



CSS Class

CSS Notes

CSS3-Cascading Style Sheets Level 3



Introduction








- CSS3 is the latest standard for CSS.
- CSS3 is completely backwards-compatible with earlier versions of CSS.
- CSS3 is divided into several separate documents called "modules".



CSS3 vs CSS

CSS3 VERSION

Website information

Total loading time:	3.3 seconds
Total objects:	12 (767.9 KB)
External objects:	1 (21.7 KB)
 (X)HTML:	1 (3.4KB)
 RSS/XML:	0
 CSS:	2 (5.2KB)
 Scripts:	2 (25.1KB)
 Images:	7 (734.2KB)
 Plugins:	0
 Other:	0
 Redirected:	0

CSS VERSION

Website information

Total loading time:	4.7 seconds
Total objects:	22 (849.2 KB)
External objects:	1 (21.7 KB)
 (X)HTML:	1 (3.5KB)
 RSS/XML:	0
 CSS:	2 (4.5KB)
 Scripts:	2 (25.1KB)
 Images:	17 (816KB)
 Plugins:	0
 Other:	0
 Redirected:	0

CSS3 Modules

- CSS3 has been split into "modules". It contains the "old CSS specification" (which has been split into smaller pieces). In addition, new modules are added.
- Some of the most important CSS3 modules are:
 - Selectors
 - Box Model
 - Backgrounds and Borders
 - Image Values and Replaced Content
 - Text Effects
 - 2D/3D Transformations
 - Animations
 - Multiple Column Layout
 - User Interface



CSS3 Border

- With CSS3, you can apply images to an element's borders.
- **Using CSS3 Borders:**
 - The CSS3 provides two new properties for styling the borders of an element in a more elegant way .
 - **border-image:** This property used for adding the images to borders.
 - **border-radius:** This property used for making the rounded corners without using any images.

A horizontal bar with rounded ends and a subtle drop shadow, containing the text "Rounded Corners by CSS3".

Rounded Corners by CSS3

A horizontal bar with sharp ends and a subtle drop shadow, containing the text "Rectangle Shadow by CSS3".

Rectangle Shadow by CSS3

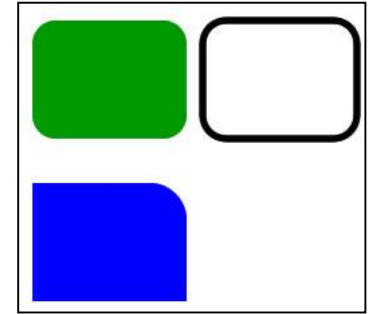
A horizontal rectangle with a dashed border and small vertical lines at each end, containing the text "Borders with Image by CSS3".

Borders with Image by CSS3








CSS3 Rounded Corners

- With the CSS3 border-radius property, you can give any element "rounded corners".



■ Browser Support:

- The numbers in the table specify the first browser version that fully supports the property.
- Numbers followed by -webkit-, -moz-, or -o- specify the first version that worked with a prefix.

Property					
border-radius	5.0 4.0 -webkit-	9.0	4.0 3.0 -moz-	5.0 3.1 webkit-	10.5



■ CSS3 border-radius - Specify Each Corner:

- **Four values:** first value applies to top-left, second value applies to top-right, third value applies to bottom-right, and fourth value applies to bottom-left corner.
- **Three values:** first value applies to top-left, second value applies to top-right and bottom-left, and third value applies to bottom-right.
- **Two values:** first value applies to top-left and bottom-right corner, and the second value applies to top-right and bottom-left corner.
- **One value:** all four corners are rounded equally.



Cont...

■ CSS3 Rounded Corners Properties:

Property	Description
border-radius	A shorthand property for setting all the four border-*-*-radius properties.
border-top-left-radius	Defines the shape of the border of the top-left corner.
border-top-right-radius	Defines the shape of the border of the top-right corner.
border-bottom-right-radius	Defines the shape of the border of the bottom-right corner.
border-bottom-left-radius	Defines the shape of the border of the bottom-left corner.



