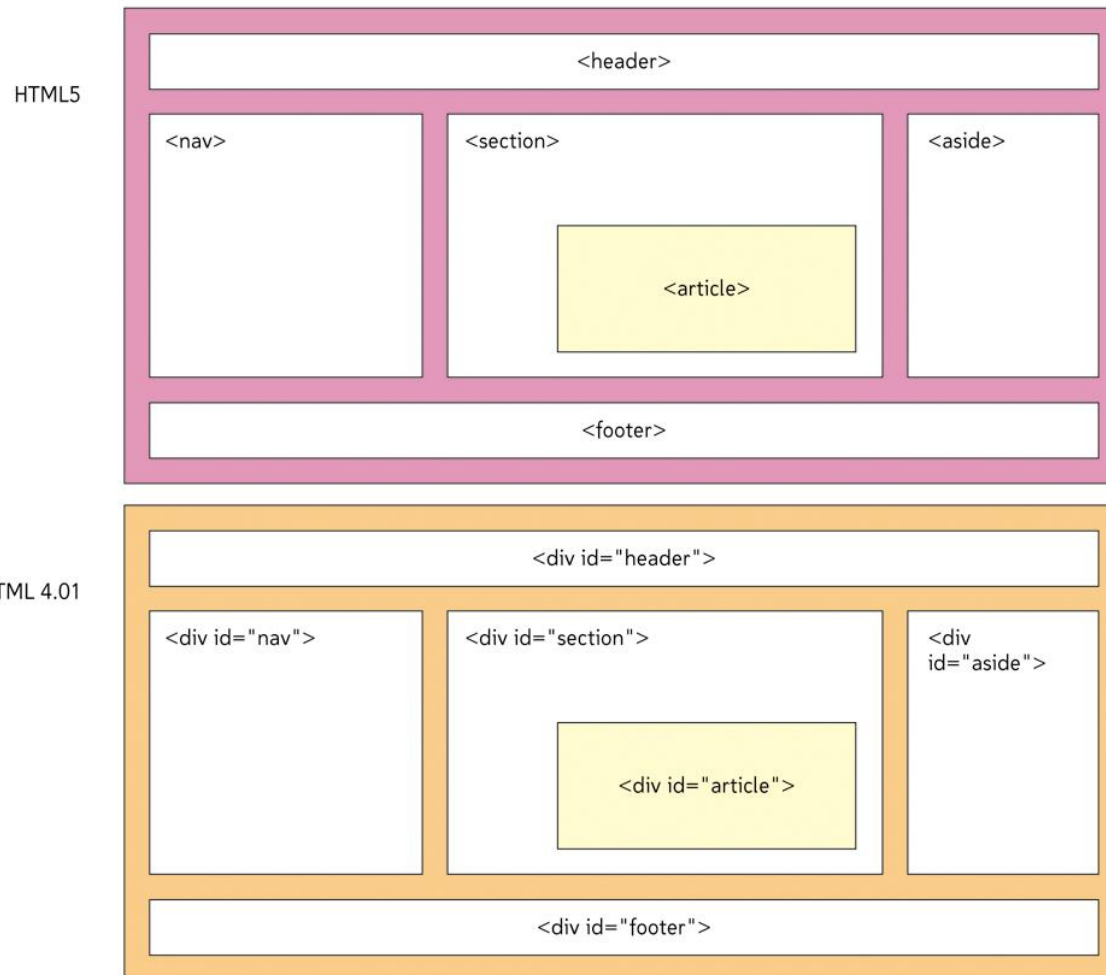
# Marking Structural Elements in HTML5

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- “ To mark the page header, use the header element
- “ To mark the page footer, use the footer element
- “ To mark a main section of page content, use the section element
- “ To mark a sidebar, use the aside element
- “ To mark an article, use the article element

# Marking a Section with the div Element

Figure 1-12 Structural elements in HTML5 and HTML 4.01



# Page Content Elements

The **h2** element marks a heading.

```
<h2>Welcome</h2>
```

The **p** element marks a paragraph.

```
<p>If you're looking for high-quality juggling and circus products, the store for you. I've designed for the past 35 years, and my products have been used by professional entertainers and hobbyists throughout the world. Our products are reasonable and our quality is excellent.</p>
```

