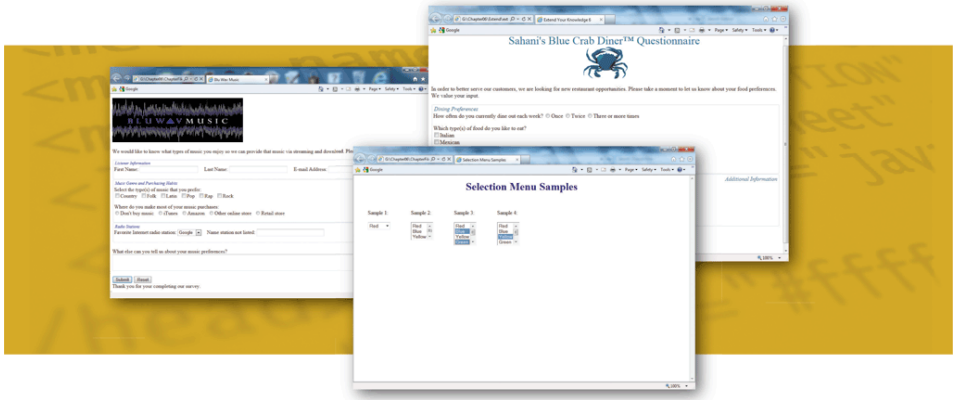
Web Design with HTML5 & CSS3 8th Edition

Chapter 6

Responsive Design Part 2: Designing for Tablet and Desktop Devices



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Chapter Objectives

1. Understand and use media query expressions
2. Explain the design principles of a tablet website
3. Insert a media query to target tablet viewports
4. Create style rules for tablet viewports
5. Explain the design principles of a desktop website
6. Insert a media query to target desktop viewports

Chapter Objectives

7. Create style rules for desktop viewports
8. Identify and modify breakpoints
9. Explain pseudo-classes
10. Apply pseudo-classes to a website
11. Explain linear and radial gradients
12. Apply a linear gradient to a webpage for a desktop viewport

Topics

1. Introduction
2. Project – Use Media Queries to Design for Tablet and Desktop Viewports
3. Using Media Queries
4. Designing for Desktop Viewports
5. Modifying Breakpoints
6. Using Pseudo-Classes
7. Using Gradients
8. Summary

3. Using Media Queries

- **Media query**
  - Detects the media type (screen or print) and the capabilities of the device that the browser is running on (such as size in pixels or orientation)
  - It applies styles that work well for that situation, based on the information provided
  - Applies styles to move, hide, or display content on the page, change text or colors, or add any other styles to make the page easier to read in a particular situation

3. Using Media Queries

- The following code provides a basic example of a media query inserted into the `link` tag of an HTML page:

```
<link rel="stylesheet"
      href="css/styles.css" media="screen">

<link rel="stylesheet"
      href="css/stylesprint.css" media="print">
```

3.1 Breakpoints

- **Breakpoint**
  - It is set to understand the code and syntax of how a media query detects viewport size
  - It is the point at which a webpage is required to change
  - It is where different styles are applied to the webpage to cause it to change in a way that makes it easier to read and navigate for a particular situation

3. Using Media Queries

- The Table 6–1 lists the three common viewport sizes

Table 6–1 Common Viewport Breakpoints

Device	Minimum Viewport Width	Maximum Viewport Width
Small smartphones	320px	480px
Tablets and larger smartphones	481px	768px
Tablets in landscape orientation, laptops, and small desktop monitors	769px	1279px
Large desktop monitors	1280px	NA

3.2 Media Query Expressions

- A media query can use a logical expression to test whether a viewport has reached a particular breakpoint
- The logical expression includes the name of a **media query feature**, a characteristic of the environment, and a breakpoint value to be tested
- If the logical expression evaluates to “true,” the media query applies the styles that follow

3.2 Media Query Expressions

- A media query can also test for both minimum and maximum breakpoints
  - Example:

```
<link rel="stylesheet"
      href="css/styles-tablet.css”
      media="screen and
            (min-width: 481px) and
            (max-width: 768px)">
```

3.2 Media Query Expressions

- The code directs browsers to apply the styles-tablet.css stylesheet in the css folder when screens have a viewport width between 481px and 768px
- When testing for minimum and maximum widths, the word "**and**" separates each part of the media attribute value

3.2 Media Query Expressions

- Another way to implement media queries is to code them directly into a single CSS file using the `@media` rule
- The three most common types of media are `screen`, `print`, and `all`

3.2 Media Query Expressions

- Table 6–2 lists common media query features that can be used in a logical expression

