

Halloween Case Study for *Murach's HTML5 and CSS3* (4th edition)

This case study consists of a series of exercises that will guide you through the development of the pages for a Halloween website.

Guidelines for doing the Halloween Case Study

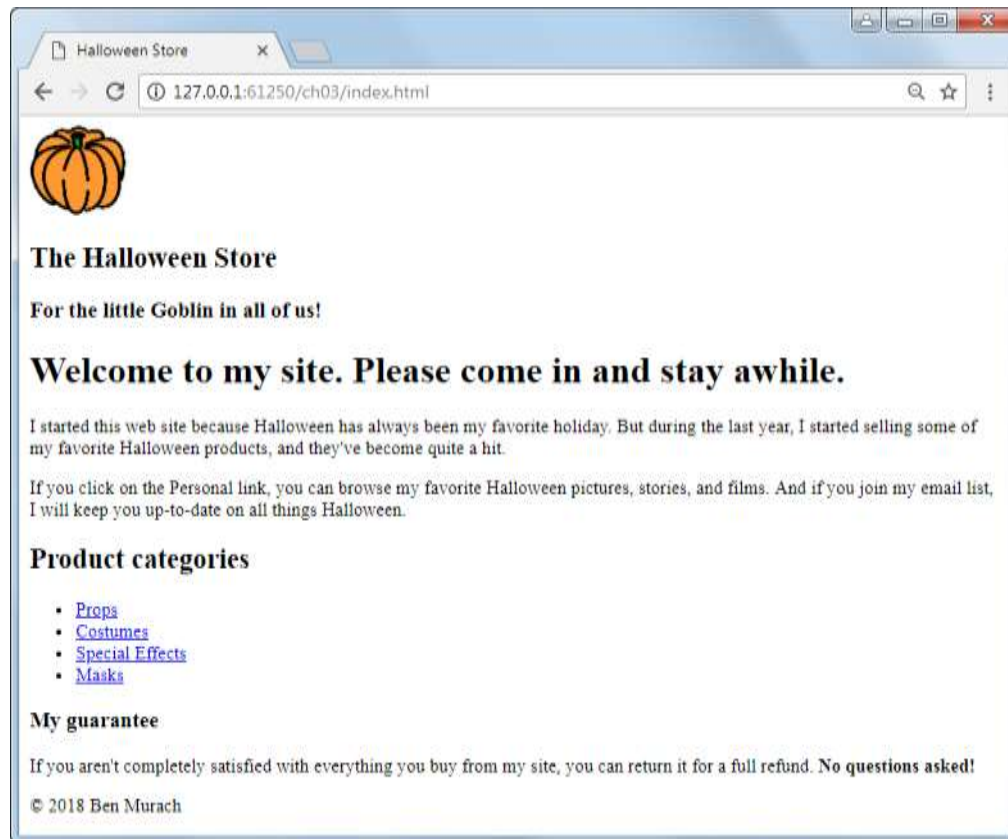
Unlike the exercises in the book, the exercises for this case study don't give you step-by-step instructions. Instead, the description for each exercise includes an image of how the page should appear in a browser, along with specifications that you can complete in whatever sequence you prefer.

These specifications are detailed enough for you to complete each exercise. However, you'll need to use your best judgment on how to code many of the details. To do that, write the code in the way that you think is best, based on the skills that were presented in the book.

Before you do the first exercise, your instructor will give you the starting files for the website. These files are stored in a folder named `halloween_exercises` and include starting HTML and CSS files for the home page, along with all supporting files such as image, media, JavaScript, and text files. The exercises will instruct you on when to use each of these files.

Halloween 3 Create the home page

In this exercise, you'll code the HTML for the home page. When you're through, the page should look like this:

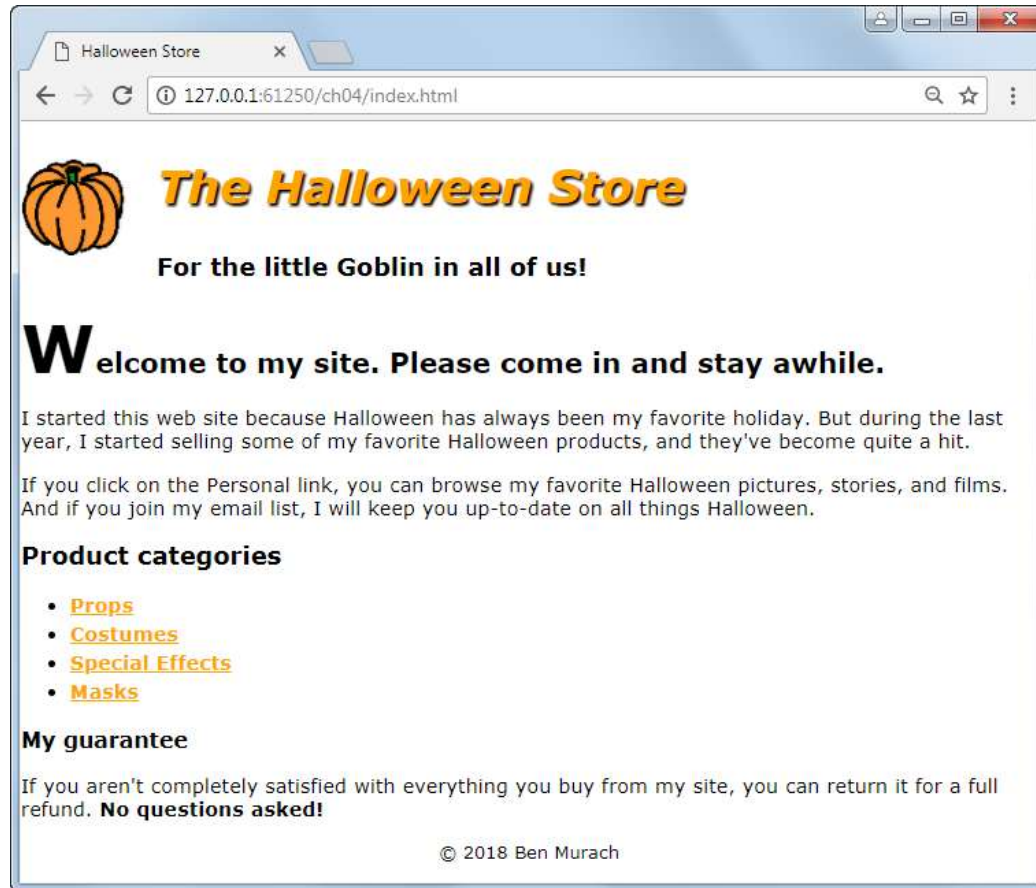


Specifications

- Create the home page from the index.html file that's in the root folder for the project. This file includes just the basic HTML elements.
- Add the HTML5 semantics to structure the page so it includes a header, the main content, and a footer.
- Add an image and two levels of headings to the header. You'll find the image, named pumpkin.gif, in the images folder. You'll find the text for the header as well as for the other areas of the page in the index.txt file in the text folder.
- Add three levels of headings and the required text for the main content. Boldface the last sentence of the guarantee.
- Code the product categories as an unordered list with links to other pages. Name the pages props.html, costumes.html, special.html, and masks.html, and assume that these pages will be stored in the products folder.
- Add the required text to the footer, using a character entity for the copyright symbol.

Halloween 4 Format the home page

In this exercise, you'll create an external style sheet that you can use to format the Halloween Store home page that you created in exercise 3. When you're through, the page should look similar to this:



Specifications

- Create the external style sheet for the home page from the main.css file that's in the styles folder. This file is currently blank.
- Set the default font for the document to a sans-serif font.
- Adjust the font sizes for all of the headings. In addition, format the first letter of the first heading in the main content so it's larger than the other letters in the heading.
- In the header, float the image to the left and indent both headings. In addition, change the color of the first heading to orange, italicize it, and add a black shadow.
- Format the links so they're displayed in boldfaced orange whether or not they've been visited. If a link has the focus or the mouse is hovering over it, though, it should be displayed in green.
- Format the list to increase the space between the list items.

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- Reduce the font size for the footer and center it.
- Link the main style sheet that you just created as well as the normalize style sheet that's in the styles folder to the home page.

Halloween 5 Enhance the home page formatting

In this exercise, you'll use the CSS box model to add spacing, borders, and backgrounds to the Halloween Store home page that you formatted in exercise 4. When you're through, the page should look similar to this:



Specifications

- Format the body of the page so it's 800 pixels wide, has a white background, has a black border with a shadow, and is centered in the browser window.
- Add a background image behind the body of the page that uses the bats.gif file in the images folder. This image should repeat both horizontally and vertically.
- Add a black border below the header and above the footer.
- Remove the shadow, italics, and color from the first heading in the header.
- Add a 45-degree gradient to the header and footer. The gradient in the header should range from white at the left to orange $\frac{3}{4}$ of the way to the right to black at the right. The gradient in the footer should be the reverse. Be sure to provide for all modern browsers.
- Adjust the margins and padding for the elements on the page so it looks as shown above.

Halloween 6 Use a 2-column layout

In this exercise, you'll enhance the formatting of the home page so it uses a 2-column layout. You'll also add some additional content to the page. When you're through, the page should look similar to this:



Specifications

- Move the unordered list to a sidebar that's floated to the left of the remaining content, which should be coded in a section. The width of the sidebar should be 160 pixels. Be sure to clear the footer so it's not displayed below the list.
- Adjust the margins and padding for the sidebar and section as necessary. (Note: Because the unordered list is given some left padding by default, you don't need to apply any additional margin or padding to it.)
- Modify the HTML for the first heading in the section so it's displayed on two lines.
- Modify the second heading as shown. Then, add the image (cat1.jpg) and the link below the heading. The link should display a page named cat.html in the products folder.

Halloween 7 Add two navigation menus

In this exercise, you'll enhance the home page you worked on in exercise 6 so it includes a vertical navigation menu, a two-tier horizontal navigation menu, and an image link. When you're through, the page should look similar to this:



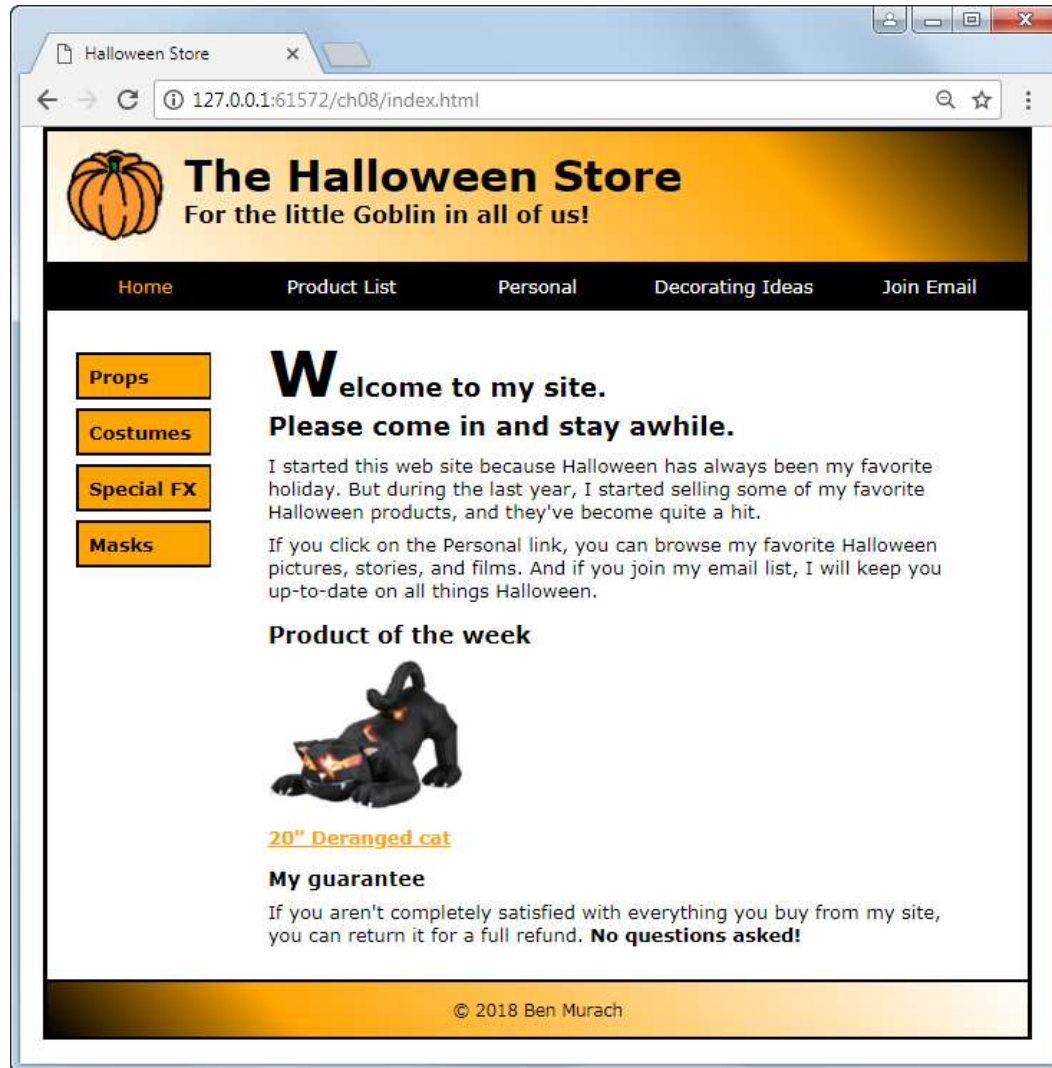
Specifications

- Add a 2-tier navigation menu that includes the links shown above. Format the navigation menu so the link for the page that's currently displayed (in this case, home) has orange text, and so the link that the mouse is hovering over (in this case, indoor) has a gray background.
- Format the links in the sidebar as a vertical navigation menu as shown above. Be sure to make the entire box for each link clickable.
- Modify the image in the main content so it's a link that displays the same page as the link below it.

Halloween 8 Use Responsive Web Design

In this exercise, you'll enhance the home page you worked on in exercise 7 so it uses Responsive Web Design.

Specifications for a fluid design



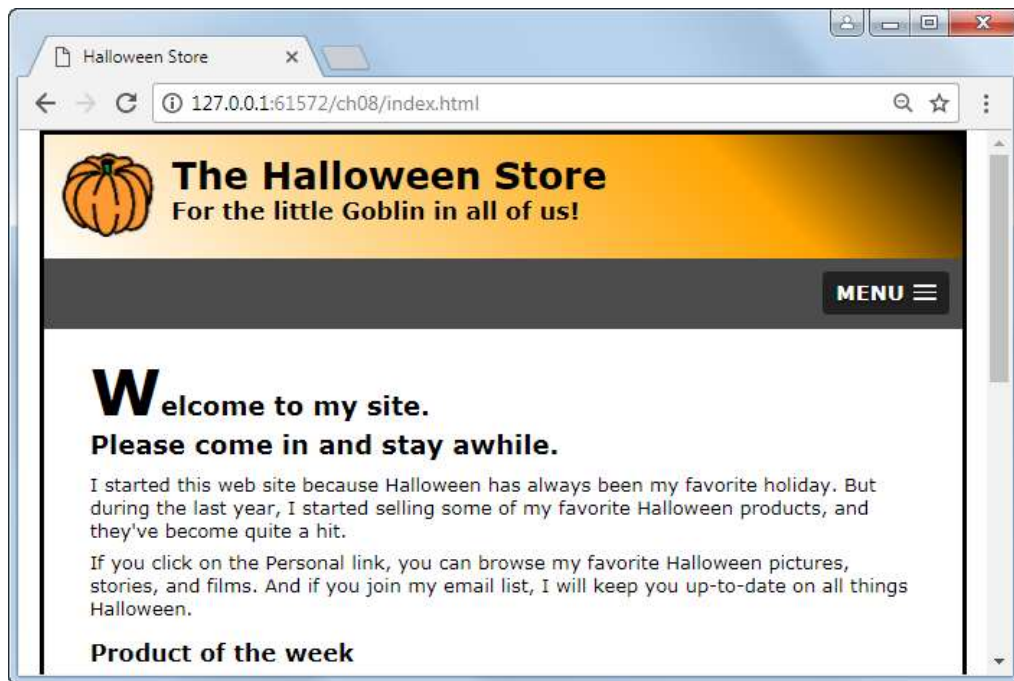
- Make a copy of the main.css style sheet and name it main_rwd.css. Then, modify the HTML for the page so it uses this style sheet.
- Modify the page so it uses a fluid layout. The maximum width for the page should be 960 pixels, and the page should occupy 95% of the browser window. Be sure to make the left and right margins and padding as well as the structural elements fluid. (Note: To get the boxes in the vertical navigation menu to size properly, you'll need to specify the width on the ul element instead of the li elements.)

- If you used pixels for any top or bottom margins or padding, convert them to ems. In addition, if you specified any of the font sizes using pixels, convert them to percentages or ems.
- Make both of the images on the page scalable, and make sure that both images are limited in size to the width that's specified in the HTML. In addition, make sure that the image in the header can't be reduced to a width less than 40 pixels.