The **ul** element marks an unordered list.

```
<ul>
<li><strong>Basic Stick ($19.95)</strong> The easiest stick to learn with, but "grippy" enough for the most demanding tricks. Comes in red, green, and blue.
</li>
<li><strong>Flower Stick ($24.95)</strong> A graceful stick with colored tassels. Flower Sticks float slowly, making them ideal for beginners.
</li>
<li><strong>Master Stick ($39.95)</strong> Our most popular stick is shorter and heavier for fast play and more advanced tricks. Each Master Stick is available in custom colors.
</li>
<li><strong>Glow Stick ($29.95)</strong> The Glow Stick shines brightly at night (without the danger of a fire stick).
</li>
</ul>
```

The **li** element marks an item in the list.

The **strong** element is a text-level element that marks strong or bold text.

Resulting Web page

The **hgroup** element groups main headings and subheadings.

```
<hgroup>
<h1>

</h1>
<h2>
Quality Juggling and Circus Props
</h2>
</hgroup>
```

The **img** element is used to insert images into the Web page.

The **blockquote** element marks large blocks of quoted material.

```
<blockquote>
<p>I'm more than happy to recommend Dave Vinet's products. I came upon his work 10 years ago and was immediately impressed by his craftsmanship. He provides well-balanced and attractive props which are the perfect complement to my performances."
<br />
</p>
</blockquote>
```

The **cite** element marks a citation.

```
<cite>Thomas Gage, Circus England</cite>
```

The **&#8212;** entity represents the em-dash character.

The **address** element marks an address or contact info.

```
<address>The J-Prop Shop • 541 West Highland Drive • Auburn, ME 04210 • (207) 555-9001</address>
```

The **&bull;** entity represents the bullet character.

A page rendered with the default browser style sheet

The same page rendered with a user-defined style sheet

The **link** element connects the Web page to the style sheet.

```
<link href="jpsstyles.css" rel="stylesheet" type="text/css" />
```

The href attribute indicates the name of the style sheet file.

The type attribute indicates the language of the style sheet.

# Working with Grouping Elements

**Figure 1-13** Grouping elements

| Grouping Element | Description   |
|------------------|---|
| address          | Contact information (usually rendered as <i>italicized</i> text)  |
| blockquote       | An extended quotation (usually indented from the left and right margins)  |
| dd               | A definition from a description list  |
| div              | A generic grouping element  |
| dl               | A description list  |
| dt               | A definition term from a description list   |
| figure           | A figure or illustration (HTML5 only)   |
| figcaption       | The caption of a figure, which must be nested within the figure element (HTML5 only)  |
| h $n$            | A heading, where $n$ is a value from 1 to 6, with h1 as the most prominent heading and h6 the least prominent (usually displayed in <b>bold</b> text) |
| li               | A list item from an ordered or unordered list   |
| ol               | An ordered list   |
| p                | A paragraph   |
| pre              | Preformatted text, retaining all white space and special characters (usually displayed in a <code>fixed width</code> font)                            |
| ul               | An unordered list   |



# Working with Grouping Elements

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- “ **Grouping elements** are elements that contain content that is viewed as a distinct block within the Web page
- “ **Heading elements** are block-level elements that contain the text of main headings on the Web page
  - . `<hn>content<hn>`
  - .  $n$  is an integer between 1 and 6
    - “ `<h1>` is the largest heading
    - “ `<h6>` is the smallest heading

# Marking Grouping Content

---

- “ To mark a heading, enter  
`<h $n$ >content</h $n$ >`  
where  $n$  is an integer from 1 to 6 and *content* is the text of heading
- “ To mark a paragraph, enter  
`<p>content</p>`
- “ To mark a block quote, enter  
`<blockquote>content</blockquote>`



# Adding Headings

Figure 1-15 Inserting h1 and h2 headings

```
<body>
  <header>
    <h1>The J-Prop Shop</h1>
    <h2>Quality Juggling and Circus Props</h2>
  </header>

  <section>
    <article>
      <h2>Welcome</h2>
    </article>

    <article>
      <h2>Specials This Month</h2>
    </article>

    <article>
      <h2>Quality Tested</h2>
    </article>
  </section>

  <aside>
    <h2>Customer Comments</h2>
  </aside>

  <footer>
</footer>
</body>
```