Table 6–2 Common Media Query Features

Feature	Description
max-device-height min-device-height	Height of the screen in pixels
max-device-width min-device-width	Width of the screen in pixels
max-height min-height	Height of the viewport in pixels
max-width min-width	Width of the viewport in pixels
orientation	Orientation of the device (landscape or portrait)

3.3 Adding Media Queries to an External Style Sheet

- In a mobile-first strategy, the mobile styles are listed first as they are the default styles
- Next, media queries are used to add styles for larger viewports, progressing from tablet to desktop. Styles created for the smaller viewports apply to larger viewports by default
- To modify the appearance of an element for a larger viewport, a media query is created for the larger viewport, and then a new style is created

4. Designing for Tablet Viewports

- With so many tablet sizes, it is difficult to design a "one size fits all" layout for a tablet device
- However, with the use of responsive web design and media queries, designing multiple tablet layouts is **not** required
- If a particular tablet device has a viewport smaller than the minimum size specified in the media query, then the layout will default to the mobile viewport layout

4. Designing for Tablet Viewports

Figure 6–3 shows the code to create a media query for a tablet viewport

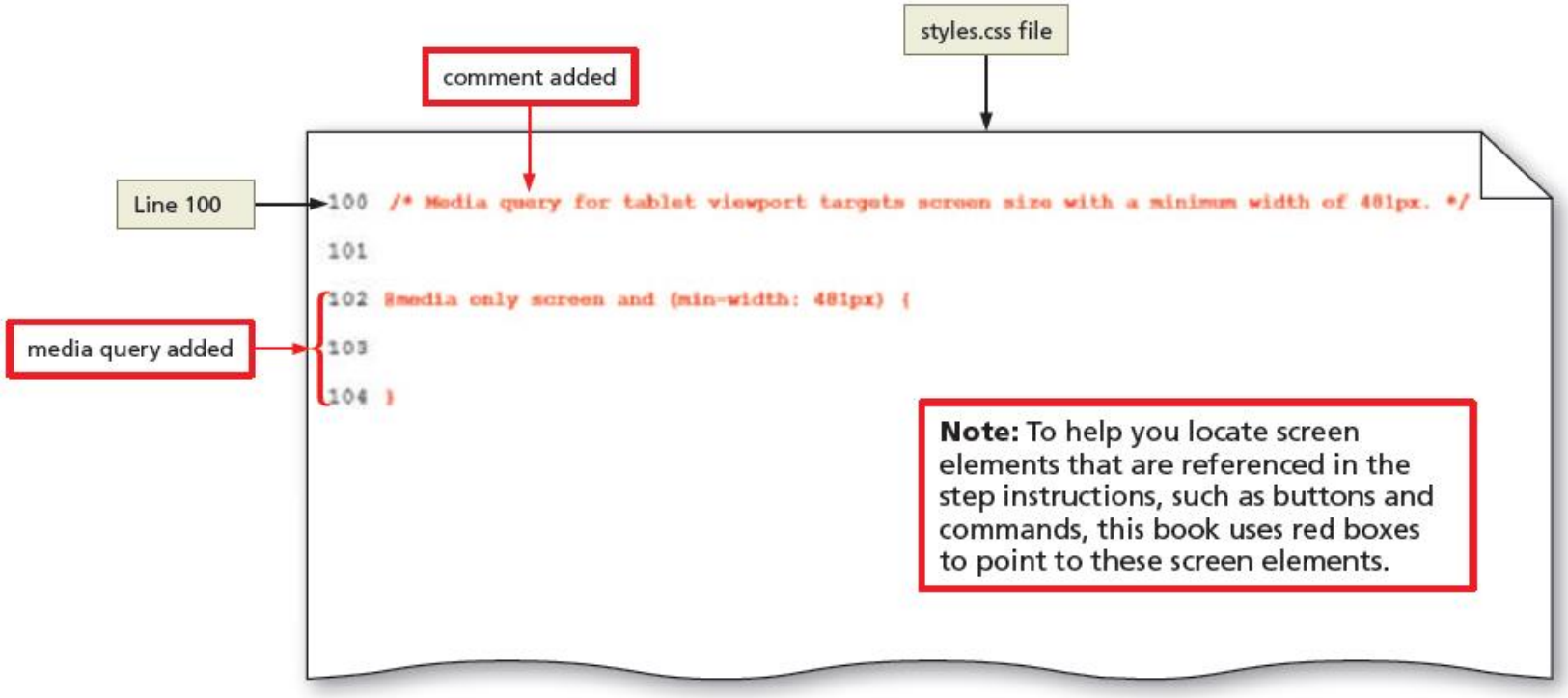

Figure 6–3

4. Designing for Tablet Viewports

4.1 Page Design for a Tablet Viewport

- When designing for a tablet viewport
  - Maintain the same color scheme, typography, and general look of the website
  - The appearance of the website should look the same from viewport to viewport
  - The only thing that should change is layout and placement of content
  - To determine the ideal layout for a website's tablet viewport, review the mobile site to confirm where the content should be added and if any content should be hidden