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#b1 {
  border-radius: 25px;
  background: green;
  padding: 10px;
  width: 200px;
  height: 20px;
}
#b2 {
  border-radius: 25px;
  border: 2px solid red;
  padding: 10px;
  width: 200px;
  height: 20px;
}
</style>
</head>
<body>

<h1>The border-radius Property</h1>
<p>Rounded corners for an element with a specified background
color:</p>
<p id="b1">Rounded corners!</p>
<p>Rounded corners for an element with a border:</p>
<p id="b2">Rounded corners!</p>

</body>
</html>
```

The border-radius Property

Rounded corners for an element with a specified background color:

Rounded corners!






Rounded corners for an element with a border:

Rounded corners!



CSS3 Border Images

- With the CSS3 border-image property, you can set an image to be used as the border around an element.
- **Browser Support:**
 - The numbers in the table specify the first browser version that fully supports the property.
 - Numbers followed by -webkit-, -moz-, or -o- specify the first version that worked with a prefix.

Property					
border-radius	5.0 4.0 -webkit-	9.0	4.0 3.0 -moz-	5.0 3.1 webkit-	10.5



Cont...

- CSS3 border-image Property:
 - The CSS3 **border-image** property allows you to specify an image to be used instead of the normal border around an element.
 - The property has three parts:
 - I. The image to use as the border.
 - II. Where to slice the image.
 - III. Define whether the middle sections should be repeated or stretched.



Cont...

Example 1:



```
border-image: url(border.png) 50 round;
```



Example 2:



```
border-image: url(border.png) 20% round;
```



Example 3:



```
border-image: url(border.png) 30% round;
```



Cont...

■ CSS3 Border Properties:

Property	Description
<code>border-image</code>	A shorthand property for setting all the border-image-* properties.
<code>border-image-source</code>	Specifies the path to the image to be used as a border.
<code>border-image-slice</code>	Specifies how to slice the border image.
<code>border-image-width</code>	Specifies the widths of the border image.
<code>border-image-outset</code>	Specifies the amount by which the border image area extends beyond the border box.
<code>border-image-repeat</code>	Specifies whether the border image should be repeated, rounded or stretched.



Example

```
<html>
<head>
<style>

#b3 {
  border-radius: 25px;
  background: url(paper.gif);
  background-position: left top;
  background-repeat: repeat;
  padding: 20px;
  width: 200px;
  height: 50px;
}
</style>
</head>
<body>

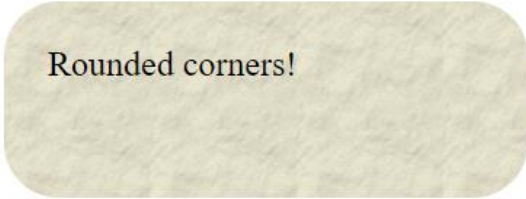
<h1>The border-radius Property</h1>

<p>Rounded corners for an element with a background
image:</p>
<p id="b3">Rounded corners!</p>

</body>
</html>
```

The border-radius Property

Rounded corners for an element with a background image:



Rounded corners!

CSS3 Backgrounds

- CSS3 contains a few new background properties, which allow greater control of the background element.
- CSS3 allows you to add multiple background images to one element.
- CSS3 properties:
 - background-size
 - background-origin
 - background-clip

