

EXERCISE PREVIEW

```
149 header nav a {
150     display: block;
151     font-weight: bold;
152     margin: 0 16px;
153     color: #fff;
154     padding-top: 4px;
155     border-top: 1px solid #fff;
156     text-transform: uppercase;
157     text-shadow: 1px 1px 1px rgba(0, 0, 0, 0.2);
158     -webkit-transition: all 0.3s ease;
159     -moz-transition: all 0.3s ease;
160     -o-transition: all 0.3s ease;
161     transition: all 0.3s ease;
162 }
```

EXERCISE OVERVIEW

CSS transitions smooth out property changes. In the last exercise, you made an opacity change to the thumbnails in the Top Stories section of the page. Instead of just seeing the image at 70% opacity and then at 100% on hover, transitions will animate the change—much like “tweening” does. The browser will actually show the intermediate changes between the two values. Transitions can be triggered by hovering, clicking or focusing. We already have a simple value change to the opacity of the image on :hover. Let's tell the browser to transition that change.

1. If you completed the previous exercise, **index.html** and **main.css** should still be open and you can skip the following sidebar. If you closed those files, re-open them now. We recommend you finish the previous exercises (2A–3B) before starting this one. If you haven't finished them, do the following sidebar.

IF YOU DID NOT DO THE PREVIOUS EXERCISES (2A–3B)

1. Close any files you may have open.
2. On the **Desktop**, go to **Class Files > yourname-HTML5 CSS3 Class**.
3. **Delete** the **Solar Flare** folder if it exists.
4. Select the **Solar Flare CSS Opacity Done** folder.
5. **Duplicate** the folder.
6. **Rename** the folder to **Solar Flare**.

2. For this exercise we'll be working with the **Solar Flare** folder. You may want to open that folder in your text/code editor if it allows you to (like Sublime Text does).

TRANSITIONING THE OPACITY OF THE TOP STORY IMAGES

To simplify the process, we'll start by using the W3C standard for coding transitions, and build our vendor-prefix stack to support all browsers when we're finished. At the time of this writing, the W3C standard for coding transitions is only supported in newer versions of Chrome, Firefox, and IE 10. Make sure you have the most up-to-date versions of Chrome and Firefox before starting this section.

1. Open **main.css** from the **css** folder in the Solar Flare folder if it isn't already open.
2. Find the **section#topstory img** rule (around line 155) and add the following in bold:

```
section#topstory img {  
    -webkit-box-shadow: 3px 3px 3px rgba(0,0,0, 0.3);  
    box-shadow: 3px 3px 3px rgba(0,0,0, 0.3);  
    margin-bottom: 4px;  
    opacity: 0.7;  
    filter: alpha(opacity=70);  
    transition-property: opacity;  
    transition-duration: 1s;  
}
```

NOTE: Transitions are declared in the rule for the object you wish to change **rather** than on the "trigger" rule (i.e. the **:hover**). This frees you up to trigger the transition from other additional pseudo classes like **:focus** or **:active** or even trigger the transition via JavaScript.

The two declarations you just added are fairly self-explanatory:

- You're telling the browser to **transition** the opacity **property** on this element
- You're setting the **duration** of the transition to last 1 second.

NOTE: There is another optional **transition-duration** declaration that lets you control the speed of the animation while it's happening. Typically this is called **easing**. In this exercise's short animations you won't really see much difference so we won't bother with it, but we explore this option in the **More CSS Transitions: Animated Graph** exercise later in this workbook.

3. Save the file.
4. Preview **index.html** in **Chrome, Firefox, or IE 10**. Mouse over any of the three small images at the bottom of the middle column to see the hover.

NOTE: Make sure you are using the most up to date version of Chrome or Firefox. Older versions need a vendor-prefix to work.

5. If possible preview **index.html** in Safari or IE 9. There's no transition here. There's a very subtle, but sophisticated difference. Transitions are pure progressive enhancement that degrade gracefully. Don't worry though, later we'll add the **-webkit-** vendor-prefix to get this working in Safari. But this is how it will look in a browser that doesn't support transitions, such as IE 9 and older.

TO DELAY OR NOT TO DELAY

If you like, the transition effect can actually be delayed a bit after the mouse hovers over the element.

1. Switch back to **main.css** in your text/code editor.

2. In the **section#topstory img** rule you just edited, add the following bold code:

```
transition-property: opacity;
transition-duration: 1s;
transition-delay: 0.5s;
```

3. Save the file.

4. Preview **index.html** in **Chrome, Firefox, or IE 10**. It works, but perhaps it's not the best effect in this case.

5. Return to the transition stack and delete:

```
transition-delay: 0.5s;
```

Keep this **transition-delay** property in your back pocket for other CSS transitions you may create down the road. It could come in handy another time!

SHORTHAND & THE VENDOR-PREFIXED TRANSITION STACK

Let's simplify the transition declaration with shorthand. We'll also add the vendor-prefix stack to support as many browsers as possible.

