

18. Within the *Main Stick* list item, insert a nested unordered list containing the following items:
 - **Weight: 7 oz.**
 - **Length: 24 inches**
 - **Tape: Dura-Coat finish with laser-style color choices**
19. Within the *Handle Sticks (one pair)* list item, insert a nested unordered list containing the following items:
 - **Weight: 2 oz.**
 - **Length: 18 inches**
 - **Tape: Soft ivory tape with rubber core**
20. Locate the two occurrences of *Dura-Coat* in the document. Directly after the word *Dura-Coat*, insert the registered trademark symbol ®. The character entity name of the ® symbol is *reg*. Display the ® symbol as a superscript by placing the character within the `sup` element.
21. Within the page footer, insert the company's address:

The J-Prop Shop
541 West Highland Drive
Auburn, ME 04210
(207) 555 - 9001
22. Separate the different sections of the address using a solid diamond (character code 9830).
23. Save your changes to the file, open it in your Web browser, and then compare your Web page to Figure 1-48 to verify that it was rendered correctly. Older browsers may display some slight differences in the design.
24. Submit your completed files to your instructor, in either printed or electronic form, as requested.

Apply your knowledge of HTML5 to create a Web page for a mathematics Web site.

APPLY

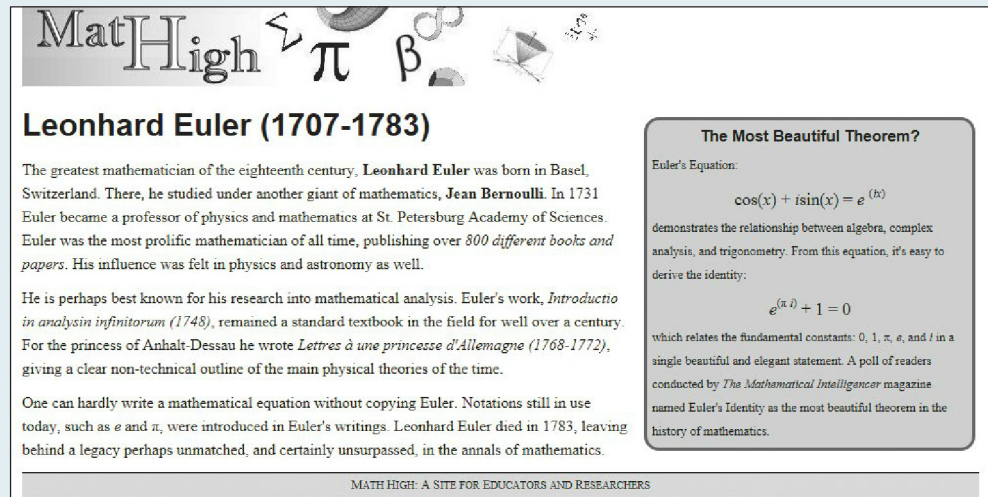
Case Problem 1

Data Files needed for the Case Problem: [mhlogo.jpg](#), [mhstyles.css](#), [mhtxt.htm](#), [modernizr-1.5.js](#)

Math High Professor Lauren Coe of the Mathematics Department of Coastal University in Anderson, South Carolina, is one of the founders of *Math High*, a Web site containing articles and course materials for high school and college math instructors. She has written a series of biographies of famous mathematicians for the Web site and would like you to transfer content she's already written to an HTML5 file. You'll create the first one in this exercise. Figure 1-49 shows a preview of the page you'll create, which profiles the mathematician Leonhard Euler.

Figure 1-49

Math High Web page



Complete the following:

1. In your text editor, open the **mhtxt.htm** file from the tutorial.01\case1 folder included with your Data Files. Save the file as **mathhigh.htm** in the same folder.
2. Enclose the contents of the file within a set of opening and closing `<html>` tags. Set the doctype of the file to indicate that this is an HTML5 document.
3. Add **head** and **body** elements to the file, enclosing the page contents within the **body** element.
4. Within the document head, insert the comment
Math High: Leonhard Euler
Author: your name
Date: the date
 where *your name* is your name and *the date* is the current date.
5. Set the character set of the document to **UTF-8**.
6. Add the page title **Math High: Leonhard Euler** to the document head.
7. Link to the **modernizr-1.5.js** script file.
8. Link to the **mhstyles.css** style sheet.
9. Within the page body, create a **header** element. Within this element, insert an inline image using the **mhlogo.jpg** file as the source and **Math High** as the alternate text.
10. Mark the page text from the line *Leonhard Euler (1707 - 1783)* up to (but not including) the line *The Most Beautiful Theorem?* as an article.
11. Mark the first line in the article element, containing *Leonhard Euler (1707 - 1783)*, as an **h1** heading.
12. Mark the next three blocks of text describing Euler's life as paragraphs.