```
background-size: cover;
```



■ CSS3 Background Size:

- The CSS3 background-size property allows you to specify the size of background images.
- Before CSS3, the size of a background image was the actual size of the image. CSS3 allows us to re-use background images in different contexts.
- The size can be specified in lengths, percentages, or by using one of the two keywords: contain or cover.



Cont...

- The contain keyword scales the background image to be as large as possible (but both its width and its height must fit inside the content area). As such, depending on the proportions of the background image and the background positioning area, there may be some areas of the background which are not covered by the background image.
- The cover keyword scales the background image so that the content area is completely covered by the background image (both its width and height are equal to or exceed the content area). As such, some parts of the background image may not be visible in the background positioning area.



■ CSS3 background-origin Property:

- The CSS3 background-origin property specifies where the background image is positioned.
- The property takes three different values:
 - border-box - the background image starts from the upper left corner of the border.
 - padding-box - (default) the background image starts from the upper left corner of the padding edge.
 - content-box - the background image starts from the upper left corner of the content.

■ CSS3 background-clip Property:

- The CSS3 background-clip property specifies the painting area of the background.
- The property takes three different values:
 - border-box - (default) the background is painted to the outside edge of the border.
 - padding-box - the background is painted to the outside edge of the padding.
 - content-box - the background is painted within the content box.



Cont...

■ CSS3 Background Properties:

Property	Description
background	A shorthand property for setting all the background properties in one declaration.
background-clip	Specifies the painting area of the background.
background-image	Specifies one or more background images for an element.
border-image-width	Specifies the widths of the border image.
background-origin	Specifies where the background image(s) is/are positioned.
background-size	Specifies the size of the background image(s).



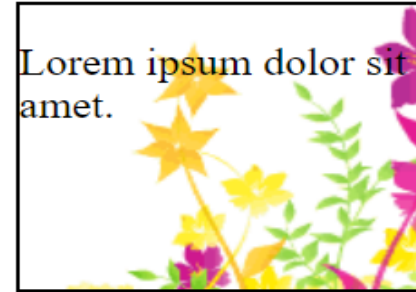
Example

```
<!DOCTYPE html>
<html>
<head>
<style>
.div3 {
  border: 1px solid black;
  height:120px;
  width:150px;
  background:url(img_flwr.gif);
  background-repeat: no-repeat;
}
</style>
</head>
<body>

<h2>No background-size defined:</h2>
<div class="div3">
<p>Lorem ipsum dolor sit amet.</p>
</div>

</body>
</html>
```

No background-size defined:



Example (Contain)

```
<!DOCTYPE html>
<html>
<head>
<style>
.div1 {
  border: 1px solid black;
  height:120px;
  width:150px;
  background:url(img_flwr.gif);
  background-repeat: no-repeat;
  background-size: contain;
}

</style>
</head>
<body>
<h2>background-size: contain:</h2>
<div class="div1">
<p>Lorem ipsum dolor sit amet.</p>
</div>

</body>
</html>
```

background-size: contain:



Example (Cover)

```
<!DOCTYPE html>
<html>
<head>
<style>
.div2 {
  border: 1px solid black;
  height:120px;
  width:150px;
  background:url(img_flwr.gif);
  background-repeat: no-repeat;
  background-size: cover;
}
</style>
</head>
<body>

<h2>background-size: cover:</h2>
<div class="div2">
<p>Lorem ipsum dolor sit amet.</p>
</div>