Specifications for a media query for a tablet in portrait orientation

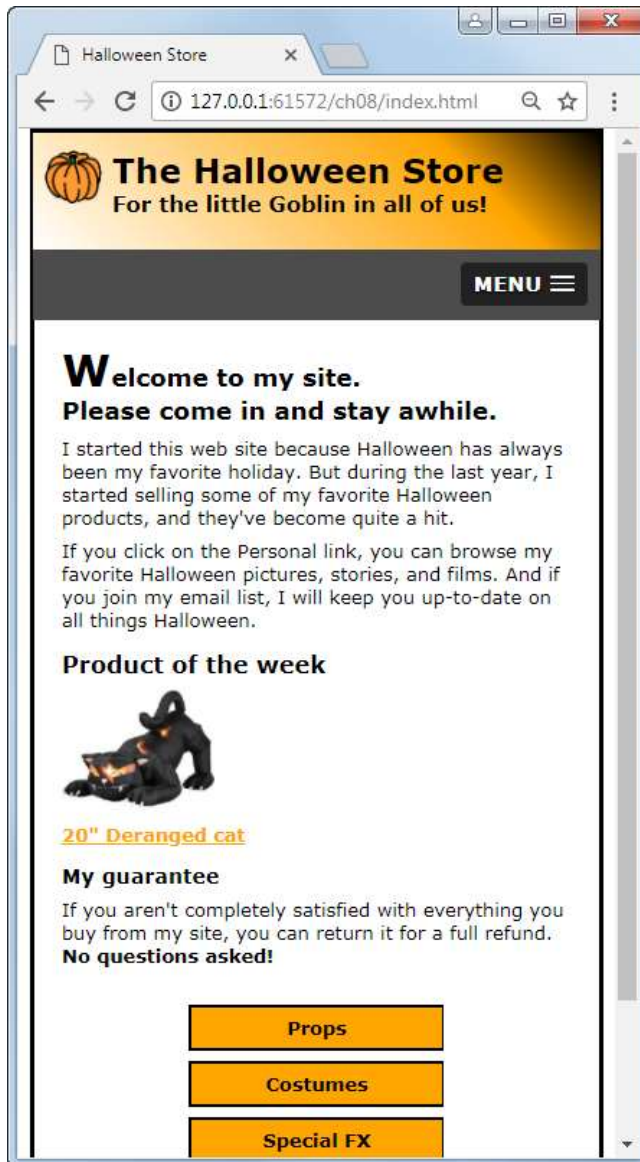
- Add a meta element to the page to control the viewport for media queries.
- Add a media query that will be applied to screens with a maximum width of 800 pixels. Then, add styles to remove the background image from the page, remove the shadow from the body, and reduce the size of all the fonts on the page to 90%.

Specifications for a media query for a mobile phone in landscape orientation



- Add a media query that will be applied to screens with a maximum width of 767 pixels. Then, add the HTML and CSS required to hide the navigation menu and display a SlivkNav menu in its place. You'll find the slicknav.css file in the styles folder, you'll find the slicknav.min.js file in the js folder, and you can get the jQuery library from the jQuery Content Delivery Network. Format the page so it appears in one column.

Note: The page shown above was captured on a desktop so it is an approximation.

Specifications for a media query for a mobile phone in portrait orientation

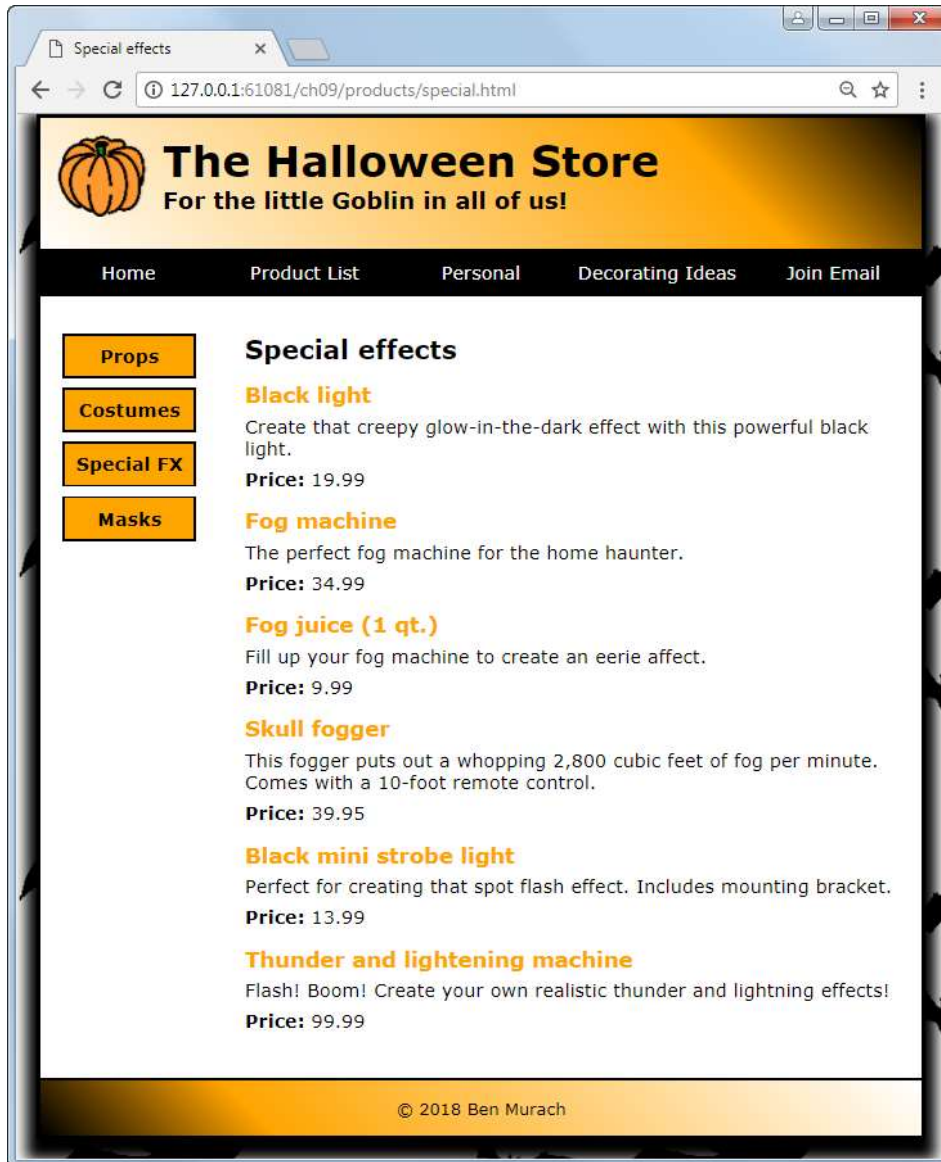
- Add a media query that will be applied to screens with a maximum width of 479 pixels. Then, reduce the font sizes of the headings in the header and the first heading in the section.

Note: The page shown above was captured on a desktop so you can see the layout of the entire page.

Halloween 9 Use Flexible Box Layout

In this exercise, you'll create a page that lists the products in the special effects category, and you'll format portions of that page using Flexible Box Layout.