4. Designing for Tablet Viewports

4.2 Navigation Design for a Tablet Viewport

- It is not necessary to maintain a vertical list of navigation buttons as a tablet screen is larger than a smartphone screen
- Align the navigation buttons in a horizontal line
- This frees space for the main content below the navigation area, improving its visibility by displaying it in the middle of the screen

4. Designing for Tablet Viewports

4.2 Navigation Design for a Tablet Viewport

- To accomplish this design, create a style rule to display the navigation list items as a single horizontal line when displayed in a tablet viewport
- Add other properties and values that override the defaults already set for the mobile viewport

4. Designing for Tablet Viewports

- Figure 6–5 shows the code to style the navigation area for a tablet viewport

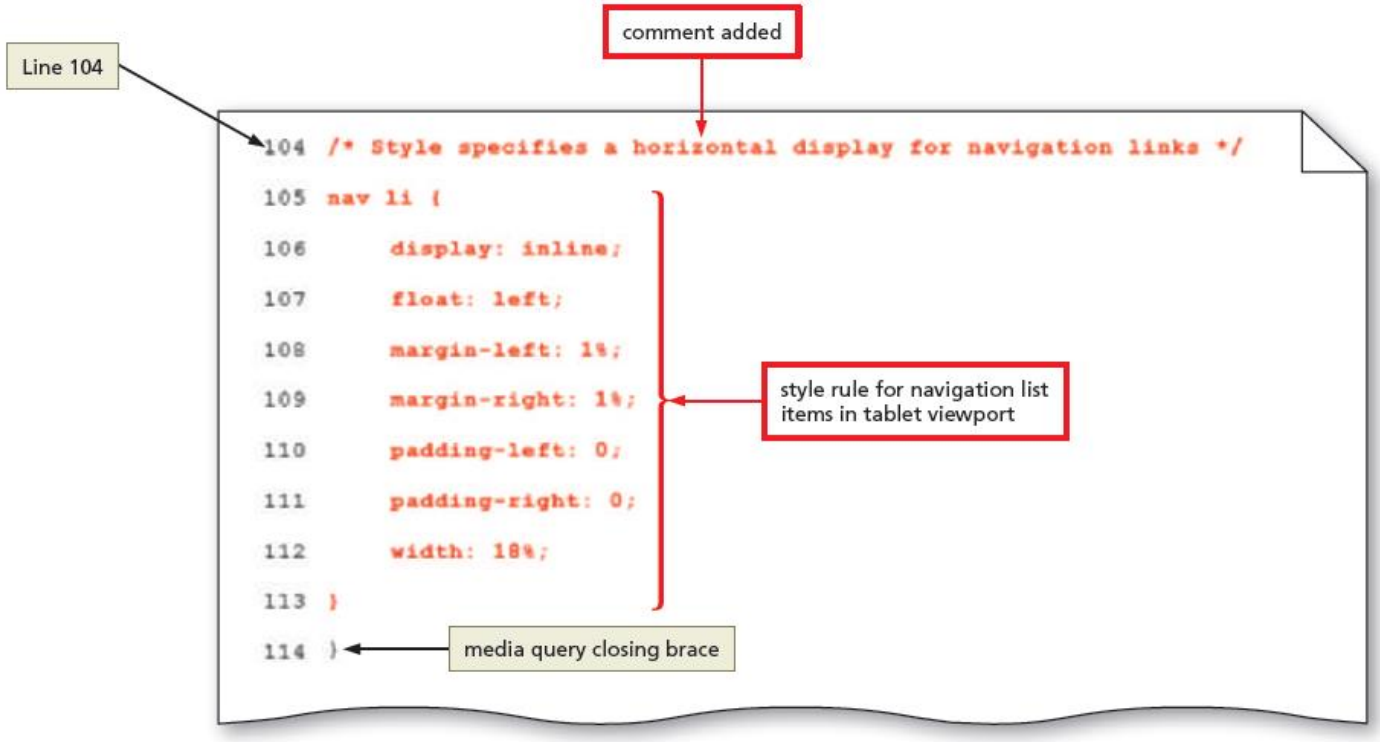

Figure 6–5

4. Designing for Tablet Viewports

- Figure 6–8 shows the code to style the style the main element for a tablet viewport

