

ISTA 230



Background Images

CSS

Background Images - Uses

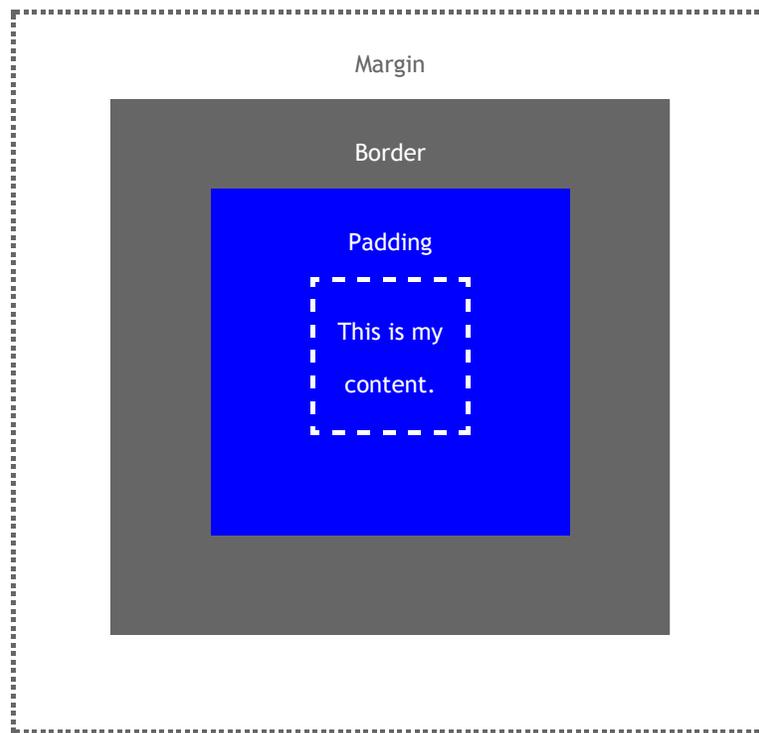
Background images can be used for a number of things:

- Addition of more interesting color combinations
- Addition of more interesting shapes
- Addition of depth and perspective
- Transform a page entirely

For some really powerful examples of how background images can be used to transform pages, visit <http://csszengarden.com>.

CSS

Box Model



Just as an element's background applies to its padding but not its margins, background images will show through an element's padding but not its margins.

CSS

Background Images

The 'background-image' property takes a URL value using the following format:

CSS

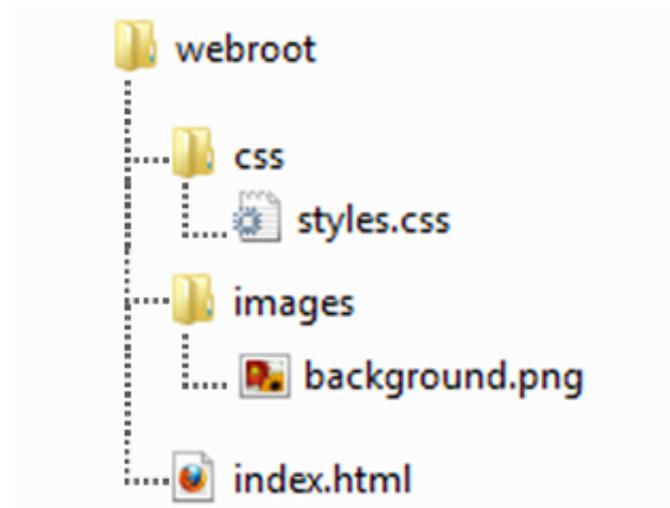
```
body
{
  background-image: url('URLtoImageFile');
}
```

It is worth noting that relative URLs are created based on the image location **in relation to the CSS file**. For example, the CSS below...

CSS

```
body
{
  background-image: url('../images/background.png');
}
```

Would work with a folder structure that looks like the following:



CSS

Background Images - Tiles



CSS

```
body
{
  background-image: url('../images/cats.png');
}
```

Browser

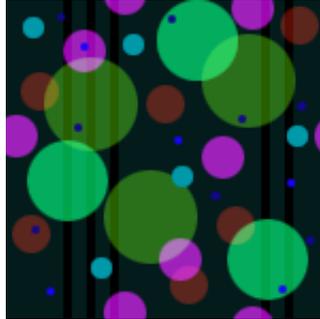


By default, background images will repeat vertically and horizontally. When using tiles, it is important that you pick background images that repeat well!