Figure 1-16 Viewing h1 and h2 headings in Dave's document

**The J-Prop Shop**

**Quality Juggling and Circus Props**

**Welcome**

**Specials This Month**

**Quality Tested**

**Customer Comments**

h1 heading

h2 headings

# Marking Paragraph Elements

Figure 1-18 Adding paragraph elements

```
<section>
<article>
  <h2>Welcome</h2>
  <p>If you're looking for high-quality, hand-crafted
    juggling and circus products, the J-Prop Shop is
    the store for you. I've designed and built props
    for the past 35 years, and my products have been
    used by professional entertainers and hobbyists
    throughout the world. Our prices are reasonable and
    our quality is excellent.
  </p>
</article>
<article>
  <h2>Specials This Month</h2>
  <p>The following devil sticks are available at a
    special discount for the entire month of May:
  </p>
</article>
<article>
  <h2>Quality Tested</h2>
  <p>Every item I create is checked and tested before
    being shipped out to assure perfect quality. I take
    pride in every one of my juggling props and I want
    my customers to feel that same pride.
  </p>
</article>
</section>
<aside>
  <h2>Customer Comments</h2>
  <p>Here are a few select quotes from our happy family
    of customers and associates:
  </p>
</aside>
```

Figure 1-19 Paragraphs in the Web page



# Marking a Block Quote

- “ The syntax for making an extended quote is
  - `<blockquote>content</blockquote>`

Figure 1-20 Adding a block quote

```
<aside>
  <h2>Customer Comments</h2>
  <p>Here are a few select quotes from our happy family
of customers and associates:
  </p>
  <blockquote>
    <p>I'm more than happy to recommend Dave Vinet's
products. I came upon his work 10 years ago and
was immediately impressed by his craftsmanship.
He provides well-balanced and attractive
props which are the perfect complement to my
performances."
    </p>
    <p>"Dave Vinet makes the best juggling equipment on
the planet. Period."
    </p>
    <p>"David has been my main supplier for 20 years. I
have never had a problem with his equipment and
his service is impeccable."
    </p>
  </blockquote>
</aside>
```

Figure 1-21 Block quote in the Web page



# Marking an Address

” `<address>content</address>`

Figure 1-22 Adding an address

```
<footer>  
  <address>The J-Prop Shop  
    541 West Highland Drive  
    Auburn, ME 04210  
    (207) 555 - 9001  
  </address>  
</footer>  
</body>
```

Figure 1-23 Address as rendered in the Web page

## Customer Comments

Here are a few select quotes from our happy family of customers and associates:

"I'm more than happy to recommend Dave Vinet's products. I came upon his work 10 years ago and was immediately impressed by his craftsmanship. He provides well-balanced and attractive props which are the perfect complement to my performances."

"Dave Vinet makes the best juggling equipment on the planet. Period."

"David has been my main supplier for 20 years. I have never had a problem with his equipment and his service is impeccable."

address text is displayed in italic by default

*The J-Prop Shop 541 West Highland Drive Auburn, ME 04210 (207) 555 - 9001*

# Marking a List

---

- “ HTML supports three kinds of lists: **ordered**, **unordered**, and **description**
- “ You use an **ordered list** for items that must appear in a numerical order
- “ You use an **unordered list** for items that do not need to occur in any special order
- “ One **list** can contain another list. This is called a nested list

# Description Lists

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- “ The **description list** contains a list of terms, each followed by the term’s description
- “ Web browsers typically display the definition description below the definition term and slightly indented:

## **Basic Stick**

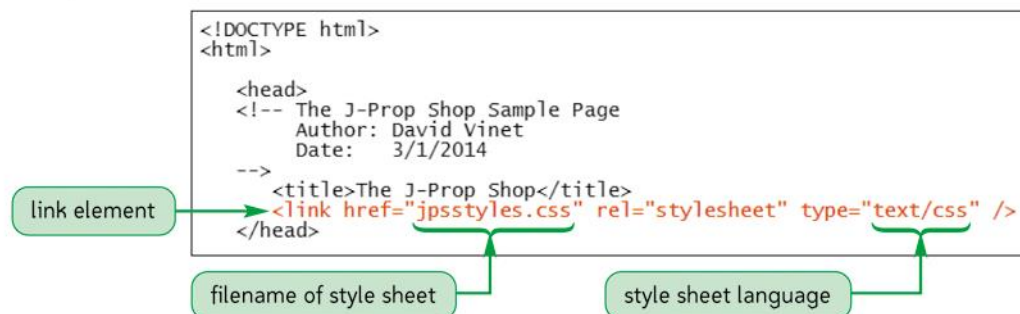
**Easiest stick to learn**

# Applying an External Style Sheet

- “ Style sheets are written in the **Cascading Style Sheet (CSS)** language
- “ To apply an external style sheet to a Web page, you create a link within the document head to the style sheet file using the link element

```
<link href="file" rel="stylesheet" type="text/css" />
```