</body>
</html>
```

background-size: cover:



CSS3 Colors

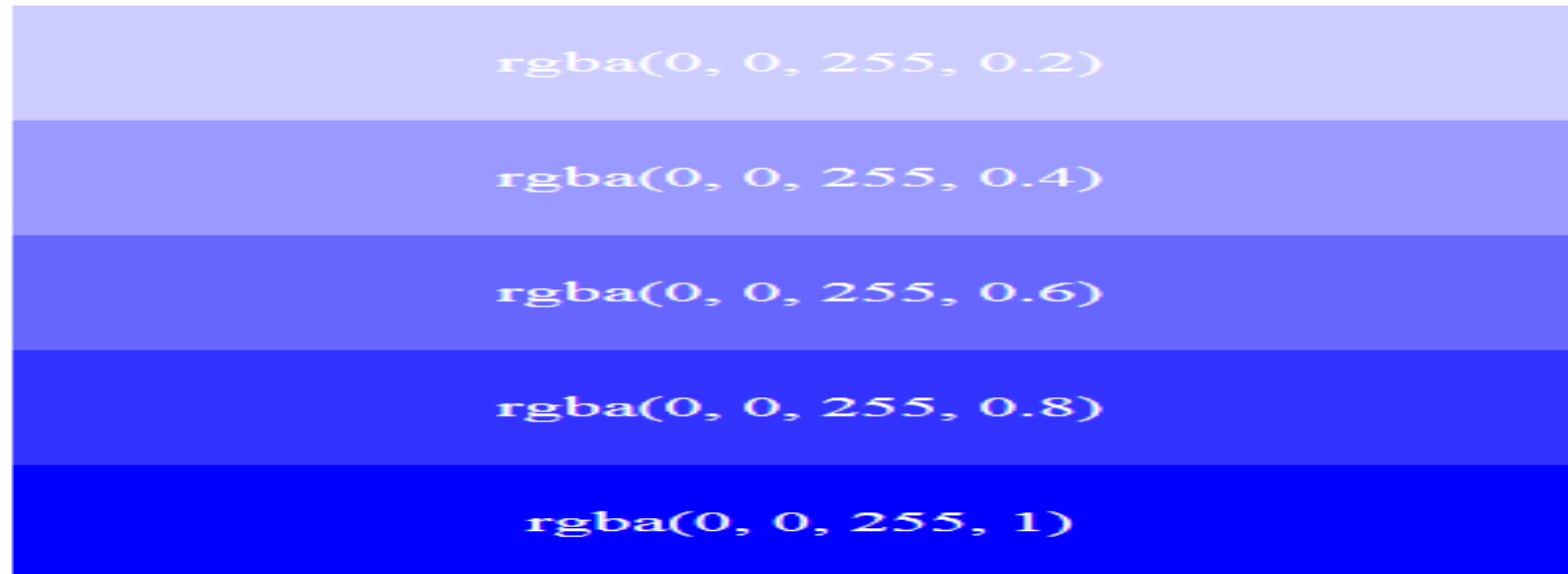
- CSS supports color names, hexadecimal and RGB colors.
- In addition, CSS3 also introduces:
 - RGBA colors
 - HSL colors
 - HSLA colors
 - opacity
- **Browser Support:**
 - The numbers in the table specify the first browser version that fully supports CSS3 color values/property.

Property					
RGBA, HSL, and HSLA	4.0	9.0	3.0	3.1	10.1
opacity	4.0	9.0	2.0	3.1	10.1



Cont...

- RGBA Colors:



- RGBA color values are an extension of RGB color values with an alpha channel - which specifies the opacity for a color.
- An RGBA color value is specified with: `rgba(red, green, blue, alpha)`. The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (fully opaque).



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#p1 {background-color:rgba(255,0,0,0.3);}
#p2 {background-color:rgba(0,255,0,0.3);}
#p3 {background-color:rgba(0,0,255,0.3);}
#p4 {background-color:rgba(192,192,192,0.3);}
</style>
</head>

<body>
<p id="p1">Red</p>
<p id="p2">Green</p>
<p id="p3">Blue</p>
<p id="p4">Grey</p>
</body>
</html>
```

Red

Green

Blue

Grey



■ HSL Colors:

- HSL stands for Hue, Saturation and Lightness.
- An HSL color value is specified with: `hsl(hue, saturation, lightness)`.
- Hue is a degree on the color wheel (from 0 to 360):
 - 0 (or 360) is red
 - 120 is green
 - 240 is blue
- Saturation is a percentage value: 100% is the full color.
- Lightness is also a percentage; 0% is dark (black) and 100% is white.



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#p1 {background-color: hsl(120, 100%, 50%);}
#p2 {background-color: hsl(120, 100%, 75%);}
#p3 {background-color: hsl(120, 100%, 25%);}
#p4 {background-color: hsl(120, 60%, 70%);}

</style>
</head>
<body>
<p id="p1">Green</p>
<p id="p2">Light green</p>
<p id="p3">Dark green</p>
<p id="p4">Pastel green</p>