13. Within the first paragraph, mark the names *Leonhard Euler* and *Jean Bernoulli* using the `strong` element. Mark the phrase *800 different books and papers* as emphasized text using the `em` element.
14. In the second paragraph, mark the phrase *Introductio in analysin infinitorum (1748)* as a citation.
15. In the phrase *Lettres a une princesse d'Allemagne*, replace the one-letter word *a* with `à` (the character entity name is `agrave`). Mark the entire publication name as a citation.
16. In the third paragraph, mark the notation for *e* as a `var` element and replace *pi* with the character `π` (the character reference name is `pi`).
17. Enclose the next section of text from the line *The Most Beautiful Theorem?* up to (but not including) the line *Math High: A Site for Educators and Researchers* as an aside.
18. Mark the text *The Most Beautiful Theorem?* as an `h1` heading.
19. Mark the next five blocks of text as individual paragraphs.
20. In the first equation, mark the letters *e*, *i*, and *x* using the `var` element (but do not italicize the *i* in *sin*). Mark the term *(ix)* as a superscript.
21. In the second equation, replace *pi* with the character `π`. Mark the letters *e* and *i* using the `var` element. Mark *(πi)* as a superscript.
22. In the last paragraph, mark the notations for *e* and *i* with the `var` element and replace *pi* with `π`.
23. Mark the journal name *The Mathematical Intelligencer* as a citation.
24. Mark the final line in the file as a footer.
25. Save your changes to the file, and then verify that the page appears correctly in your Web browser.
26. Submit your completed files to your instructor, in either printed or electronic form, as requested.

Apply your knowledge of HTML to create a page showing text from a scene of a Shakespeare play.