CSS

Background Images - Tiles

When using complex backgrounds, it is important to remember our goals from typography: legibility and readability. Placing text directly on a busy background image can create illegible text. For example, consider a background like the following image:

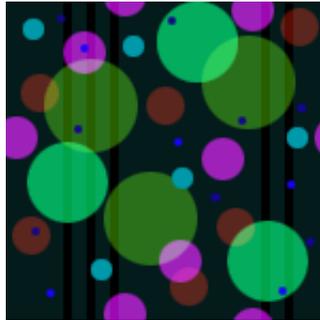


Browser

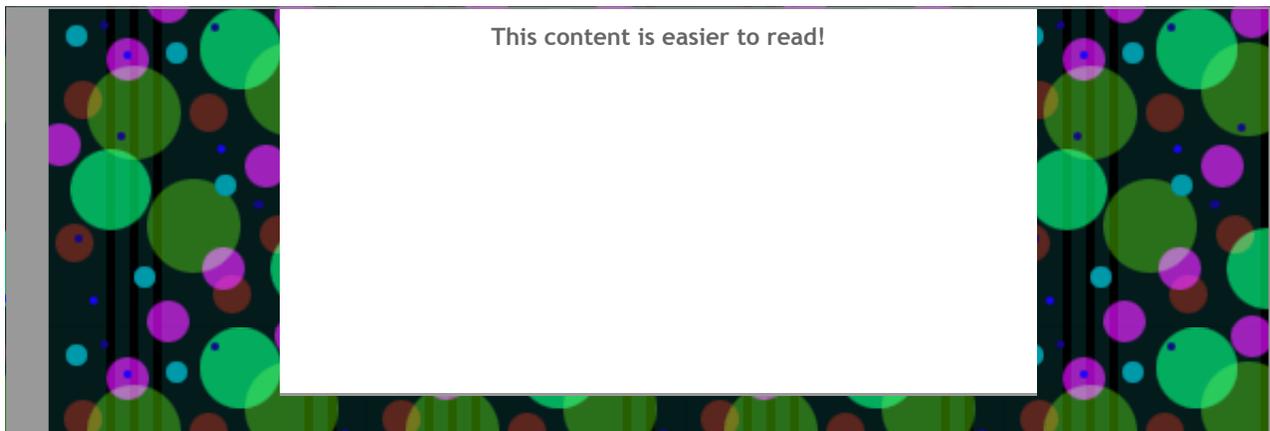


CSS

Background Images - Tiles



Browser



A solution for this would be to use the background image along the edges of the page but use a solid contrasting color for the background.

CSS

Background Repeat



As previously mentioned, background images are repeated both vertically and horizontally on the page. This is done along x- and y- axes.

CSS

```
body
{
  background-image: url('../images/background.png');
}
```

Browser

```
← x axis →
↑
y
a
x
i
s
↓
```

CSS

Background Repeat

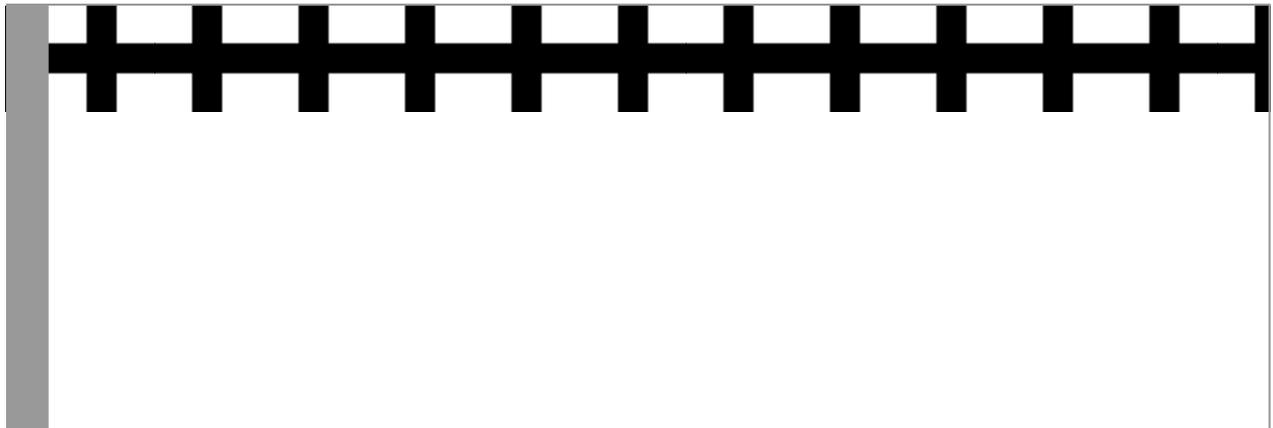


Using the 'background-repeat' property, we can adjust how (or if) background images are repeated. For example, we can specify 'repeat-x' to cause the background image to repeat horizontally.