Figure 1-30 Linking to the jpsstyles.css style sheet



# Linking to a JavaScript File

**Figure 1-33** Linking to the Modernizr script

```
<!DOCTYPE html>
<html>
  <head>
    <!-- The J-Prop Shop Sample Page
         Author: David Vinet
         Date: 3/1/2014
    -->
    <title>The J-Prop Shop</title>
    <script src="modernizr-1.5.js"></script>
    <link href="jpsstyles.css" rel="stylesheet" type="text/css" />
  </head>
```





# Marking Text-Level Elements

Figure 1-35 Text-level elements

| Text-Level Element  | Description  |
|---------------------|--|
| <code>a</code>      | A hypertext link   |
| <code>abbr</code>   | An abbreviation  |
| <code>b</code>      | Text offset from the surrounding content (usually displayed in <b>boldface</b> text) |
| <code>cite</code>   | A citation (usually displayed in <i>italics</i> )                                    |
| <code>code</code>   | Program code (usually displayed in a <code>fixed width</code> font)                  |
| <code>del</code>    | Deleted text (usually displayed with a <del>strikethrough</del> line)                |
| <code>dfn</code>    | A definition term (usually displayed in <i>italics</i> )                             |
| <code>em</code>     | Emphasized content (usually displayed in <i>italics</i> )                            |
| <code>i</code>      | Text representing an alternate voice or mood (usually displayed in <i>italics</i> )  |
| <code>ins</code>    | Inserted text (usually displayed with an <u>underline</u> )                          |
| <code>kbd</code>    | Keyboard text (usually displayed in a <code>fixed width</code> font)                 |
| <code>mark</code>   | Highlighted or marked text (usually displayed with a <b>highlight</b> . HTML5 only)  |
| <code>q</code>      | Quoted text (occasionally enclosed in "quotes")                                      |
| <code>samp</code>   | Sample computer code (usually displayed in a <code>fixed width</code> font)          |
| <code>small</code>  | Text displayed in a smaller font than surrounding content                            |
| <code>span</code>   | A span of generic text   |
| <code>strong</code> | Strongly emphasized content (usually displayed in <b>boldface</b> text)              |
| <code>sub</code>    | Subscripted text   |
| <code>sup</code>    | Superscripted text   |
| <code>time</code>   | A date and time value (HTML5 only)   |
| <code>var</code>    | Programming variables (usually displayed in <i>italic</i> )                          |

# Using the Generic Elements

## div and span

---

- “ HTML supports two such generic elements: div and span
  - The div element is used to mark general grouping content
  - The span element is used to mark general text-level content

# Marking a Line Break

Figure 1-41 Inserting line breaks

line break element

```
<blockquote>
  <p>"I'm more than happy to recommend Dave Vinet's
  products. I came upon his work 10 years ago and
  was immediately impressed by his craftsmanship.
  He provides well-balanced and attractive
  props which are the perfect complement to my
  performances."
  <br />
  <cite>Thomas Gage, Circus England</cite>
</p>
<p>"Dave Vinet makes the best juggling equipment on
the planet. Period."
  <br />
  <cite>Douglas Pederson, Street-Wise Shows</cite>
</p>
<p>"David has been my main supplier for 20 years. I
have never had a problem with his equipment and
his service is impeccable."
  <br />
  <cite>Linda Unger, Linda & Louis</cite>
</p>
</blockquote>
```

# Inserting an Inline Image

Figure 1-42 Adding an inline image

image file

```
<body>
<header>
  <h1></h1>
  <h2>Quality Juggling and Circus Props</h2>
</header>
<section>
  <article>
    <h2>Welcome</h2>
    <p>If you're looking for high-quality, hand-crafted
    juggling and circus products, the J-Prop Shop is
    the store for you. I've designed and built props
    for the past 35 years, and my products have been
    used by professional entertainers and hobbyists
    throughout the world. Our prices are reasonable and
    our quality is excellent.
    </p>
  </article>
</section>
```

alternate text displayed  
in place of the image

Figure 1-43 Viewing the company logo

company logo



## Welcome

If you're looking for high-quality, hand-crafted juggling and circus products, the J-Prop Shop is the store for you. I've designed and built props for the past 35 years, and my products have been used by professional entertainers and hobbyists throughout the world. Our prices are reasonable and our quality is excellent.