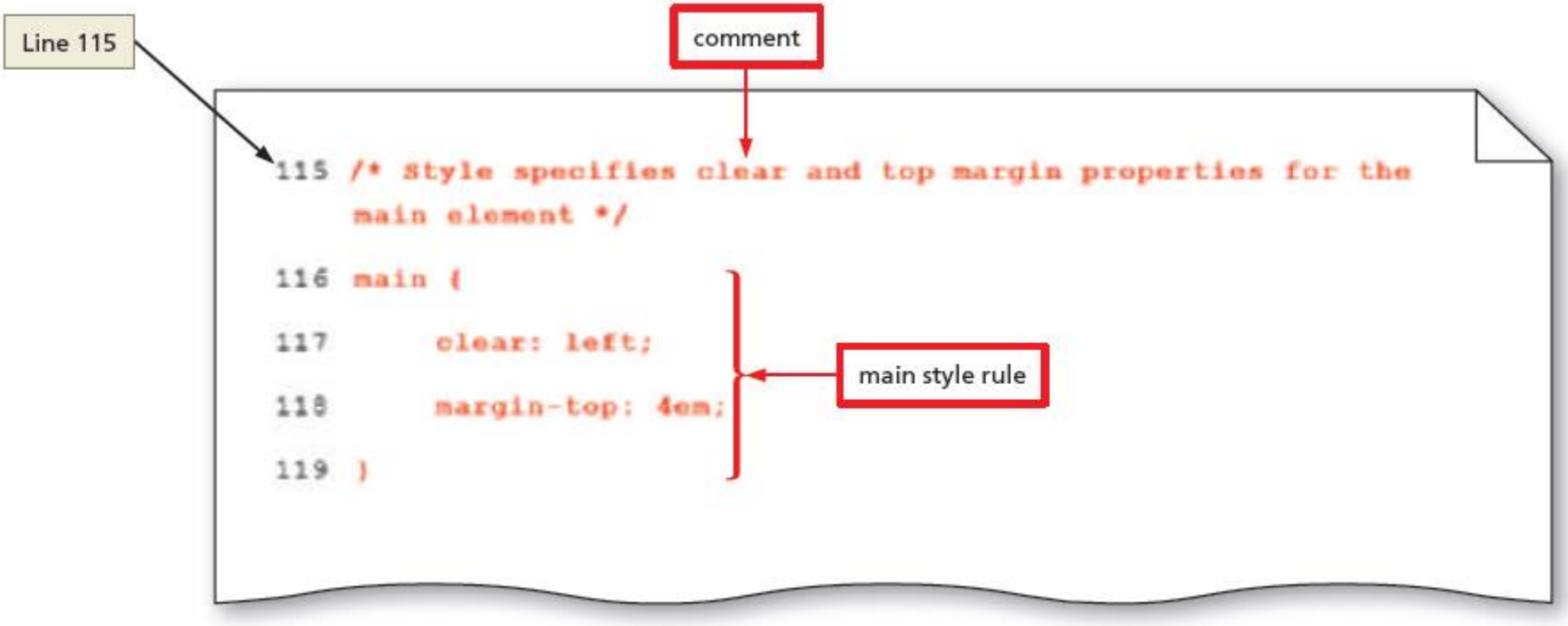

Figure 6–8

4. Designing for Tablet Viewports

- Figure 6–10 shows the code to show and hide content for a tablet viewport

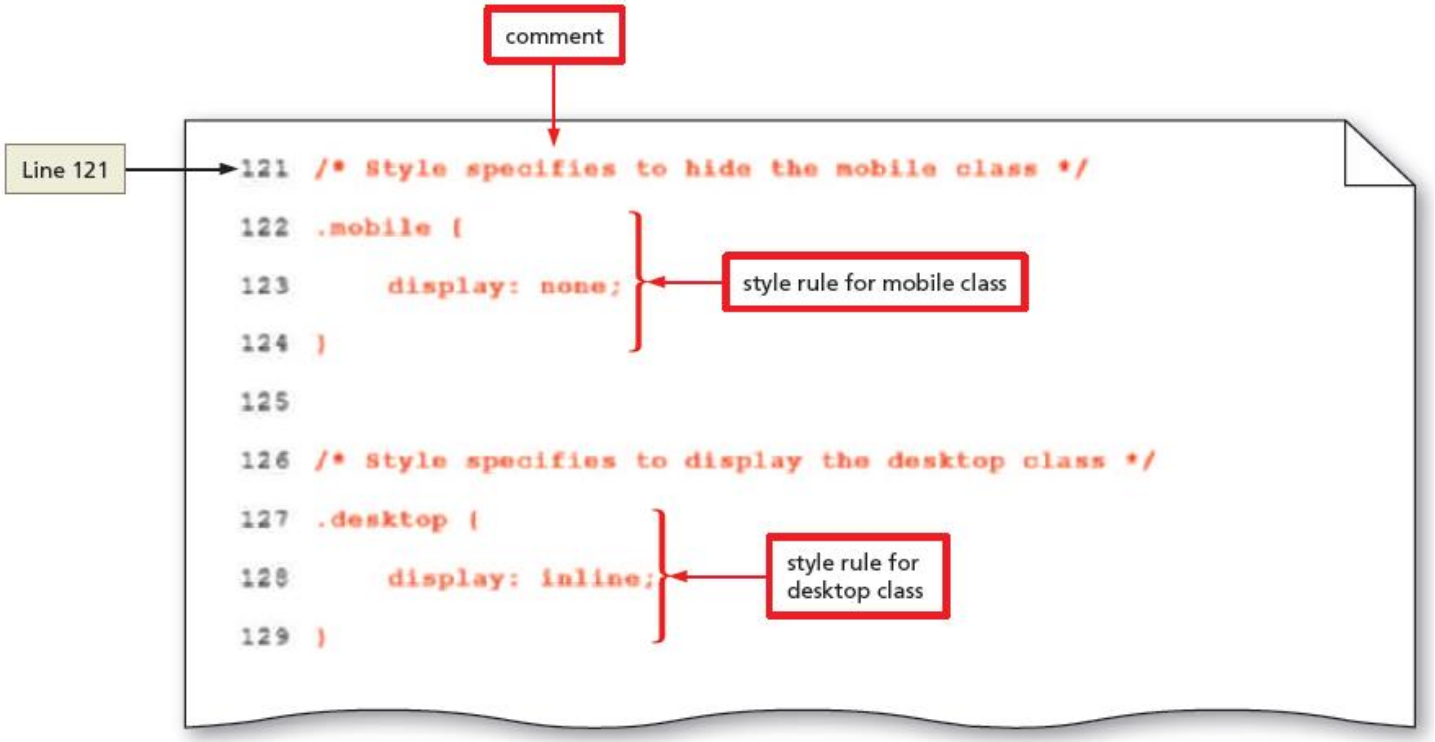

Figure 6–10

BREAK

Break

5. Designing for Desktop Viewports

- When designing for desktop viewports
  - Use simple, intuitive navigation, clear images, and typography and apply the same color scheme
  - Maintain the same look and feel of the site, but change some formatting to best accommodate the desktop viewport
  - It also provides an opportunity for a multiple-column layout

6. Modifying Breakpoints

- **Breakpoint**
  - It is the point at which different styles are applied to a webpage depending on the viewport
  - Set breakpoints as determined by the content on the page

7. Using Pseudo-Classes

- **Pseudo-classes**
  - They allow changes to the style of a link based on four link states: link, visited, hover, and active
  - They must be used in the following order: link, visited, hover, active
  - A pseudo-class is attached to a selector with a colon to specify a state or relation to the selector

7. Using Pseudo-Classes

- The Table 6–3 describes each link state

Table 6–3 Pseudo-Classes

Pseudo-class	Used to Style
:link	Unvisited link
:visited	Link that has been clicked
:hover	Link when the mouse is hovering over it
:active	Link at the moment it is clicked

7. Using Pseudo-Classes

- A pseudo-class is attached to a selector with a colon to specify a state or relation to the selector to give the web developer more control over that selector
- A unique style for normal, visited, hover, and active links is defined by creating four separate style rules with **a:link**, **a:visited**, **a:hover**, and **a:active** as the selectors

7. Using Pseudo-Classes

- It is not necessary to use all of the pseudo-classes. However, if it is omitted from the design, it is important to maintain the same order of the pseudo-class styles in the CSS code
- They are used in a desktop viewport
- They are not used in mobile and tablet devices as they do not have a hover or a click option