CSS

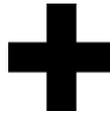
```
body
{
  background-image: url('../images/background.png');
  background-repeat: repeat-x;
}
```

Browser



CSS

Background Repeat

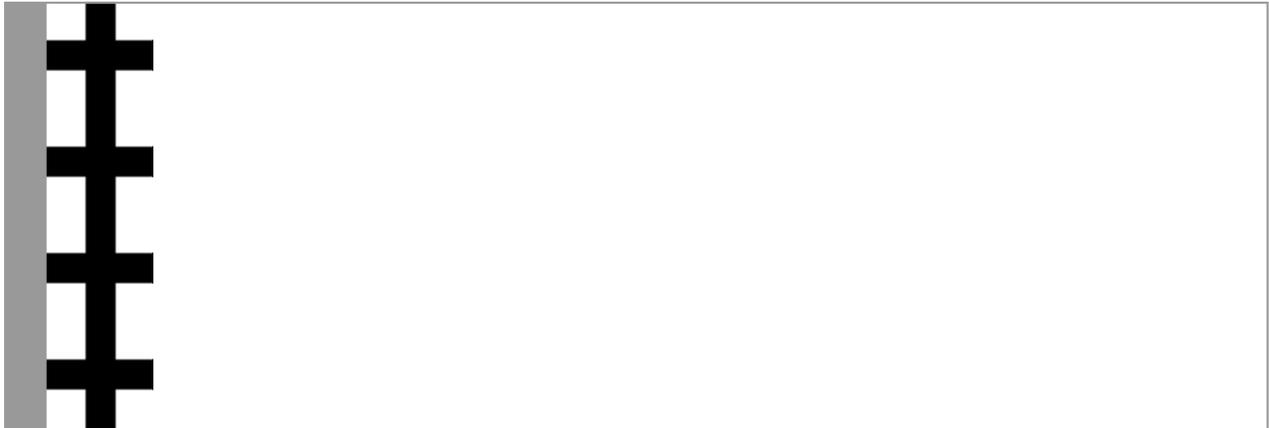


By specifying 'repeat-y', we can tell the browser that the background image should repeat vertically but not horizontally.

CSS

```
body
{
  background-image: url('../images/background.png');
  background-repeat: repeat-y;
}
```

Browser



CSS

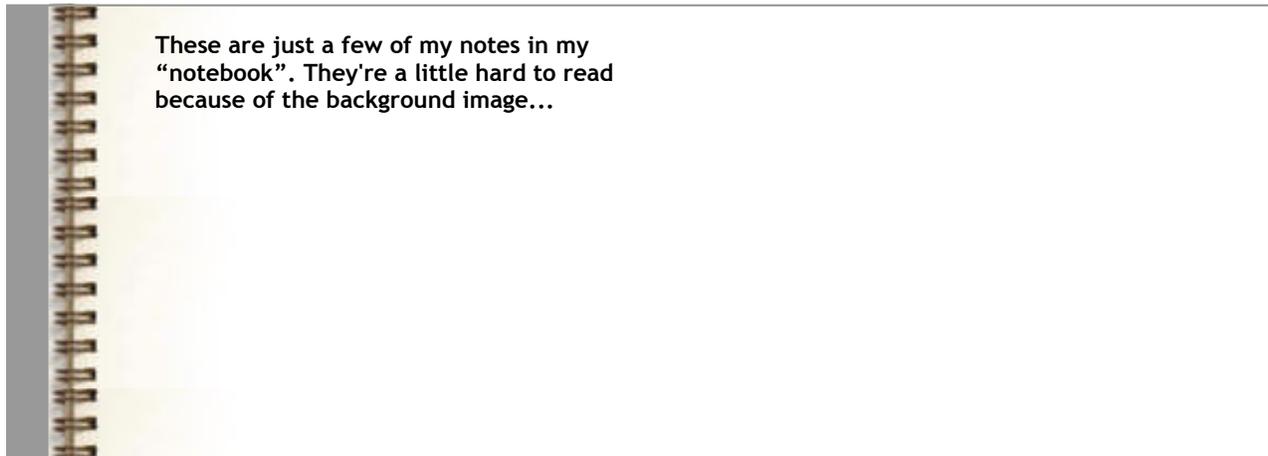
Background Repeat



CSS

```
body
{
  background-image: url('../images/notebook.png');
  background-repeat: repeat-y;
  padding-left: 50px;
}
```

Browser



When using vertically repeating images, use left and right padding to position your text away from the background image to ensure good readability.