1. In the **section#topstory img** rule, select the last two declarations and **delete** them so the rule once again simply reads:

```
section#topstory img {
  -webkit-box-shadow: 3px 3px 3px rgba(0,0,0, 0.3);
  box-shadow: 3px 3px 3px rgba(0,0,0, 0.3);
  margin-bottom: 4px;
  opacity: 0.7;
  filter: alpha(opacity=70);
}
```

2. After the opacity declaration, add the following bold code. TIP: If you have Emmet installed in your text/code editor you can type **trs** and hit **Tab** to add the stack for transitions. You can then tab into each of the values and add the desired values.

```
section#topstory img {
  -webkit-box-shadow: 3px 3px 3px rgba(0,0,0, 0.3);
  box-shadow: 3px 3px 3px rgba(0,0,0, 0.3);
  margin-bottom: 4px;
  opacity: 0.7;
  filter: alpha(opacity=70);
  -webkit-transition: opacity 0.5s;
  -moz-transition: opacity 0.5s;
  -ms-transition: opacity 0.5s;
  -o-transition: opacity 0.5s;
  transition: opacity 0.5s;
}
```

NOTE: If you wanted to add a **transition-delay** to the shorthand, simply tack it on at the end. For example, to add back the half-second delay you tested out earlier, you would simply write:

```
transition: opacity 0.5s 0.5s;
```

3. Save the file and if possible, preview the effect in **Safari** to see it works there too. Excellent.

BASIC STYLES TO FORMAT THE HEADER NAVIGATION

Let's style and transition the main page navigation next. We have provided you with some basic styles for all the nav elements in the header.

1. Switch back to your text/code editor.
2. Open **header-nav-styles.css** from the **snippets** folder in the **Solar Flare** folder.
3. Select all the code on the page.
4. Copy it and close the document.
5. You should be back in **main.css**. Find the **header nav** rule (around line 113).
6. Paste the new rules **below** the **header nav** rule. Take a moment to review these new rules a bit. These styles space out the elements nicely, add basic text formatting and text-shadow to the anchors and change the color and opacity of the text-shadow on the **:hover**.
7. Save the file.
8. Preview **index.html** in a browser, making sure to roll over the navigation at the top right of the page.

TRANSITIONING MULTIPLE PROPERTIES

Next we'll use what we just learned about CSS transitions to make these changes more subtly smooth and classy.

1. Switch back to your text/code editor.
2. Find the rule for **header nav a** (around line 115) and add the following declaration (in bold). TIP: If you have Emmet installed in your text/code editor you can type **trs** and hit **Tab** to add the stack for transitions. You can then tab into each of the values and add the desired values.

```
header nav a {  
  display: block;  
  font-weight: bold;  
  margin: 0 16px;  
  color: #fff;  
  padding-top: 4px;  
  border-top: 1px solid #fff;  
  text-transform: uppercase;  
  text-shadow: 1px 1px 1px rgba(0,0,0, 0.2);  
  -webkit-transition: color 2s;  
  -moz-transition: color 2s;  
  -ms-transition: color 2s;  
  -o-transition: color 2s;  
  transition: color 2s;  
}
```

BUG ALERT!

Be careful when using multiple transitions. There's a bug in mobile webkit browsers that may cause elements with multiple transitions to disappear. This is an issue on Android and iOS devices. Be sure to test carefully.

We're setting a long duration here so you can more easily track the differences in syntax you'll make over the course of the next few steps. You'll create a shorter, smoother transition at the end.

3. Save the file.
4. Preview **index.html** in a browser, making sure to roll over the navigation in the header.

The color transition works but notice what happens to the text shadow when you roll out of the navigation. The shadow just abruptly disappears! We can perfect the effect if we add the text-shadow property to the transition.

5. Switch back to your text/code editor.
6. Edit the **header nav a** rule as shown below. TIP for Sublime Text users: You can place multiple cursors on each line and then type all five instances at once! Click into the first line, then hold **Cmd** (MAC) or **Ctrl** (WINDOWS) and click on the other four lines. Then type away.

```
header nav a {
    display: block;
    font-weight: bold;
    margin: 0 16px;
    color: #fff;
    padding-top: 4px;
    border-top: 1px solid #fff;
    text-transform: uppercase;
    text-shadow: 1px 1px 1px rgba(0,0,0, 0.2);
    -webkit-transition: color 2s, text-shadow 2s;
    -moz-transition: color 2s, text-shadow 2s;
    -ms-transition: color 2s, text-shadow 2s;
    -o-transition: color 2s, text-shadow 2s;
    transition: color 2s, text-shadow 2s;
}
```

7. Save the file.
8. Preview **index.html** in a browser. Nicer.
9. There's a way to economize this declaration. Simply using the **all** value will tell the browser to transition all available properties. Let's rewrite the declaration using **all** and, while we're at it, we can speed up the duration of the transition.

10. Switch back to your text/code editor. Change the transition as shown below.
TIP: If you have Emmet installed in your text/code editor, you can use the reflect shortcut to modify all values in a vendor-prefix stack. In the `-webkit-` declaration change **color 2s**, **text-shadow 2s** to **all 0.4s** then with the cursor still in the value press **Cmd-Shift-R** (MAC) or **Ctrl-Shift-R** (WINDOWS) to apply that change to the rest of the vendor-prefix stack.

```
-webkit-transition: all 0.4s;  
-moz-transition: all 0.4s;  
-ms-transition: all 0.4s;  
-o-transition: all 0.4s;  
transition: all 0.4s;
```

11. Save the file.
12. Preview **index.html** in all major browsers.
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