APPLY

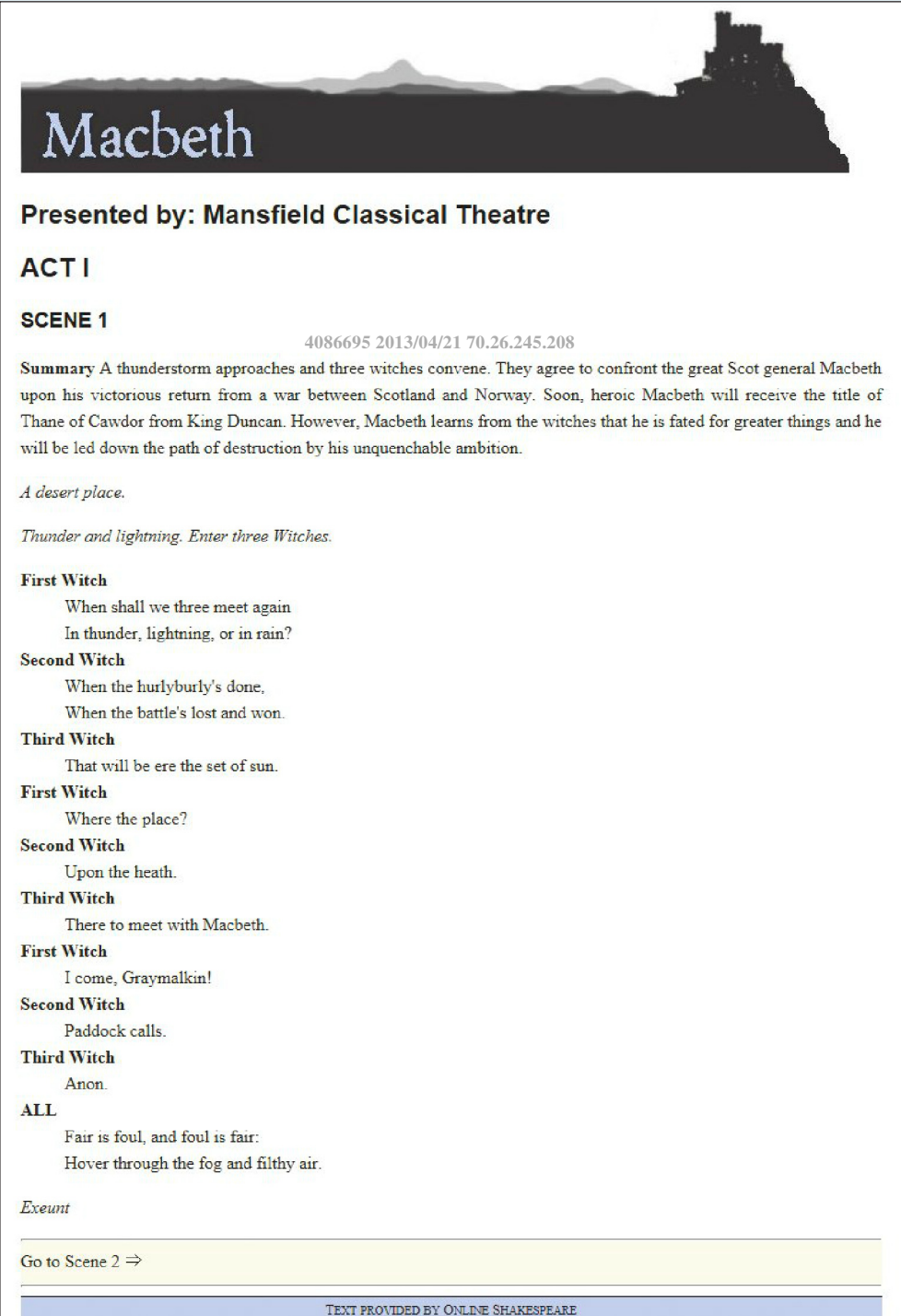
Case Problem 2

Data Files needed for the Case Problem: `macbeth.jpg`, `macbethtxt.htm`, `macstyles.css`, `modernizr-1.5.js`

Mansfield Classical Theatre Steve Karls is the director of Mansfield Classical Theatre, a theatre company for young people located in Mansfield, Ohio. This summer the company is planning to perform the Shakespeare play *Macbeth*. Steve wants to put the text of the play on the company's Web site and has asked for your help in designing and completing the Web page. Steve wants a separate page for each scene from the play. A preview of the page you'll create for Act I, Scene 1 is shown in Figure 1-50. Steve has already typed the text of the scene. He needs you to supply the HTML code.

Figure 1-50

Macbeth Act I, Scene 1 Web page



The image shows a web page for Macbeth Act I, Scene 1. At the top, there is a dark banner with the word "Macbeth" in a large, white, serif font. To the right of the text is a silhouette of a castle on a hill. Below the banner, the text "Presented by: Mansfield Classical Theatre" is displayed in a bold, black, sans-serif font. The title "ACT I" is in a bold, black, sans-serif font, followed by "SCENE 1" in a bold, black, sans-serif font. A small, gray, sans-serif font displays the text "4086695 2013/04/21 70.26.245.208". The main text is in a black, serif font and describes the summary of the scene, the setting, and the dialogue of the witches. The text is formatted with indentation for dialogue. At the bottom, there is a yellow button with the text "Go to Scene 2 =>" and a blue footer with the text "TEXT PROVIDED BY ONLINE SHAKESPEARE".

Macbeth

Presented by: Mansfield Classical Theatre

ACT I

SCENE 1

4086695 2013/04/21 70.26.245.208

Summary A thunderstorm approaches and three witches convene. They agree to confront the great Scot general Macbeth upon his victorious return from a war between Scotland and Norway. Soon, heroic Macbeth will receive the title of Thane of Cawdor from King Duncan. However, Macbeth learns from the witches that he is fated for greater things and he will be led down the path of destruction by his unquenchable ambition.

A desert place.

Thunder and lightning. Enter three Witches.

First Witch

When shall we three meet again
In thunder, lightning, or in rain?

Second Witch

When the hurlyburly's done,
When the battle's lost and won.

Third Witch

That will be ere the set of sun.

First Witch

Where the place?

Second Witch

Upon the heath.

Third Witch

There to meet with Macbeth.

First Witch

I come, Graymalkin!

Second Witch

Paddock calls.

Third Witch

Anon.

ALL

Fair is foul, and foul is fair:
Hover through the fog and filthy air.

Exeunt

[Go to Scene 2 =>](#)

TEXT PROVIDED BY ONLINE SHAKESPEARE

Complete the following:

1. Open the **macbeth.txt.htm** file from the tutorial.01\case2 folder included with your Data Files. Save the file as **macbeth.htm** in the same folder.