CSS

Background Images - Non-repeating Background



Lastly, by specifying 'no-repeat', we can tell the browser that an image shouldn't be repeated on the page.

CSS

```
body
{
  background-image: url('../images/background.png');
  background-repeat: no-repeat;
}
```

Browser



CSS

Background Images - Non-repeating Background

CSS

```
body
{
  background-image: url('../images/LargeCats.jpg');
  background-repeat: no-repeat;
  padding-left: 75px;
}
```

It is worth noting that background images do not have any dimensions other than the original dimensions of the image. In other words, be careful when using larger images as they will display at their original size regardless of the size of the screen they are viewed on.

Browser



Cats!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut sapien orci, sollicitudin sit amet vulputate nec, adipiscing sed elit. Nunc et nisi felis, eget venenatis velit. Nam mauris tortor, diam quis sollicitudin ut, placerat sed ante. Donec mattis sem et libero placerat lacinia consequat diam cursus. Ut ornare ultrices tincidunt. Aenean quis urna ac mauris cursus rhoncus vitae at est. Maecenas faucibus pharetra mi vitae rhoncus. Cras vel urna eu nisi luctus blandit vel eu lectus. Aliquam tortor eros, pharetra sed tincidunt commodo, posuere a mauris. Quisque sed purus id mi dapibus tempus. Morbi varius fringilla ante, vel laoreet nisi euismod pellentesque.

Cras eget est. In lorem dictum euismod. Aliquam sit amet ipsum accumsan nisi lobortis tempus. Nulla fermentum viverra fermentum. In ipsum velit, at tincidunt magna. Proin malesuada nisi eu massa varius eget sodales sem semper. Curabitur ac magna et erat hendrerit molestie et in lectus. Duis accumsan dignissim lectus non convallis. Suspendisse potenti. Etiam suscipit eros quis velit rutrum ullamcorper. Suspendisse vel nisi magna, vel porttitor urna. Nam at sem arcu. Vestibulum leo lorem, pharetra sit amet volutpat nec, pretium tincidunt dui. Nunc varius, elit vitae dignissim dignissim, risus elit imperdiet sapien, mollis pretium ligula eros non nisi.

CSS

Background Images - A caution

- There are no 'alt' attributes for background images!
- If a background image doesn't show up, it shouldn't impact:
 - The meaning of your content
 - Your user's ability to use your website

In other words, use HTML for organization, structure, and meaning. Use CSS for modifying the display and design of the webpage.

CSS

Background Images - Accessibility

On occasion, I have seen instances of designers using background images in place of text. For example, consider the following code snippets:

HTML

```
<a class='imageLink' href='about.html'></a>
```

CSS

```
a.imageLink  
{  
  display: block;  
  height: 50px;  
  width: 200px;  
  background-image: url('../images/link.jpg');  
  background-repeat: no-repeat;  
}
```

Browser



While the above link might be visible to most users, any users who are relying on a screen reader or other assistive technology would not have any text associated with the link (and therefore would have no context on what the link does).

CSS

background-image Property

CSS

```
div { background-image: url('someFile'); }
```

```
div { background-image: none; }
```

```
/*  
 * This property sets the background image  
 * for an element. By default, background  
 * images are placed at the top-left  
 * corner of an element and repeated  
 * both vertically and horizontally.  
 * the capitalization of the text.  
 *  
 * Default Value: none  
 * Inherited: No  
 */
```

CSS

background-repeat Property

CSS

```
div { background-repeat: repeat; }
```

```
div { background-repeat: repeat-x; }
```

```
div { background-repeat: no-repeat; }
```

```
/*  
 * This property specifies if/how a background  
 * image should be repeated. By default, images  
 * are repeated both vertically and horizontally.  
 *  
 * Default Value: repeat  
 * Inherited: No  
 *  
 */
```

CSS

Background Images - Where to get them...

