

EXERCISE 1. Adding color to a document

In this exercise, we'll start with a simple black-and-white menu and give it some personality with foreground and background colors (FIGURE 13-17). You should have enough experience writing style rules by this point that I'm not going to hold your hand as much as I have in previous exercises. This time, you write the rules. You can check your work against the finished style sheet provided with the materials for this chapter.

Open the file *summer-menu.html* (get it at learningwebdesign.com/5e/materials) in a text editor. You will find that there is already an embedded style sheet that provides basic text formatting. You'll just need to work on the colors. Feel free to save the document at any step along the way and view your progress in a browser.

1. Make the **h1** heading purple (R:153, G:51, B:153, or **#993399**) by adding a new declaration to the existing **h1** rule. Note that because this value has all double digits, you can use the condensed version (**#939**).
2. Make the **h2** headings light brown (R:204, G:102, B:0, **#cc6600** or **#c60**).
3. Make the background of the entire page a light green (R:210, G:220, B:157, or **#d2dc9d**). Now might be a nice time to save, have a look in a browser, and troubleshoot if the background and headings do not appear in color.

4. Make the background of the **header** white with 50% transparency (R:255, G:255, B:255, .5) so a hint of the background color shows through.
5. I've already added a rule that turns underlines off under links (**text-decoration:none**), so we'll be relying on color to make the links pop. Write a rule that makes links the same purple as the **h1** (**#939**).
6. Make visited links a muted purple (**#937393**).
7. When the mouse is placed over links, make the text a brighter purple (**#c700f2**) and add a white background color (**#fff**). This will look a little like the links are lighting up when the mouse is pointing at it. Use these same style rules for when the links are in focus.
8. As the mouse is being clicked (or tapped on a touch device), add a white background color and make the text turn a vibrant purple (**#ff00ff**). Make sure that all of your link pseudo-classes are in the correct order.

When you are done, your page should look like FIGURE 13-17.

We'll be adding background images to this page later, so if you'd like to continue experimenting with different colors on different elements, make a copy of this document and give it a new name. Remember that the Google color picker is an easy destination for colors and their RGB equivalents.

WARNING

Don't forget the # character before hex values. The rule won't work without it.



FIGURE 13-17. The Black Goose Bistro menu page with colors applied.

EXERCISE 2. Adding a tiling background image

In this exercise, we’re going to add a simple tiling background image to the menu. The images provided for this exercise should be in the *images* directory.

Add a declaration to the **body** style rule that makes the image *bullseye.png* tile in the background of the page. Be sure to include the pathname relative to the style sheet (in this case, the current HTML document).

```
background-image: url(images/bullseye.png);
```

Easy, isn’t it? When you save and view the page in the browser, it should look like [FIGURE 13-19](#).

I want to point out that *bullseye.png* is a slightly transparent PNG graphic, so it blends into any background color. Try temporarily changing the **background-color** for the **body** element by adding a second **background-color** declaration lower in the stack so it overrides the previous one. Play around with different colors and notice how the circles blend in. When you are done experimenting, delete the second declaration so the background is green again and you’re ready to go for upcoming exercises.



EXERCISE 3. Controlling tile direction

Now let's try some slightly more sophisticated tiling on the Summer Menu page. This time we'll add a tiling background just along the top edge of the **header** element.

1. In the **header** rule, add the image *purpledotted.png* and set it to repeat horizontally only:

```
header {
  margin-top: 0;
  padding: 3em 1em 2em 1em;
  text-align: center;
  background-color: rgba(255,255,255,.5);
  background-image: url(images/purpledot.png);
  background-repeat: repeat-x;
}
```

2. Save the file and look at it in the browser. It should look something like [FIGURE 13-22](#). I recommend resizing your browser window wider and narrower and paying attention to the position of the background pattern. See how it's always anchored on the left? You're going to learn how to adjust position next. Try changing the style rule to make the dot repeat vertically only; then make it not repeat at all (set it back to **repeat-x** and save when you're done).



FIGURE 13-22. Adding a horizontal tiling image to the **header**.

3. Finally, try out the **space** and **round** repeat values on the **body** background image and see if you like the effect. Note that the tiles are evenly spaced within the body of the document, not just the viewport, so you may see some cut-off circles at the bottom edge of your browser. Delete the **background-repeat** declaration so it goes back to the default **repeat** for upcoming exercises:

```
body {
  ...
  background-repeat: space;
}
```

EXERCISE 4. Positioning background images

Let's have some fun with the position of the background image in the menu. First we're going to make some subtle adjustments to the background images that are already there, and then we'll swap them out for a whole different background and play around some more. We are still working with the *summer-menu.html* document, which should have repeating tile patterns in the **body** and **header** elements.

1. I'm thinking that because the main elements of the menu are centered, it would be nice if the background patterns stayed centered, too. Add this declaration to both the **body** and **header** rules; then save and look at it in the browser.

```
background-position: center top;
```

You may not notice the difference until you resize the browser wide and narrow again. Now the pattern is anchored in the center and reveals more or less on both edges, not just the right edge as before.