7. Using Pseudo-Classes

- Figure 6–45 shows the code for link and visited pseudo-classes

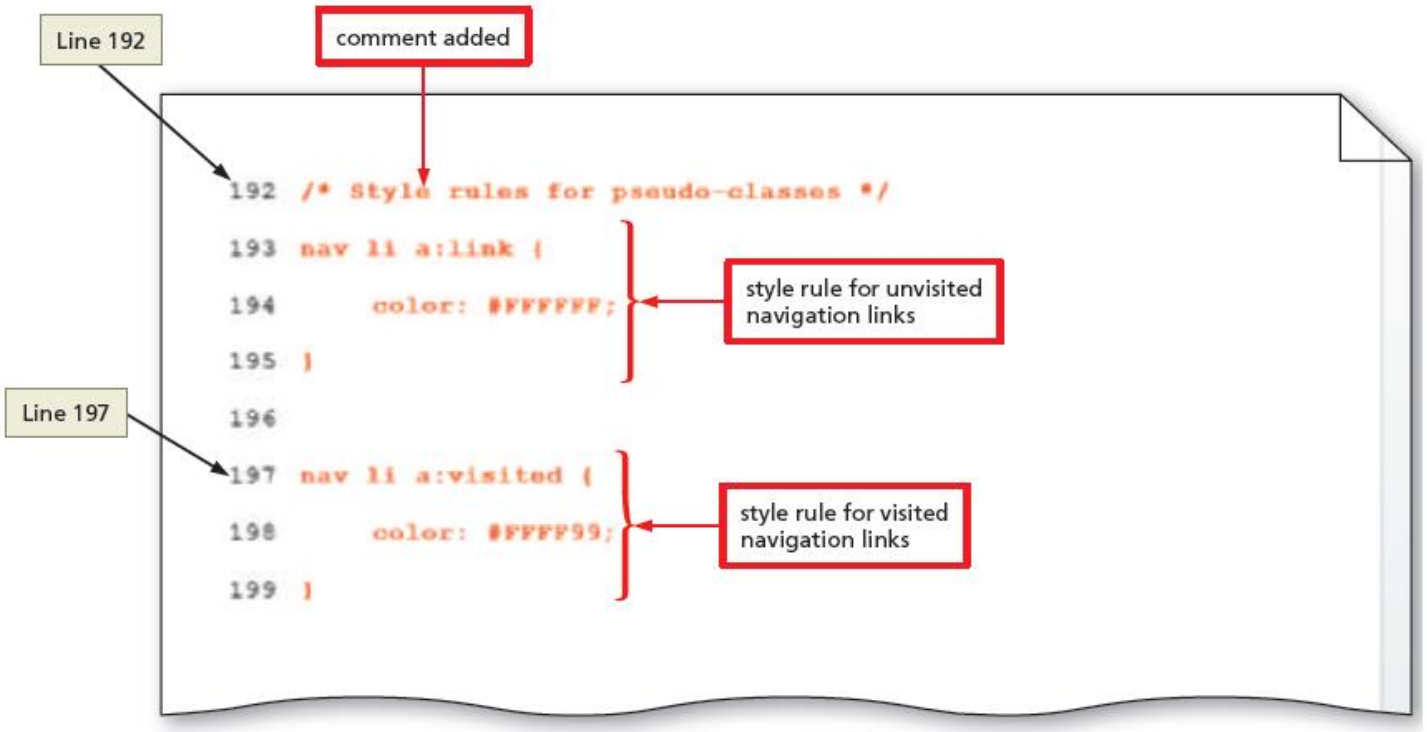

Figure 6–45

7. Using Pseudo-Classes

- Figure 6–46 shows the code for hover and active pseudo-classes

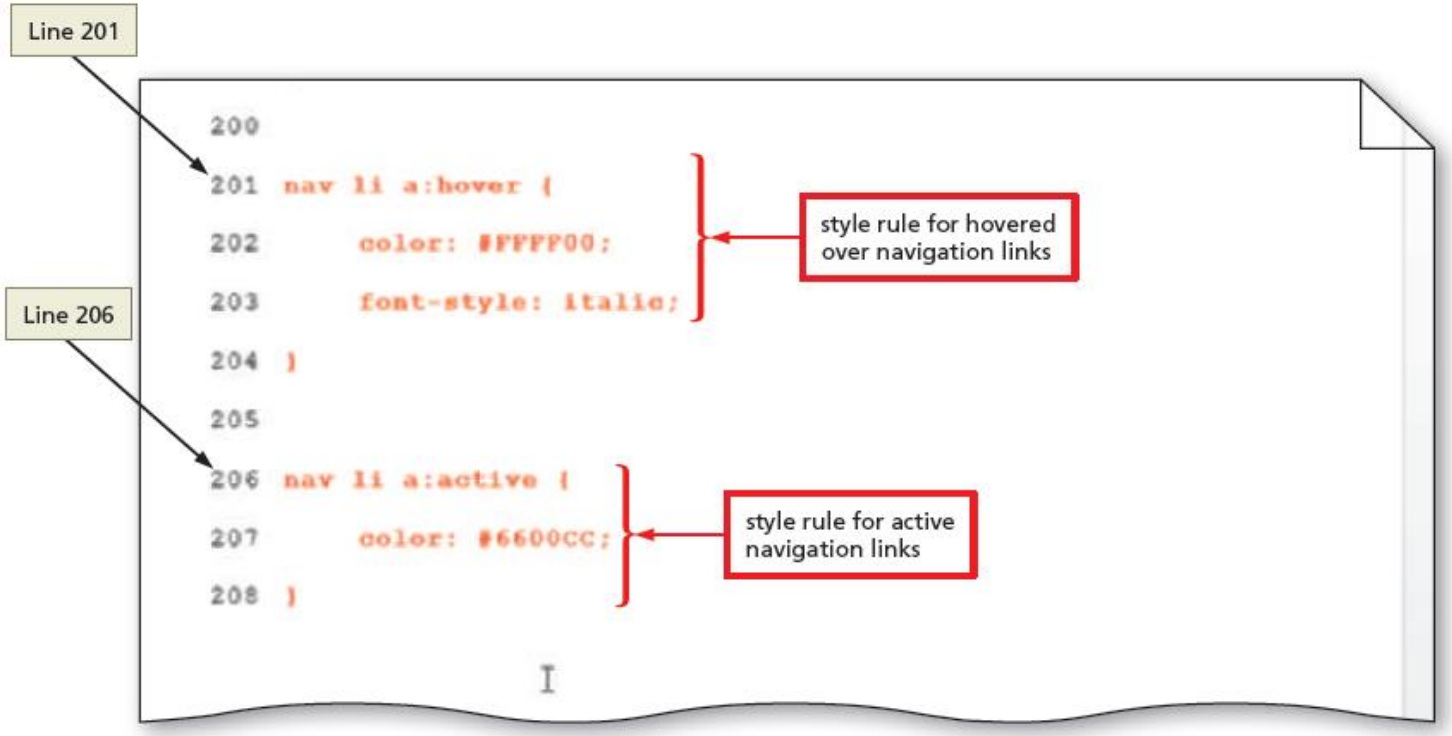

Figure 6–46

8. Using Gradients

- **Gradient**
  - Is a gradual transition from one color to another
  - CSS3 has two types of gradients:
    - linear and radial

8. Using Gradients

- **Linear Gradient**
  - It can transition from several different angles
  - The default transition is from the top to the bottom
  - It can also transition up, left, right, or diagonally

8. Using Gradients

- **Linear Gradient**
  - Use the **linear-gradient** property to create it
  - The following is an example of how to apply a linear gradient:

```
body {
    background: linear-gradient(white, blue);
      }
```

8. Using Gradients

- **Linear Gradient**
  - To provide support for major browsers, use the following prefixes:

    `-moz- for Mozilla Firefox`

    `-o- for Opera`

    `-webkit- for Google Chrome and Safari`

8. Using Gradients

- The following example of a linear gradient includes all browser support prefixes:

```
body {
background: -moz-linear-gradient(white, blue);
background: -o-linear-gradient(white, blue);
background: -webkit-linear-gradient(white, blue);
background: linear-gradient(white, blue);