2. Enclose the entire Macbeth text within the structure of an HTML document including the `html`, `head`, and `body` elements. Add a doctype to the document head to indicate that the page is written in HTML5.
3. Within the head section, insert a comment containing the following text:
Macbeth: Act I, Scene 1
Author: your name
Date: the date
4. Add the page title **Macbeth: Act I, Scene 1**.
5. Link the file to the **modernizr-1.5.js** script file and to the **macstyles.css** style sheet. Set the character set to **UTF-8**.
6. Within the `body` element, insert a heading group consisting of an `h1` heading and an `h2` heading. Within the `h1` heading, insert an inline image containing the *macbeth.jpg* image file. Specify **Macbeth** as the alternate text. Within the `h2` heading, enter the text **Presented by: Mansfield Classical Theatre**.
7. Enclose the text of the play within a `section` element.
8. Mark the text *ACT I* as an `h2` heading. Mark *SCENE 1* as an `h3` heading. Group the two headings within an `hgroup` element.
9. Mark the summary of the scene as a paragraph. Mark the word *Summary* using the strong element.
10. In the text of the play, mark the descriptions of setting, scene, and exits as separate paragraphs and italicize the text using the `i` element, as shown in Figure 1-50.

EXPLORE

11. Mark the dialog as a description list, with each character's name marked as a description term and each speech marked as a description. When a speech includes two lines, add a line break at the end of the first line to keep the speech on separate lines, as shown in the figure.

EXPLORE

12. Directly below the paragraph containing the text *Exeunt*, insert the line **Go to Scene 2**. Mark this line as a `div` element with the `id` value *direction*. At the end of this line, insert a **right arrow character** using the 8658 character number. Add horizontal rules directly above and below this statement.
13. Mark the line *Text provided by Online Shakespeare* as a footer. Make sure the `footer` element is below the `section` element.
14. Save your changes to the file, and then confirm the layout and content of the page in your Web browser.
15. Submit the completed files to your instructor, in either printed or electronic form, as requested.

Explore how to use HTML to create a recipe page.

CHALLENGE


Case Problem 3

Data Files needed for the Case Problem: *dessertstyles.css*, *dessertweb.jpg*, *modernizr-1.5.js*, *torte.jpg*, *tortetxt.htm*


dessertWEB Amy Wu wants to take her enjoyment of cooking and her love of sharing recipes to the World Wide Web. She's interested in creating a new Web site called *dessertWEB* where other cooks can submit and review dessert recipes. Each page within her site will contain a photo and description of a dessert, along with a list of ingredients, cooking directions, and a list of reviews. Each recipe will be rated on a five-star scale. She already has information on one recipe: Apple Bavarian Torte. She's asked for your help in creating a Web page from the data she's collected. A preview of the completed page is shown in Figure 1-51.

Figure 1-51

dessertWeb menu page



Apple Bavarian Torte (★★★★)



A classic European torte baked in a springform pan. Cream cheese, sliced almonds, and apples make this the perfect holiday treat (12 servings).

INGREDIENTS

- ½ cup butter
- ½ cup white sugar
- ¼ teaspoon vanilla extract
- 1 cup all-purpose flour
- 1 (8 ounce) package cream cheese
- ¼ cup white sugar
- 1 egg
- ½ teaspoon vanilla extract
- 6 apples - peeled, cored, and sliced
- ½ cup white sugar
- ½ teaspoon ground cinnamon
- ¼ cup sliced almonds

DIRECTIONS

1. Preheat oven to 450° F (230° C).
2. Cream together butter, sugar, vanilla, and flour.
3. Press crust mixture into the flat bottom of a 9-inch springform pan. Set aside.
4. In a medium bowl, blend cream cheese and sugar. Beat in egg and vanilla. Pour cheese mixture over crust.
5. Toss apples with sugar and cinnamon. Spread apple mixture over all.
6. Bake for 10 minutes. Reduce heat to 400° F (200° C) and continue baking for 25 minutes.
7. Sprinkle almonds over top of torte. Continue baking until lightly browned. Cool before removing from pan.

REVIEWS

★★★★

I loved the buttery taste of the crust which complements the apples very nicely.

— Reviewed on Sep. 22, 2014 by MMASOW.

★★

Nothing special. I like the crust, but there was a little too much of it for my taste, and I liked the filling but there was too little of it. I thought the crunchy apples combined with the sliced almonds detracted from the overall flavor.