</body>
</html>
```

Green

Light green

Dark green

Pastel green



`hsl(0, 50%, 50%)`

`hsl(240, 80%, 50%)`

`hsl(30, 100%, 50%)`

`hsla(0, 100%, 0%, 0.8)`

`hsla(210, 100%, 50%, 0.8)`

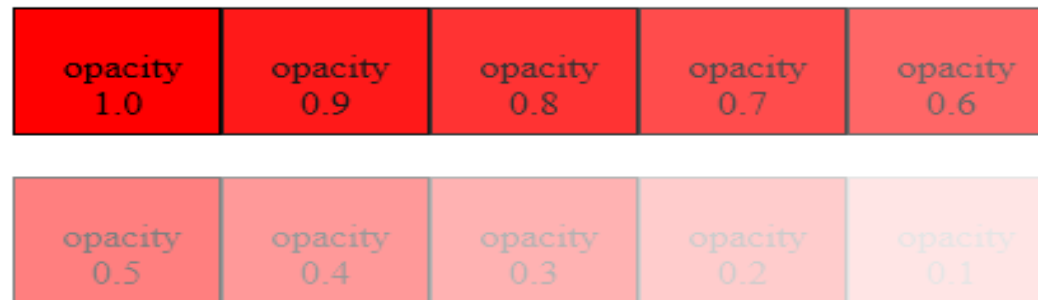


Cont...

■ HSLA Colors:

- HSLA color values are an extension of HSL color values with an alpha channel - which specifies the opacity for a color.
- An HSLA color value is specified with: `hsla(hue, saturation, lightness, alpha)`, where the alpha parameter defines the opacity. The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (fully opaque).

■ Opacity:



- The CSS3 opacity property sets the opacity for the whole element (both background color and text will be opaque/transparent).
- The opacity property value must be a number between 0.0 (fully transparent) and 1.0 (fully opaque).



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#p1 {background-color:hsla(120,100%,50%,0.3);}
#p2 {background-color:hsla(120,100%,75%,0.3);}
#p3 {background-color:hsla(120,100%,25%,0.3);}
#p4 {background-color:hsla(120,60%,70%,0.3);}

</style>
</head>
<body>

<p id="p1">Green</p>
<p id="p2">Light green</p>
<p id="p3">Dark green</p>
<p id="p4">Pastel green</p>

</body>
</html>
```

Green

Light green

Dark green

Pastel green



CSS3 Gradients






- CSS3 gradients let you display smooth transitions between two or more specified colors.
- Earlier, you had to use images for these effects. However, by using CSS3 gradients you can reduce download time and bandwidth usage. In addition, elements with gradients look better when zoomed, because the gradient is generated by the browser.
- CSS3 defines two types of gradients:
 - Linear Gradients (goes down/up/left/right/diagonally)
 - Radial Gradients (defined by their center)



Cont...

■ Browser Support:

- The numbers in the table specify the first browser version that fully supports the property.
- Numbers followed by -webkit-, -moz-, or -o- specify the first version that worked with a prefix.

Property					
linear-gradient	26.0 10.0 -webkit-	10.0	16.0 3.6 -moz-	6.1 5.1 -webkit-	12.1 11.1 -o-
radial-gradient	26.0 10.0 -webkit-	10.0	16.0 3.6 -moz-	6.1 5.1 -webkit-	12.1 11.6 -o-
repeating-linear-gradient	26.0 10.0 -webkit-	10.0	16.0 3.6 -moz-	6.1 5.1 -webkit-	12.1 11.1 -o-
repeating-radial-gradient	26.0 10.0 -webkit-	10.0	16.0 3.6 -moz-	6.1 5.1 -webkit-	12.1 11.6 -o-



Cont...

■ CSS3 Linear Gradients:

- To create a linear gradient you must define at least two color stops. Color stops are the colors you want to render smooth transitions among. You can also set a starting point and a direction (or an angle) along with the gradient effect.
- Syntax :

```
background: linear-gradient(direction, color-stop1, color-stop2, ...);
```

■ Using Angles:

- If you want more control over the direction of the gradient, you can define an angle, instead of the predefined directions (to bottom, to top, to right, to left, to bottom right, etc..) .
- Syntax:

```
background: linear-gradient(angle, color-stop1, color-stop2);
```



Cont...