- ColourLovers.com
- [Stripe Generator](#)
- [Linear Gradient Generator](#)
- [Google.com - Search 'free css backgrounds'](#)
- Make your own!

CSS

Background Images

In addition to specifying how a background image should repeat, we can also specify the position where it should be placed (and repeat outwards from).

CSS

```
body
{
  background-image: url('../images/radialGradient.png');
  background-repeat: no-repeat;
  background-position: horizontalValue verticalValue;
}
```

Background position can be specified in pixels, percentages, or using CSS keywords.

It is important to note that using pixels specifies the exact position of the top-left corner of the image while, when using a percentage value or CSS keyword, the position values used refer to both the position on the element as well as the position on the image. For example, consider the following CSS code:

CSS

```
body
{
  background-position: 100px 50px;
}
```

The top-left corner of the background image would be *exactly* 100px from the left edge of the element and 50px from the top edge of the element. Conversely, consider the following CSS code:

CSS

```
body
{
  background-position: 50% 100%;
}
```

The percentages refer to both the element *AND* the corresponding point on the image. In other words, the horizontal mid-point of the picture should be lined up with the horizontal midpoint of the <body>. Similarly, the bottom edge of the image should be lined up with the bottom edge of the <body>.

The CSS keywords 'left', 'right', 'center', 'top', and 'bottom' are simply alternatives to their equivalent percentages.

CSS

background-position Property

CSS

```
div { background-position: 10px 10px; }
```

```
div { background-position: 50% 100%; }
```

```
div { background-position: right bottom; }
```

```
/*  
 * This property specifies the starting position  
 * for a background image. This property takes  
 * a x-axis position and a y-axis position.  
 * Positions can be specified in pixels, percentages,  
 * or using keywords from the following list:  
 * 'left', 'right', 'center', 'top', and 'bottom'  
 *  
 * Default Value: 0% 0%  
 * Inherited: No  
 *  
 */
```

CSS

Background Images - Background Attachment



We can also change the way background images are attached to the page. By default, background images scroll along with the rest of the content on the page. We can change this by specifying 'fixed' for the background-attachment property.

CSS

```
body
{
  background-color:#2a5184;
  background-image: url('../images/grass.png');
  background-repeat:repeat-x;
  background-position: 0 100%;
  padding-bottom:75px;
  background-attachment: fixed;
}
```

When using fixed backgrounds, background-position is relative to the viewport, not the containing element. Because of this, it's best to only use fixed backgrounds on the <body> element (if at all).

CSS

background-attachment Property

CSS

```
div { background-attachment: scroll; }
```

```
div { background-attachment: fixed; }
```

```
/*  
 * This property specifies what happens to the background  
 * image when the user scrolls up or down the page.  
 *  
 * Default Value: scroll  
 * Inherited: No  
 *  
 */
```

CSS

Background - Shorthand

If you don't like typing so much, you can use the shorthand notation for background properties.

CSS

```
body
{
  background: color image repeat attachment x-axis-position y-axis-position;
}
```

For example:

CSS

```
body
{
  background: #f00 url('../images/grass.png') repeat-x scroll 0% 100%;
}
```

The above would result in the body having a red background color and the file 'grass.png' as its background image. The background image would scroll along with the page content and would be positioned starting on the bottom left corner of the page and would repeat across the x-axis.

CSS

Background Images - Hover Effects

One advanced use of background images is to create more interesting hover effects. We can change background images when the user hovers their mouse over a given element.

CSS

```
a
{
  background-color: #036;
  background-image: url("../images/gradient1.png");
  color:white;
}

a:hover
{
  background-image: url("../images/gradient2.png");
}
```

While this is technically possible, it is worth noting that this can have a bit of a 'flicker' effect when using larger background images. This is because the browser doesn't actually download a copy of the second image until it is needed (i.e., when the user first hovers their cursor over the link).

CSS

Background Images - Informational Icons

Background images can also be used to give additional visual indicators to elements such as error or warning messages.

CSS

```
.warningMessage
{
  background-color: #FFFF8C;
  border: 1px solid #FFCC00;
  color: #666666;
  font-weight: bold;
  padding-left: 80px;
  background-image: url("../images/warningIcon.png");
  background-repeat: no-repeat;
  background-position: 0% 50%;
}
```

Browser



Warning: There are bears in the building!