Specifications for the desktop layout

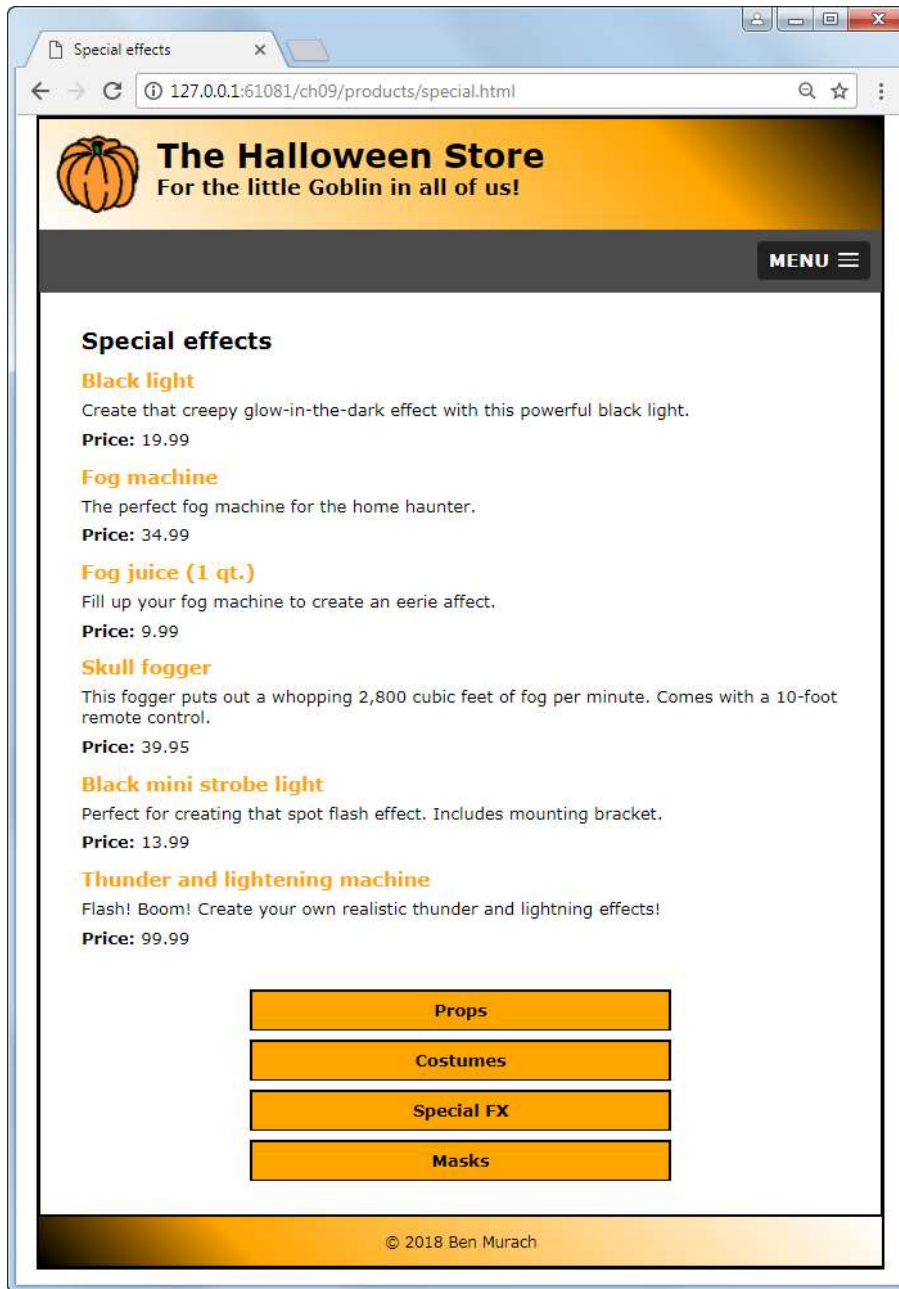


- To create the special effects page, you can copy the index.html file you worked on in exercise 8 to the products folder and rename it special.html. Then, you can replace the content of the section with the content of the special.txt file in the text folder and modify the URLs on the page as necessary.
- Make a copy of the main_rwd.css style and name it c9_category.css. Then, modify the HTML for the page so it uses this style sheet.

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- Modify the horizontal navigation menu so it indicates that no page is current, and modify the HTML and CSS for the section so it appears as shown above. The product names should be coded as links that go to other pages. Because these pages don't exist, you can name them anything you like. However, you should assume that they will be stored in the products folder.
- Modify the horizontal navigation menu so it uses flex. The menu should extend the full width of the body, each flex item should occupy the same amount of space within the flex container, and space should be allocated evenly between the flex items.
- Modify the main element so it uses flex. Allocate space to the sidebar and section so they're displayed as shown above.
- Reorder the section and the sidebar so the sidebar is displayed at the left side of the page.
- Adjust the spacing as necessary so the page looks as shown above.

Specifications for a media query for a mobile phone in landscape orientation



- Modify the main element so the section and sidebar are displayed in a column.
- Reorder the section and sidebar so the section is displayed above the sidebar.
- Adjust the spacing as necessary so the page is displayed as shown above.

Halloween 10 Use Grid Layout

In this exercise, you'll format a page that lists the products in the props category using Grid Layout.