## Customer Comments

Here are a few select quotes from our happy family of customers and associates:

"I'm more than happy to recommend Dave"

# Figures and Figure Captions

---

- “ In books and magazines, figures and figure captions are often placed within boxes that stand aside from the main content of an article
- “ HTML5 introduced this type of object to Web page markup with the figure and figcaption elements

```
<figure>
```

```
    content
```

```
    <figcaption>caption</figcaption>
```

```
</figure>
```

# Working with Character Sets and Special Characters

---

- ” **Character sets** come in a wide variety of sizes, based on the number of symbols required for communication in the chosen Language
- **ASCII (American Standard Code for Information Interchange)**
  - **Latin-1**
  - **ISO 8859-1**
  - **Unicode**
  - **UTF-8**

# Working with Character Sets and Special Characters

---

- “ **Character encoding** associates each symbol from a character set with a numeric value called the **numeric character reference**
- “ Another way to insert a special symbol is to use a **character entity reference**, in which a short memorable name is used in place of the numeric character reference

# Working with Character Sets and Special Characters

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- “ To insert a symbol based on the encoding number, use the entity `&#code;`  
where *code* is the encoding number.
- “ To insert a symbol based on a character entity reference, use the entity *char*;  
where *char* is the name assigned to the character.
- “ To insert a nonbreaking space, use the following entity:  
`&nbsp;`
- “ To insert the < symbol, use the following entity:  
`&lt;`
- “ To insert the > symbol, use the following entity:  
`&gt;`



# Working with Character Sets and Special Characters

Figure 1-44 HTML characters demo page

Enter a character code or character name:

Select a table of characters from the list box:

**General Symbols**

|              |              |              |              |              |             |            |              |              |            |
|--------------|--------------|--------------|--------------|--------------|-------------|------------|--------------|--------------|------------|
| "            | &            | <            | >            | nbsp (160)   | ¡           | ¢          | £            | ¤            | ¥          |
| quot (34)    | amp (38)     | lt (60)      | gt (62)      | nbsp (160)   | ¡ (161)     | cent (162) | pound (163)  | curren (164) | yen (165)  |
|              | §            | ¨            | ©            | ª            | «           | ¬          | ®            | ¯            |            |
| brvbar (166) | sect (167)   | uml (168)    | copy (169)   | ordf (170)   | laquo (171) | not (172)  | shy (173)    | reg (174)    | macr (175) |
| °            | ±            | ²            | ³            | ´            | µ           | ¶          | ·            | ¸            | ¹          |
| deg (176)    | plusmn (177) | sup2 (178)   | sup3 (179)   | acute (180)  | micro (181) | para (182) | middot (183) | cedil (184)  | sup1 (185) |
| º            | »            | ¼            | ½            | ¾            |             |            |              |              |            |
| ordm (186)   | raquo (187)  | frac14 (188) | frac12 (189) | frac34 (190) |             |            |              |              |            |

Annotations:

- character symbol: points to the registered trademark symbol (®)
- character entity reference: points to the text '&reg;' in the search bar
- symbol: points to the registered trademark symbol (®) in the table
- numeric character reference: points to 'reg (174)' in the table
- character entity reference: points to 'frac34 (190)' in the table

# Specifying a Character Set

Figure 1-47 Specifying the character encoding

```
<!DOCTYPE html>
<html>

  <head>
    <!-- The J-Prop Shop Sample Page
         Author: David Vinet
         Date: 3/1/2014
    -->
    <meta charset="UTF-8" />
    <title>The J-Prop Shop</title>
    <script src="modernizr-1.5.js"></script>
    <link href="jpsstyles.css" rel="stylesheet" type="text/css" />
  </head>
```

