Apply your knowledge of CSS text and color styles to format a Web page for a cryptographic institution.

# Case Problem 1

Data Files needed for this Case Problem: algo.htm, c\_layout.css, c\_stylestxt.css, crypttxt.htm, enigma.htm, history.htm, locks.jpg, logo.gif, modernizr-1.5.js, public.htm, scytale.gif, single.htm

International Cryptographic Institute Sela Dawes is the media representative for the ICI, the International Cryptographic Institute. The ICI is an organization of cryptographers who study the science and mathematics of secret codes, encrypted messages, and code breaking. Part of the ICI's mission is to inform the public about cryptography and data security. Sela has asked you to work on a Web site containing information about cryptography for use by high school science and math teachers. She wants the design to be visually interesting in order to help draw students into the material. Figure 3-62 shows a preview of your design.

# Figure 3-62

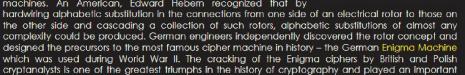
# Cryptography home page

# THE SCIENCE OF CRYPTOGRAPHY

# What is Cryptography?

Cryptography is the science of secure communications, formed from the Greek words kryptós meaning "hidden" and lógos, meaning "word." The first recorded use of cryptography was by the Spartans who as early as 400 BC employed a cipher device called a scytale to send secret communications between military commanders. The scytale consisted of a tapered baton around which was wrapped a piece of parchment inscribed with the message. Once unwrapped the parchment appeared to contain an incomprehensible set of letters; however when wrapped around another baton of identical size the original text appears.

Cryptographers developed more and more ingenious systems, but it was in the  $20^{\rm th}$  Century that the science of cryptography took off. The first major achievement was the development of rotor cipher machines. An American, Edward Hebern recognized that by



To learn more cryptography, please tour the site.



# Complete the following:

role in the Allied victory.

- In your text editor, open the crypttxt.htm and c\_stylestxt.css files from the tutorial.03\case1 folder included with your Data Files. Enter your name and the date in the comment section of each file. Save the files as crypt.htm and c\_styles.css respectively.
- 2. Go to the **crypt.htm** file in your text editor, and review the contents and structure of the document. Link the file to the **c\_layout.css** style sheet.

- 3. Locate the three strong elements in the two paragraphs and add the class attribute to each element with the class value set to **keyword**.
- 4. Locate the *locks.jpg* inline image, and below the image create an image map with the name **locks**. Add the following hotspots to the image map:
  - a. A circular hotspot linked to the history.htm file, centered at the coordinates (52, 52) with a radius of 43 pixels; the alternate text should be History.
  - b. A circular hotspot with a radius of 43 pixels located at the coordinates (155, 52); link the hotspot to the enigma.htm file, and with the alternate text set to Enigma.
  - c. A circular hotspot with a radius of 43 pixels located at the coordinates (255, 52); link the hotspot to the algo.htm file and set the alternate text to Algorithms.
  - d. A circular hotspot with a radius of 43 pixels located at the coordinates (355, 52); link the hotspot to the **single.htm** file and set the alternate text to **Single Key**.
  - e. A circular hotspot with a radius of 43 pixels located at the coordinates (455, 52); link the hotspot to the **public.htm** file and set the alternate text to **Public Key**.
- 5. Apply the **locks** image map to the *locks.jpg* inline image.
- 6. Save your changes to the crypt.htm file.
- 7. Go to the **c\_styles.css** style sheet file in your text editor. Set the color of the page body background and text to **black** and **white**, respectively. Set the default font to a list consisting of **Century Gothic** followed by a generic **sans-serif** font.
- 8. Add a style rule for h1 headings nested within a header element to: a) display the text in **yellow**; b) use **Courier New**, **Courier**, or another **monospace** font; c) set the font size to **28** pixels with a kerning of **20** pixels; and d) **center** the text.
- 9. Add a style rule for h2 headings nested within an article element to: a) set the font size to **24** pixels; b) display the text without boldface; and c) set the kerning to **5** pixels.
- 10. Align paragraph text within the article element using full justification.
- 11. For strong elements belonging to the keyword class, create a style rule that displays the text in a **yellow**, non-bold font.
- 12. Center the contents of paragraphs nested within the footer element.

# **EXPLORE**

- 13. You don't want image maps to appear with a colored border. To remove the border, create a style rule for inline images that contain the usemap attribute and set the border width to **0** pixels.
- 14. Document your work with style comments and then save your changes to the file.
- 15. Return to the **crypt.htm** file in your text editor and link the file to the **c\_styles.css** style sheet.
- 16. Open **crypt.htm** in your Web browser and confirm that it matches the design shown in Figure 3-62.
- 17. Submit your completed files to your instructor, in either printed or electronic form, as requested.