- Using Transparency:

- CSS3 gradients also support transparency, which can be used to create fading effects.
- To add transparency, we use the `rgba()` function to define the color stops. The last parameter in the `rgba()` function can be a value from 0 to 1, and it defines the transparency of the color: 0 indicates full transparency, 1 indicates full color (no transparency).

- Repeating a linear-gradient:

- The `repeating-linear-gradient()` function is used to repeat linear gradients:



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#grad1 {
  height: 100px;
  background: linear-gradient(0deg, red, yellow);
}
#grad2 {
  height: 100px;
  background: linear-gradient(90deg, red, yellow);
}
#grad3 {
  height: 100px;
  background-image: linear-gradient(180deg, red, yellow);
}
#grad4 {
  height: 100px;
  background-image: linear-gradient(-90deg, red, yellow);
}
</style>
</head>
<body>
<h1>Linear Gradients - Using Different Angles</h1>
<div id="grad1">0deg</div><br>
<div id="grad2">90deg</div><br>
<div id="grad3">180deg</div><br>
<div id="grad4">-90deg</div>

</body>
</html>
```

Linear Gradients - Using Different Angles

0deg



90deg



180deg



-90deg



Cont...

■ CSS3 Radial Gradients:

- A radial gradient is defined by its center.
- To create a radial gradient you must also define at least two color stops.
- Syntax:

```
background: radial-gradient(shape size at position, start-color, ..., last-color);
```

- By default, shape is ellipse, size is farthest-corner, and position is center.
- Radial Gradient - Evenly Spaced Color Stops (this is default)



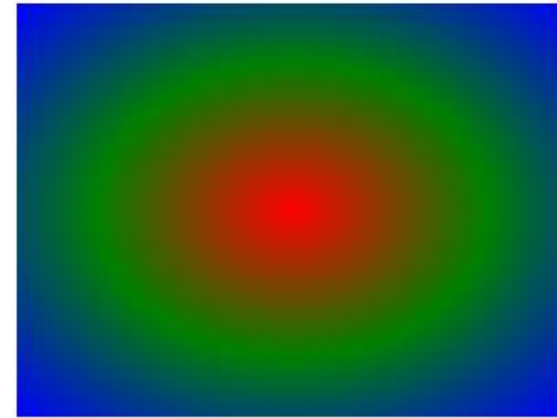
Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#grad1 {
  height: 150px;
  width: 200px;
  background: radial-gradient(red, green, blue);
}
</style>
</head>
<body>

<h1>Radial Gradient </h1>
<div id="grad1"></div>

</body>
</html>
```

Radial Gradient



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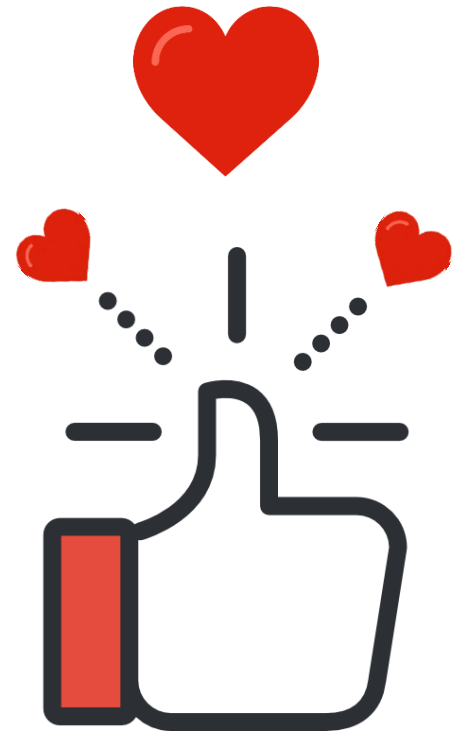
Just Dial

https://www.justdial.com/Ahmedabad/Akash-Technolabs-Navrangpura-Bus-Stop-Navrangpura/079PXX79-XX79-170615221520-S5C4_BZDET



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