      }
```

8. Using Gradients

- The Table 6–4 provides an overview of linear gradients

Table 6–4 Linear Gradients

Direction	Examples

top to bottom (default)	body {
	background: -moz-linear-gradient: (white, blue);
	background: -o-linear-gradient: (white, blue);
	background: -webkit-linear-gradient: (white, blue);
	background: linear-gradient: (white, blue);
	}

left to right	body {
	background: -moz-linear-gradient: (right, white, blue);
	background: -o-linear-gradient: (right, white, blue);
	background: -webkit-linear-gradient: (left, white, blue);
	background: linear-gradient: (to right, white, blue);
	}

diagonal	body {
	background: -moz-linear-gradient: (bottom right, white, blue);
	background: -o-linear-gradient: (bottom right, white, blue);
	background: -webkit-linear-gradient: (left top, white, blue);
	background: linear-gradient: (to bottom right, white, blue);
	}

specified angle	body {
	background: -moz-linear-gradient: (180deg, white, blue);
	background: -o-linear-gradient: (180deg, white, blue);
	background: -webkit-linear-gradient: (180deg, white, blue);
	background: linear-gradient: (180deg, white, blue);
	}

8. Using Gradients

- **Radial gradients**
  - They are specified by their center
  - The color begins in the center and transitions in a radial direction to another color or colors
  - To create a radial gradient, at least two colors must be specified