— Reviewed on Sep. 1, 2014 by GLENDACHEF.

★★★★★

Delicious!! I recommend microwaving the apples for 3 minutes before baking, to soften them. Great dessert - I'll be making it again for the holidays.

— Reviewed on August 28, 2014 by BBABS.

Complete the following:






1. Open the **tortetxt.htm** file from the tutorial.01\case3 folder included with your Data Files. Save the file as **torte.htm** in the same folder.
2. Add the structure of an HTML5 document around the recipe text. Within the **head** element, insert a comment containing the following text:

Apple Bavarian Torte

Author: *your name*

Date: *the date*

3. Set the character set of the document to **ISO-8859-1**.
4. Link the document to the **modernizr-1.5.js** script file and the **dessertstyles.css** style sheet file.
5. Specify **Apple Bavarian Torte Recipe** as the page title.
6. Within the **body** element, add a **header** element. Within the **header** element, insert an **h1** heading containing the inline image **dessertweb.jpg** with the alternate text **dessertWEB**.

7. Enclose the recipe description, ingredients list, and directions within a `section` element. Enclose the recipe reviews within an `aside` element.
8. Mark the text *Apple Bavarian Torte* as an `h1` heading.
-  **EXPLORE** 9. Replace the text (*4 stars*) in the `h1` heading with a set of four **star symbols** (character number 9733).
-  **EXPLORE** 10. Directly below the `h1` heading, insert the inline image **torte.jpg**. Specify the alternate text **Torte image**. Set the width of the image to **250** pixels.
11. Mark the description of the dessert as a paragraph.
12. Mark *INGREDIENTS* and *DIRECTIONS* as `h2` headings.
13. Mark the list of ingredients as an unordered list. Mark the list of directions as an ordered list.
-  **EXPLORE** 14. Within the ingredients, replace the occurrences of 1/2 with the character symbol ½ (reference number 189), the occurrences of 1/4 with the symbol ¼ (reference number 188), and the occurrences of 1/3 with the symbol ⅓ (reference number 8531.)
-  **EXPLORE** 15. Replace each occurrence of the word *degrees* in the directions with the degree symbol (°) (character name *deg*).
16. Mark *REVIEWS* within the `aside` element as an `h1` heading.
17. Change the text of each customer star rating to a set of **star symbols** using character number 9733 placed within a paragraph.
-  **EXPLORE** 18. Enclose the text of each customer review in a paragraph nested within a `blockquote` element. Place the name of the reviewer and the date on a new line within that paragraph. Insert an **em-dash** (character name *mdash*) before the word *Reviewed* in each of the reviews. Enclose the date of each review within a `time` element and enclose by *reviewer* within a `cite` element where *reviewer* is the name of the reviewer.
19. Save your changes to the file, and then verify the layout and content of the page in your Web browser.
20. Submit the completed files to your instructor, in either printed or electronic form, as requested.

Test your knowledge of HTML and use your creativity to design a Web page for an exercise equipment company.

RESEARCH

Case Problem 4

Data Files needed for the Case Problem: logo.jpg, smith.jpg, and smith.txt

Body Systems Body Systems is a leading manufacturer of home gyms. The company recently hired you to assist in developing its Web site. Your first task is to create a Web page for the LSM400, a popular weight machine sold by the company. You've been given a text file describing the features of the LSM400. You've also received two image files: one of the company's logo and one of the LSM400. You are free to supplement these files with any other resources available to you. You are responsible for the page's content and appearance.

Complete the following:

1. Create a new HTML5 file named **smith.htm** and save it in the tutorial.01\case4 folder included with your Data Files.
2. Add the appropriate doctype for HTML5 to the beginning of the file.
3. Add a comment to the document head describing the document's content and containing your name and the date.
4. Add an appropriate page title to the document head.
5. Set the character set of the file to **UTF-8**.

6. Use the contents of the **smith.txt** document (located in the tutorial.01\case4 folder) as the basis of the document body. Include at least one example of each of the following:
 - structural elements such as the **header**, **footer**, **section**, and **aside** elements
 - grouping elements including a heading and a paragraph
 - an ordered or unordered list
 - a text-level element
 - an inline image
 - a character entity reference or a character encoding number
7. Structure your HTML5 code so that it's easy for others to read and understand.
8. Save your changes to the file, and then open it in your Web browser to verify that it is readable.
9. Submit your completed files to your instructor, in either printed or electronic form, as requested.

ENDING SOLUTION FILES