When using this approach, it is important to consider what your element will look like when there's not very much text in the element (i.e., doesn't have a very large height value). Conversely, you should also consider what it will look like when there is a lot of text in the element (i.e., it has a very large height value).

CSS

Background Images - Sprites

Often times, background images are used to provide small visual indicators and/or decorations. For example, links to files are often accompanied by a small icon indicating what type of file it is.

CSS

```
a
{
  height:25px;
  padding-left: 30px;
  background-repeat: no-repeat;
  background-position: 0px 0px;
}
a.pdf { background-image: url('../images/pdfIcon.png'); }
a.doc { background-image: url('../images/docIcon.png'); }
a.xls { background-image: url('../images/xlsIcon.png'); }
a.jpg { background-image: url('../images/jpgIcon.png'); }
```

Browser



[document.pdf](#)



[myPaper.doc](#)



[report.xls](#)



[myPhoto.jpg](#)

The problem with the above approach is that requires the browser to download multiple images (4 HTTP requests for a total content size of 14.0 kB).

CSS

Background Images - Sprites

Instead of using multiple images, we'll use an approach that requires only a single image for our file icons. This will reduce both the number of HTTP calls as well as the total file size.



- Multiple images
- Each image is 25 px tall
- 4 HTTP requests
- Content Size: 14.0 kB



- Single image
- Total image height is 100px
- 1 HTTP request
- Content Size: 11.0 kB

CSS

Background Images - Sprites

Instead of specifying a different background image for each file type, we'll use a shared background image. We can then use a negative value for the background position to move the visible region of the background image around. It is worth noting that this technique works because of the fixed size of the element (30px × 25px).

CSS

```
a
{
  height:25px;
  padding-left: 30px;
  background-repeat: no-repeat;
  background-position: 0px 0px;
  background-image: url('../images/icons.png');
}
a.pdf { background-position: 0px 0px; }
a.doc { background-position: 0px -25px; }
a.xls { background-position: 0px -50px; }
a.jpg { background-position: 0px -75px; }
```

CSS

Background Images - Image Replacement

Often times, we would like to display text in a non-standard font to help distinguish our website from others. Unfortunately, the limitations of web typography make this a bit more challenging.

Using just HTML, we can easily create text that looks like the following:

Our Product

However, we can use background images and a technique called 'image replacement' to make it look like this:

Our Product

CSS

Background Images - Image Replacement

Using our background image properties, we would specify an image of our logo as the background image, specify that it should not repeat, and that it should be centered horizontally in our <h1> element.

Next, we want to specify the exact dimensions of our heading element so that it matches the dimensions of our image.

Lastly, we want to hide the text of our heading element. We can do this using a negative value for our text-indent property. This will move the text off of the screen on traditional browsers while leaving it in place for screen readers and other assistive technology.

CSS

```
h1#Logo
{
  background:url('../images/logo.png') no-repeat 50% 0;
  height:150px;
  width:300px;
  text-indent: -9999px;
}
```

Browser



CSS

Background Text Images - Where to get them...

- FlamingText.com
- CoolText.com
- *Make your own!*

CSS

Background Images - Sliding Doors

Consider the following challenge: Create a navigation element that has a solid border and rounded corners on the top left and top right.

The first approach might be to try and use a single background image to solve the problem.

HTML

```
<a href='#' class="tab">Label</a>
```

CSS

```
a.tab
{
  background:url('../images/tab.png') no-repeat 0% 100%;
  height:50px;
  padding:0 10px;
}
```

Browser



While this would work on smaller elements, links with more text would have an overflow issue.

Browser



CSS

Background Images - Sliding Doors

The trick here is to break our background image into two pieces. The first image will serve as the background element for the parent element. The second will serve as a right-aligned background element for the child element.



HTML

```
<a href="#" class="tab"><span>Label</span></a>
```

CSS

```
a.tab
{
  display:block;
  background: url('../images/left.png') no-repeat 0% 100%;
  padding-left:10px;
  overflow:auto;
}

a.tab span
{
  display:block;
  height:25px;
  background: url('../images/right.png') no-repeat 100% 100%;
  padding-right:10px;
  float:left;
}
```

Browser



As the text of the link grows, the `` grows as well, with its background image 'sliding' out to cover the entire element.

CSS

Background Images - Rounded Corners

Using eight images and a similar approach to that described on the previous slide, you can create an element that has 'rounded corners'.