Specifications for the desktop layout

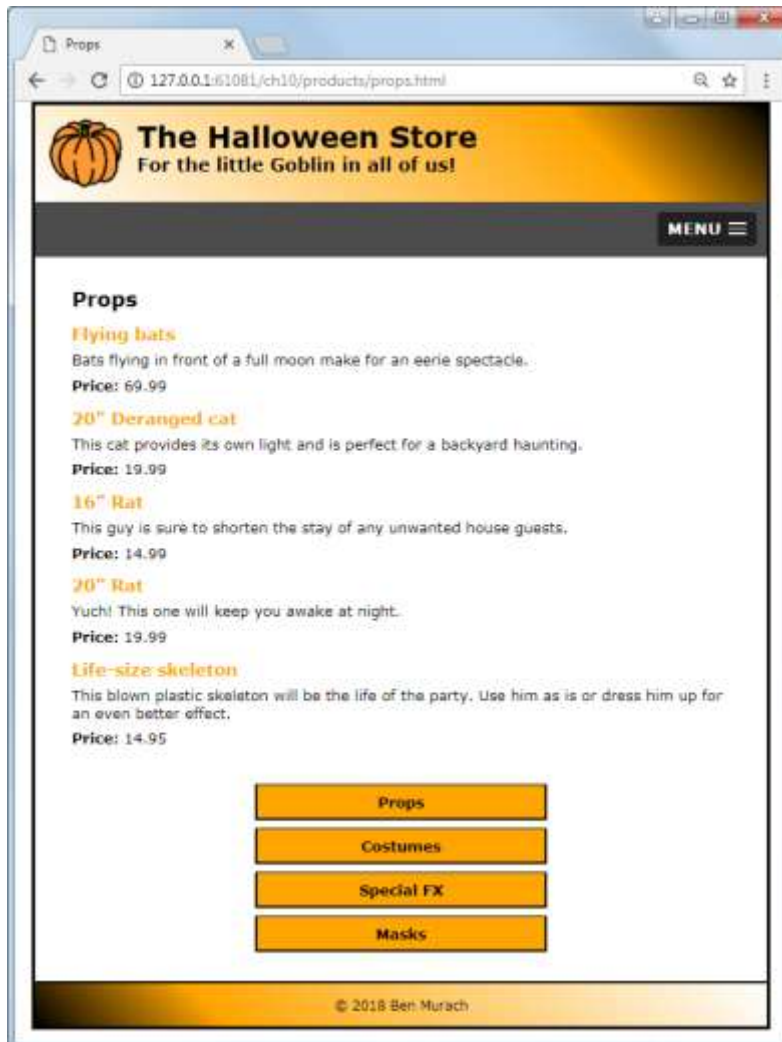


- To create the props page, you can copy the index.html file you worked on in exercise 8 to the products folder and rename it props.html. Then, you can replace the content in the section with the content of the props.txt file in the text folder and modify the URLs on the page as necessary.
- Make a copy of the main_rwd.css style and name it c10_category.css. Then, modify the HTML for the page so it uses this style sheet.
- Modify the horizontal navigation menu so it indicates that no page is current, and modify the HTML and CSS for the section so it appears as shown above.
- Format the body of the page so it uses grid. The grid should include grid areas for the header, the horizontal navigation menu, the sidebar, the section, and the footer. Use any technique you want to position the elements in the grid.

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- Format the horizontal navigation menu so it uses grid. The menu items should be sized proportionally.

Specifications for a media query for a mobile phone in landscape orientation



- Redefine the grid for the body of the page so the header, navigation menu, sidebar, section, and footer are displayed in a single column that's the full width of the screen. The section should be displayed before the sidebar.
- Position the mobile menu in the grid so it's displayed in place of the navigation menu.
- Adjust the spacing as necessary so the page looks as shown above.

Halloween 11 Create a product page

In this exercise, you'll create a product page that uses a variety of features for working with images. When you're through, the page should look similar to this:



Specifications

- To create the product page, you can copy the index.html file you worked on in exercise 7 to the products folder and rename it cat.html. Then, you can delete the content from the section, modify the URLs on the page as necessary, and add the content shown above.
- Create a new style sheet named product.css for the product page, and copy the styles you need from the main.css file to this style sheet. Then, modify the link element for the style sheet in the cat.html file so it points to the correct style sheet.
- Modify the horizontal navigation menu so it indicates that no page is current.
- In the section, float the image to the left of the text. In addition, set the left margin for the text so if the product description is longer, the text won't flow below the image.
- Assign an id to the left sidebar, and modify the CSS so it refers to the sidebar by that id.
- Add another sidebar with a width of 180 pixels that's floated to the right of the main section, and assign an id to that sidebar. Set the background color of the right sidebar to #F5DEB3.

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- Add a heading to the right sidebar, formatted as shown above. Then, add an unordered list with three list items. Each list item should include a figure with a link that includes an image and a figure caption that includes a text link. The images are named `flying_bats.jpg`, `rat1.jpg`, and `strobe1.jpg`. Be sure to size the images appropriately.
- Format the links in the right sidebar so they're displayed in black whether or not they've been visited. If a link has the focus or the mouse is hovering over it, though, it should be displayed in green.
- Adjust the margins and padding as necessary so the page looks as shown above.
- Add a circular image map for the pumpkin image in the header. When this image map is clicked, the home page should be displayed.
- Add the link element for the favicon to the head element of the HTML document. You'll find the favicon in the images folder.

Halloween 12 Create a page that uses a table

In this exercise, you'll create a page that uses a table to present a list of products. When you're through, the page should look similar to this:



Specifications

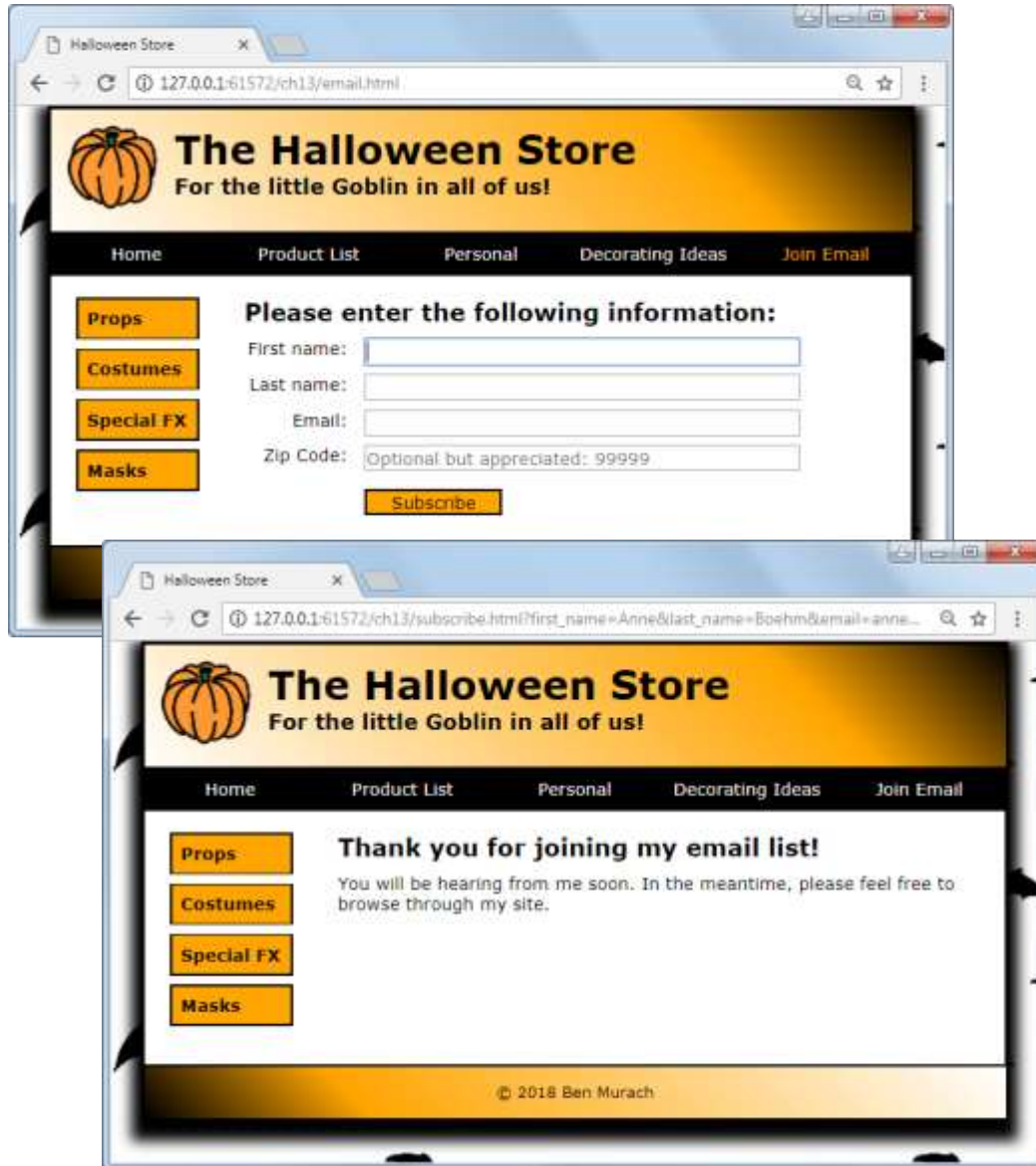
- To create the product list page, you can copy the index.html file you worked on in exercise 7 to the products folder. Then, you can delete the content from the main section and modify the URLs on the page as necessary.
- Modify the horizontal navigation menu so it indicates that the product list page is the current page.
- Add a table to the section with a caption, a header, and a body as shown above. Be sure to merge the rows in the first column for each category so the category name is displayed only in the first row.
- Code the description for each product as a link to the page for that product. You can use any names you want for these product pages, but the pages should be stored in the products folder. (The exception is the page for the deranged cat, which should be named cat.html as indicated in exercise 11.)

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- Create a new style sheet named `summary.css` for the product list page, and copy the styles you need from the `main.css` file to this style sheet. Then, modify the link element for the style sheet in the `products/index.html` file so it points to the correct style sheet.
- Align the caption, headings, and data, and apply any other required formatting as shown above. Use a structural pseudo-class selector to apply a background color of `#F5DEB3` to the prices in the third column.

Halloween 13 Create a page that uses a form

In this exercise, you'll create a page that includes a form for joining an email list. In addition, you'll create a page that's displayed when the form is submitted. When you're through, the pages should look similar to this:



Specifications for the email form

- Create a new page named `email.html` in the root folder for the project. Then, copy the code for the basic page elements, as well as for the header, footer, and sidebar, from the page for exercise 7.
- Modify the horizontal navigation menu so it indicates that the email page is the current page.

- Create a new style sheet named `email.css` for the email page, and copy the styles you need from the `main.css` file to this style sheet. Then, modify the link element for the style sheet in the `email.html` file so it points to the correct style sheet.
- Add the heading and the form element to the section. Code the form element so a form named `subscribe.html` in the root folder is displayed when the Subscribe button is clicked.
- Add the label and input elements for the form. The focus should be on the first text field when the form is first displayed.
- Align the controls as shown above, and format the button so it's orange with a black border.
- Use the data validation attributes to require entries in the first three text fields. In addition, use a regular expression to validate an entry in the Zip Code field, and display an appropriate message in the tooltip if the entry is invalid.
- Use a placeholder to display a message in the Zip Code field as shown above.
- Add any other formatting as necessary so the page looks as shown above.

Specifications for the subscribe form

- Create a new page named `subscribe.html` in the root folder for the project. Then, copy the code for the basic page elements, as well as for the header, footer, and sidebar, from the email page.
- Create a new style sheet named `subscribe.css` for the subscribe page, and copy the styles you need from the `main.css` file to this style sheet. Then, modify the link element for the style sheet in the `subscribe.html` file so it points to the correct style sheet.
- Modify the horizontal navigation menu so it indicates that no page is current.
- Add the heading and paragraph shown above, and format it as necessary.

Halloween 14 Create a page that uses video

In this exercise, you'll create a personal page that contains a video. When you're through, the page should look similar to this:



Specifications

- To create the personal page, you can copy the index.html file from exercise 7 to the personal folder. Then, you can delete the content from the section and modify the URLs on the page as necessary.
- Modify the horizontal navigation menu so it indicates that the personal page is the current page.
- Modify the vertical navigation menu so it provides the links shown above. Use any names you want for the pages, but assume that they're stored in the personal folder.
- Create a new style sheet named personal.css for the personal page, and copy the styles you need from the main.css file. Then, modify the link element for the style sheet in the personal/index.html file so it points to the correct style sheet.
- Add a heading and the video to the section. Provide for the MPEG-4 media type, and provide a Flash file as fallback in case a browser doesn't support the video element. You'll find the video files you need in the media folder.
- Add any other formatting as necessary so the page looks as shown above.