Apply your knowledge of CSS to design a Web page for a bike touring company.

# **Case Problem 2**

Data Files needed for this Case Problem: bmtourtxt.htm, modernizr-1.5.js, mw\_layout.css, mw\_stylestxt.css, mwlogo.png, wheelmarker.png

Mountain Wheels Adriana and Ivan Turchenko are the co-owners of Mountain Wheels, a bike shop and touring agency in Littleton, Colorado. One of their most popular tours is the Bike the Mountains Tour, a six-day excursion over some of the highest roads in Colorado. Adriana wants to update the company's Web site to provide more information about the Bike the Mountains Tour. She already has had a colleague design a three-column layout with a list of links in the first column and descriptive text in the second and third columns. She has asked for your help in completing the design by formatting the text and colors in the page. Figure 3-63 shows a preview of the Web page you'll create.

Figure 3-63

Bike the Mountains page



# Bike the Mountains Tour

Home

Learn More
Testimonials
Route Maps
Register
Lodging
Meals
Training
Equipment
Forums
FAQs

THE BIKE THE MOUNTAINS TOUR RISES from the town of Littleton, Colorado and explores the Colorado Front Range. Our tour crosses the Continental Divide twice, giving you the opportunity to bike the highest paved roads in the United States. This tour is a classic showcase of Colorado's Rocky Mountain scenery.

Not designed for the weekend cyclist, this tour is offered only for those fit enough to ride high mountain passes. We

"The Bike the
Mountains Tour is
amazing. I highly
recommend it and
would gladly return."

— Steve H.

provide sag wagons and support. Your lodging and meals are also part of the registration fee. We guarantee tough climbs, amazing sights, sweaty jerseys, and lots of fun.

This is the seventh year we've offered the Bike the Mountains Tour. It is our most popular tour and riders are returning again and again. Our experienced tour leaders will be there to guide, help, encourage, draft, and lead you every stroke of the way. Come join us!

## Itinerary

Day 1
We start from the footbills
above Littleton, Colorado,
promptly at 9am. The first day
is a chance to get your legs in
shape, test your gearing, and
prepare for what's to come.

#### Day 2

Day 2 starts with a climb up Bear Creek Canyon to Lookout Mountain, followed by a swift and winding descent into the town of Golden. Refresh yourself at the famous Coors Brewery.

#### Day 3

Day 3 takes you along the Peak to Peak Highway. This 55-mile route showcases the mountains of the Front Range, providing amazing vistas from Golden Gate Canyon State Park Rocky Mountain National Park.

#### Day 4

Now for the supreme challenge: Day 4 brings some real highaltitude cycling through Rocky Mountain National Park and up Trail Ridge Road. It's an amazing ride, high above timberline, topping out at over 11,000 feet.

#### Day 5

We start Day 5 on the west side of the Continental Divide. From Grand Lake, you'll bike to Winter Park and then over Berthoud Pass, and back to the eastern side of the Continental Divide.

#### Day 6

On Day 6 we ride back to Littleton over Squaw Pass and Bear Creek and then enjoy a 4086695 celebratory/dinners as a great four.

Mountain Wheels • Littleton, CO 80123 • (303) 555 - 5499

## Complete the following:

- 1. Open the **bmtourtxt.htm** and **mw\_stylestxt.css** files from the tutorial.03\case2 folder. Enter your name and the date in the comment section of each file. Save the files as **bmtour.htm** and **mw\_styles.css** in the same folder.
- 2. Return to the **bmtour.htm** file in your text editor. Link the file to the **mw\_layout.css** style sheet. Take some time to review the contents and structure of the document.
- 3. You need to name different elements within the document using the id attribute. Add the following ids to the document: a) name the first header element pageheader and the second header element articleheader; and b) name the first section element leftsection and the second section element rightsection.
- 4. Save your changes to the file and then go to the mw\_styles.css style sheet in your text editor.
- 5. Set the default font for the page body to a font list containing **Tahoma**, **Geneva**, and sans-serif.
- 6. For the articleheader id, apply a style rule that: a) sets the font size to 18 pixels and removes boldface; b) sets the kerning to 7 pixels; and c) centers the text.
- 7. Set the background color of the navigation list to the value (125, 120, 89) and set the line height to **3em**. Remove the bullet markers from the navigation list.
- 8. For hypertext links within the navigation list, create a style rule that: a) sets the font color to white for older browsers, and to white with 50% opacity for newer browsers; and b) removes the underlining from the link text.