2. For kicks, alter the **background-position** values so that the purple dots are along the bottom edge of the **header** (**center bottom**). (That doesn't look so good; I'm putting mine back to **top**.) Then try moving *bullseye.png* down 200 pixels (**center 200px**). Notice that the pattern still fills the entire screen—we moved the origin image down, but the background is still set to tile in all directions. **FIGURE 13-25** shows the result of these changes.
3. That looks good, but let's get rid of the background on the **body** for now. I want to show you a little trick. During the design process, I prefer to hide styles in comments instead of deleting them entirely. That way, I don't need to remember them or type them in again; I only have to remove the comment indicators, and they're back. When the design is done and it's time to publish, I strip unused styles out to keep the file size down.

Here's how to hide declarations as CSS comments:

```
body {
  ...
  background-color: #d2dc9d;
  /* background-image: url(images/bullseye.png);
  background-position: center 200px; */
}
```

4. Now, add the *blackgoose.png* image (also a semi-transparent PNG) to the background of the page. Set it to not repeat, and center it at the top of the page:

```
background-image: url(images/blackgoose.png);
background-repeat: no-repeat;
background-position: center top;
```

Take a look in the browser window and watch the background scroll up with the content when you scroll the page.

5. I want you to get a feel for the various position keywords and numeric values. Try each of these out and look at it in the browser. Be sure to scroll the page and watch what happens. Note that when you provide a percentage or keyword to the vertical position, it is based on the height of the entire document, not just the browser window. You can try your own variations as well.

```
background-position: right top;
```

```
background-position: right bottom;
```

```
background-position: left 50%;
```

```
background-position: center 100px;
```

6. Leave the image positioned at **center 100px** so you are ready to go for the next exercise. Your page should look like the one shown on the right in **FIGURE 13-25**.



Centered background pattern



Positioned non-repeating image

FIGURE 13-25. The results of positioning the origin image in the tiling background patterns (left) and positioning a single background logo (right).

EXERCISE 5.

1. Fixed position

When we last left the bistro menu, we had applied a large, non-repeating logo image to the background of the page. We'll leave it just like that, but we'll use the **background-attachment** property to keep it in the same place even when the page scrolls:

```
body {  
  background-image: url(images/  
blackgoose.png);  
  background-repeat: no-repeat;  
  background-position: center  
100px;  
  background-attachment: fixed;  
}
```

Save the document, open it in the browser, and try scrolling. The background image stays put in the viewing area of the browser. Cool, huh?

For extra credit, see what happens when you fix the attachment of the dot pattern in the **header**. (Spoiler: it stays in the same place, but only within the **header** itself. When the **header** slides out of view, so does its background.)

EXERCISE 6. Convert to shorthand property

This one is easy. Replace all of the background-related declarations in the **body** of the bistro menu with a single **background** property declaration:

```
body {  
  font-family: Georgia, serif;  
  font-size: 100%;
```

```
  line-height: 175%;  
  margin: 0 15%;  
  background: #d2dc9d url(images/blackgoose.png)  
no-repeat center 100px fixed;  
}
```

Do the same for the **header** element, and you're done.

EXERCISE 7. Multiple background images

In this exercise, we'll give multiple background images a try (be sure you aren't using an old version of IE, or this won't work).

I'd like the dot pattern in the **header** to run along the left and right sides. I also have a little goose silhouette (*gooseshadow.png*) that might look cute walking along the bottom of the header. I'm making this example friendly for non-supporting browsers (IE8 and earlier) by providing a fallback declaration with just one image and separating out the **background-color** declaration so it doesn't get overridden. If IE8 is not a concern, you don't need the fallback.

You can see in the example that we are placing three images in a single header: dots on the left side, dots on the right, and a goose at the bottom.

```
header {
  ...
  background: url(images/purpledotted.png) center top
  repeat-x;
  background:
    url(images/purpledotted.png) left top repeat-y,
    url(images/purpledotted.png) right top repeat-y,
    url(images/gooseshadow.png) 90% bottom no-repeat;
  background-color: rgba(255,255,255,.5);
}
```

FIGURE 13-30 shows the final result. Meh, I liked it better before, but you get the idea.



FIGURE 13-30. The bistro menu header with two rows of dots and a small goose graphic in the **header** element.

Making an external style sheet

It is OK to use an embedded style sheet while designing a page, but it is probably best moved to an external style sheet once the design is finished so it can be reused by multiple documents in the site. We'll do just that for the summer menu style sheet.

1. Open the latest version of *summer-menu.html*. Select and cut all of the rules within the **style** element, but leave the `<style>...</style>` tags because we'll be using them in a moment.
2. Create a new plain ASCII text document and paste all of the style rules. Make sure that no markup got in there by accident.
3. Save this document as *menustyles.css* in the same directory as the *summer-menu.html* document.
4. We'll add the style sheet with a **link** element in the **head** of the document.

```
<link rel="stylesheet"
href="menustyles.css">
```

Again, test your work by saving the document and taking a look at it in the browser.

CSS REVIEW: COLOR AND BACKGROUND PROPERTIES

Here is a summary of the properties covered in this chapter, in alphabetical order.

Property	Description
background	Shorthand property that combines background properties
background-attachment	Specifies whether the background image scrolls or is fixed
background-clip	Specifies how far the background image should extend
background-color	Specifies the background color for an element
background-image	Provides the location of an image to use as a background
background-origin	Determines how the background-position is calculated (from edge of border, padding, or content box)
background-position	Specifies the location of the origin background image
background-repeat	Specifies whether and how a background image repeats (tiles)
background-size	Specifies the size of the background image
color	Specifies the foreground (text and border) color
opacity	Specifies the transparency level of the foreground and background