Halloween 15 Add an embedded font and a story and provide for printing the story

In this exercise, you'll use a Google web font on the personal page that you created in exercise 14. You'll also add a story to this page and provide for printing that story. When you're done, the page should look similar to this:

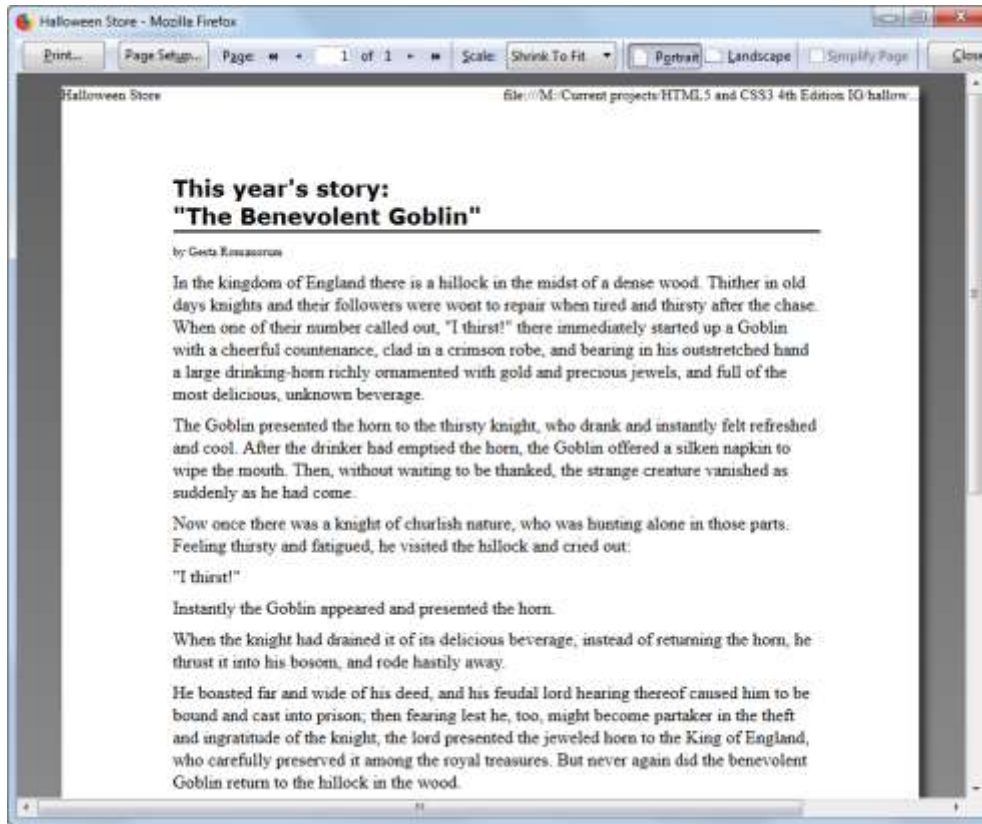


Specifications

- Use the Google Web Fonts page (www.google.com/fonts) to get the link element for using the Creepster font. Copy this link element into the head section of the personal page.
- Apply the Creepster font to the first heading in the header.
- Add the story to the personal page, and format it as shown above. You'll find the text for the story in the story.txt file in the text folder. (If you didn't do exercise 14, see the information below for creating the personal page without the video.)
- Add the required code to the personal.css style sheet to provide for printing the story. Print the author's name and the body of the story in a serif font, but print

the heading in a sans-serif font. In addition, add a 3-pixel black rule below the heading.

- Remove all other elements from the page, and remove the box shadow from around the page. When you're done, the printed output should look like this:



If you didn't do exercise 14:

- Start by creating the personal page. To do that, you can copy the index.html file from exercise 7 to the personal folder. Then, you can delete the content from the section and modify the URLs on the page as necessary.
- Modify the horizontal navigation menu so it indicates that the personal page is the current page.
- Modify the vertical navigation menu so it provides the links shown above. Use any names you want for the pages, but assume that they're stored in the personal folder.
- Create a new style sheet named personal.css for the personal page, and copy the styles you need from the main.css file to this style sheet. Then, modify the link element for the style sheet in the personal/index.html file so it points to the correct style sheet.
- Continue with the specifications listed above.

Halloween 16 Add a transition and an animation

In this exercise, you'll add a transition and an animation to the product page that you created in exercise 11. When you're done, the page should look similar to this:



Specifications

- Add a transition for the widths of the images in the right sidebar of the cat.html file in the products folder that will last for three seconds and use the linear speed curve. The transition should increase the width of an image to 125 pixels when the mouse hovers over an image. Be sure to provide for all browsers.
- Add an animation for the image in the section that will cause the image to move up and down when the page is loaded. The animation should last for half a second, use the ease-in-out speed curve, repeat six times, and alternate directions on each repetition.

Halloween 19 Use JavaScript and jQuery to enhance the footer and add a slide show

In this exercise, you'll create a decorations page that uses jQuery to present a slide show with decorating ideas. In addition, you'll use JavaScript to add a footer that indicates when Halloween is. When you're through, the page should look similar to this:



Specifications

- To create the decorations page, you can copy the index.html file from exercise 7 to the decorations folder. Then, you can delete the content from the section and modify the URLs on the page as necessary.
- Modify the horizontal navigation menu so it indicates that the decorations page is the current page.
- Modify the vertical navigation menu so it provides the links shown above. Use any names you want for the pages, but assume that they're stored in the decorations folder.

- Create a new style sheet named `decorations.css` for the decorations page, and copy the styles you need from the `main.css` file to this style sheet. Then, modify the link element for the style sheet in the `decorations/index.html` file so it points to the correct style sheet.
- Add the JavaScript that creates the footer to the `decorations/index.html` file. You'll find this script in the `days_to_halloween.js` file in the `js` folder.
- Add the script elements that are needed to create a slide show. You'll find the `slide_show.js` file in the `js` folder, and you can get the jQuery library from the jQuery Content Delivery Network.
- Add a heading and the slide show to the section. You'll find the image files you need in the `slides/decorations` folder.
- Add any other formatting as necessary so the page looks as shown above.