# **EXPLORE**

- 9. When a user hovers the mouse pointer over list items in the navigation list, change the background color to the value (131, 121, 36) and display the image file wheelmarker.png as the bullet image. When a user hovers the mouse pointer over a hypertext link in the navigation list, change the font color to **yellow** for older browsers, and to white with 100% opacity for newer browsers.
- 10. For paragraphs that are direct children of the leftsection id, set the font size to 22 pixels. Also, for the first paragraph that is also a direct child of the leftsection id, display the first line of the paragraph in uppercase.
- 11. For the blockquote element, create a style rule to set: a) the background color to (131, 121, 36); b) the font color to white; c) the font size to 16 pixels; and d) the font family to Comic Sans MS, Times, and cursive.

- **EXPLORE** 12. For paragraphs within the blockquote element, create styles to insert a **double quotation mark** directly before and after the text of the paragraph.
  - 13. For h1 headings within the rightsection id, create a style rule to: a) set the font size to 22 pixels and the kerning to 3 pixels; b) remove the boldface from the text; and c) center the text. For h2 headings within the rightsection id, create a style rule to: a) set the font size to 18 pixels; b) right-align the text; and c) remove the boldface from the text. Finally, for paragraphs within the rightsection id, create a style rule to: a) set the font color to gray; b) set the font size to 14 pixels; and c) **justify** the text.
  - 14. For address elements within the page footer, create a style rule to: a) set the font size to 16 pixels; b) remove the italic style from the address; and c) center the text.
  - 15. Add style comments to document your work and then save your changes to the file.
  - 16. Return to the **bmtour.htm** file in your text editor and link that file to the mw\_styles.css style sheet.
  - 17. Open the **bmtour.htm** file in your Web browser and confirm that it matches the design and layout shown in Figure 3-63.
  - 18. Submit your completed files to your instructor, in either printed or electronic form, as requested.

Explore how to use CSS to design a Web page for an online Civil War History course.

# **Case Problem 3**

Data Files needed for this Case Problem: civilwartxt.htm, cw\_layout.css, cw\_stylestxt.css, cwphoto.png, modernizr-1.5.js, mwulogo.png, pcphoto.png

**The Civil War and Reconstruction** Peter Craft is a professor of military history at Midwest University. The college is offering a series of online courses, one of which is *The Civil War and Reconstruction* taught by Professor Craft. He has developed the online content and has had a colleague help with the page layout. You've been asked to complete the project by creating text and color styles. A preview of the sample page is shown in Figure 3-64.

Figure 3-64

Civil War and Reconstruction page

#### Midwest University online About Terms of Use Home COURSES Course Outline The Civil War and Reconstruction I. The Road to War A. Planting the Seeds B. The First Crisis C. Compromise & Failure D. Fault Lines II. Politicians & Generals A. Politicians B. Generals About Peter About the Course III. The Course of War A. 1861-1862 The Civil War and Reconstruction explores the B. 1863 causes and consequences of the American Civil War, covering American history from 1840 through 1876 in C. 1864-1865 great detail. My primary goal is to interpret the IV. Aftermath multiple threads that run through this epic event and consider how these threads still engage the politics A. Lincoln Assassination and culture of the present day. In this course we will B. Reconstruction rely heavily on primary texts, interpreting the events of the day through the words of those men and C. A New Constitution women who experienced it. We'll examine four main D. The United States Is .. points of interest: Peter Craft is a professor of American The crisis of disunion in a young nation and Military History and the Director The personality and motivations of the men and of the Taylor Institute for the Study of women who responded to that crisis Military History at Midwest The events of the war which shaped the outcome University. He is the author of The aftermath and the unresolved issues which numerous books, including: Fault Lines: came out of the conflict The Causes of the Civil War, Day at Cooper Union (for which he received the Course Structure Lincoln Prize), and Helen: A Memoir. Lectures are provided through podcast or via direct He is also a frequent contributor to The News Hour and the History Channel. download twice weekly with lecture notes available through e-mail or RSS feed. A detailed summary of the lectures is provided in the links at the left. Midwest University 2014. Some rights reserved. Unless otherwise indicated, all content on this web site is licensed under a Creative Commons License

## Complete the following:

1. Open the civilwartxt.htm and cw\_stylestxt.css files in your text editor. Add your name and the date to the comment section of each file, and then save the files as civilwar.htm and cw\_styles.css, respectively.

- 2. Go to the civilwar.htm file in your text editor. Take some time to review the content and structure of the Web page. There are two navigation lists in the document. Peter wants the first navigation list to be displayed horizontally and the second navigation list to be displayed vertically. Add the class attribute to each nav element, setting the class values to **horizontal** and **vertical** respectively.
- 3. Save your changes to the file, and then go to the **cw\_styles.css** file in your text editor.

# **EXPLORE**

- 4. Peter already has stored the layout styles in the cw layout.css file. Directly after the opening comments, use the @import rule to import this style sheet. Add a comment describing the purpose of the @import rule.
- 5. Set the typeface of the page body to the font list Palatino Linotype, Book Antiqua, Palatino, and serif.