8. Using Gradients

- The following is an example of a radial gradient:

```
body {
background: -moz-radial-gradient(red, white, blue);
background: -o-radial-gradient(red, white, blue);
background: -webkit-radial-gradient(red, white, blue);
background: radial-gradient(red, white, blue);
      }
```

8. Using Gradients

- Figure 6–51 shows the code for creating a new style rule to apply a linear gradient for a desktop viewport

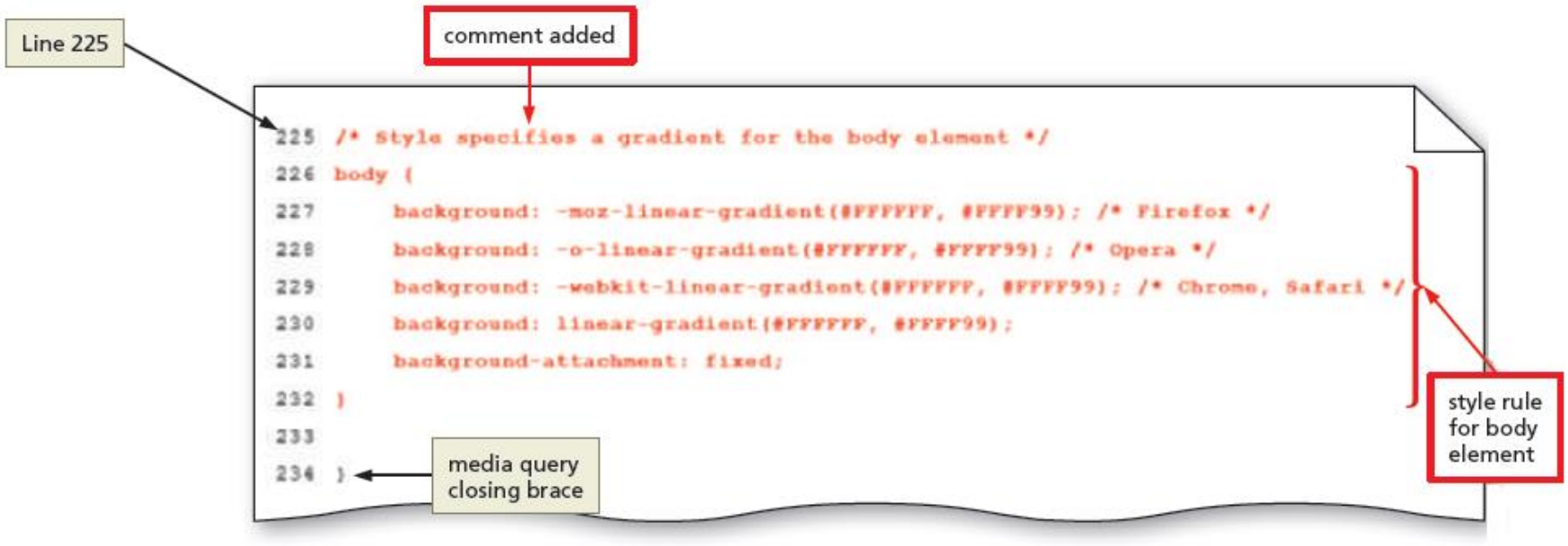

Figure 6–51

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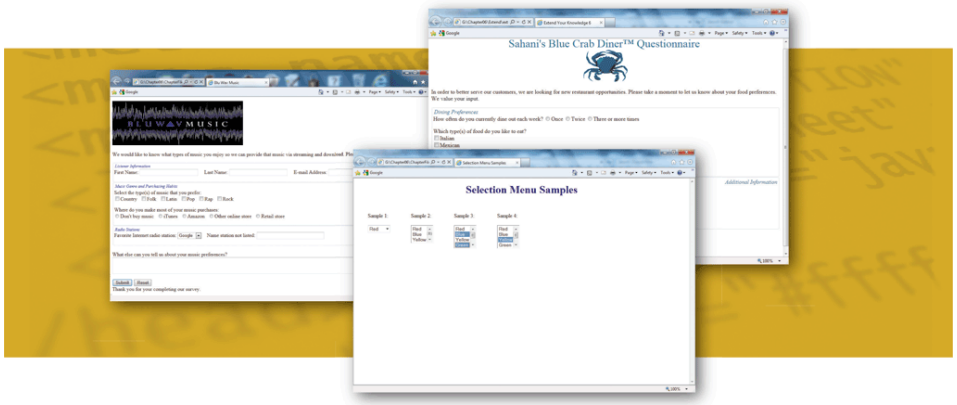
Chapter 6

Responsive Design Part 2:

Designing for Tablet and Desktop Devices



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