# **EXPLORE**

- 6. For every h1 through h6 heading, apply styles to: a) set the color to the HSL value of (212, 0%, 0%) with an opacity of 0.4; b) set the font family to Trebuchet MS, Helvetica, and sans-serif; c) remove the boldface; and d) set the kerning and text indent to 5 pixels.
- 7. For h1 headings that are direct children of a header element that is a direct child of the body element, set the background color to the HSL value (212, 100%, 29%).
- 8. For an unordered list within the horizontal navigation list, apply styles to: a) display the text in **Century Gothic MS** or another **sans-serif** font; b) set the font size to 14 pixels; c) display the text in **bold**; d) set the kerning to 3 pixels and the line height to 20 pixels; and e) remove the markers from the list.
- 9. For hypertext links within the horizontal navigation list, set the text to the HSL value (212, 100%, 70%) and remove the underlining. When the mouse hovers over a hypertext link in this list, change the font color to the HSL value (212, 100%, 29%).
- 10. Set the background color of the vertical navigation list to the HSL value (32, 100%, 95%).
- 11. For the h4 element within the vertical navigation list, create a style rule to: a) set the color to the HSL value (32, 0%, 0%) with an opacity of 0.5; and b) set the font size to 18 pixels and the text indent to 15 pixels.
- 12. Display the ordered list items in the vertical navigation list in an outline style with uppercase Roman numerals for the top level, and uppercase alphabetic letters for the second level. Set the line height of the lists to 2em.

- **EXPLORE** 13. Set the color of the hypertext links in the vertical navigation list to the HSL value (212, 100%, 29%) with an opacity of 0.6. Remove the underlining from the hypertext links. If the user hovers the mouse pointer over a link in the list, increase the opacity to **1.0** and display the underline.
  - 14. Set the background color of the section element to the HSL value (212, 95%, 90%).
  - 15. For the first paragraph after the h2 heading within the article element, create a style rule to display the first letter with a font size of 32 pixels.
  - 16. For the paragraph within the page footer, create a style rule that sets the font size to 10 pixels and the line height to 30 pixels and centers the text.
  - 17. Save your changes to the style sheet.
  - 18. Return to the civilwar.htm file in your text editor and link the file to the cw\_styles.css style sheet.
  - 19. Add style comments to document your work and then save your changes to the style sheet.
  - 20. Open the civilwar.htm file in your Web browser. Verify that the style layout and design match that of the Web page shown in Figure 3-64. Verify that when you hover the mouse pointer over the links in the horizontal navigation list, the text changes color. Verify that when you hover the mouse pointer over the links in the vertical navigation list, the text color changes and the text is underlined.
  - 21. Submit your completed project to your instructor, in either printed or electronic form, as requested.

Test your knowledge of CSS to design text and color styles for a children's choir Web site.

# **Case Problem 4**

Data Files needed for this Case Problem: chen.png, choirtxt.htm, gcc\_layout.css, gcc\_stylestxt.css, gcclogo.png, modernizr-1.5.js, nobile.txt, nobile-webfont.eot, nobile-webfont.svg, nobile-webfont.ttf, nobile-webfont.woff

**Gresham Children's Choir** Faye Dawson is the program director for Gresham Children's Choir in Mentor, Ohio. The choir offers a chance for talented youth to perform and to learn about music history. Faye is working on redesigning the choir's Web site and has asked for your help. She already has created a sample Web page for you to work on and has developed a page layout. She wants you to complete the design by creating styles for the text and colors in the page.

# Complete the following:

- 1. Use your text editor to open the **choirtxt.htm** and **gcc\_stylestxt.css** files from the tutorial.03\case4 folder. Add *your name* and *the date* in the comment section of each file. Save the files as **choir.htm** and **gcc\_styles.css**, respectively.
- 2. Go to the **choir.htm** file in your text editor and link the file to the **gcc\_layout.css** file. Take some time to study the content and structure of the document. Save your changes to the file and then view the current layout in your Web browser.
- 3. Go to the gcc\_styles.css file and create a style sheet with style rules that:
  - modify the typeface, font weight, font size, kerning, and line height
  - employ a Web font
  - modify the appearance of list items
  - change the text and background color, including at least one example of a semitransparent color
  - employ contextual selectors, pseudo-elements, and pseudo-classes
  - · create rollover effects
  - employ progressive enhancement

Document all of your work with informative style comments.

- 4. Add an embedded style sheet to the **choir.htm** file to apply a style rule of your own choosing to that page only.
- Test your Web site in a variety of browsers to ensure your design works under different conditions.
- 6. Submit your completed files to your instructor, in either printed or electronic form, as requested.

#### **ENDING DATA FILES**

