CSS visibility Property

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**h1.visible {**

**visibility: visible**

**}**

**h1.hidden {**

**visibility: hidden**

**}**

**</style>**

**</head>**

**<body>**

**<h1 class="visible">This is a visible heading</h1>**

**<h1 class="hidden">This is an invisible heading</h1>**

**<p>Notice that the invisible heading still takes up space.</p>**

**</body>**

**</html>**

**<!DOCTYPE html>**

**<html>**

**<body>**

**<img id="myImg" src="w3javascript.gif" width="100" height="132">**

**<br>**

**<button type="button" onclick="hideElem()">Hide image</button>**

**<button type="button" onclick="showElem()">Show image</button>**

**<script>**

**function hideElem() {**

**document.getElementById("myImg").style.visibility = "hidden";**

**}**

**function showElem() {**

**document.getElementById("myImg").style.visibility = "visible";**

**}**

**</script>**

**</body>**

**</html>**

## CSS3 Animations

An animation lets an element gradually change from one style to another.

## The @keyframes Rule

When you specify CSS styles inside the @keyframes rule, the animation will gradually change from the current style to the new style at certain times.

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**from {background-color: red;}**

**to {background-color: yellow;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**from {background-color: red;}**

**to {background-color: yellow;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**<p><b>Note:</b> When an animation is finished, it changes back to its original style.</p>**

**</body>**

**</html>**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color: red;}**

**25% {background-color: yellow;}**

**50% {background-color: blue;}**

**100% {background-color: green;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color: red;}**

**25% {background-color: yellow;}**

**50% {background-color: blue;}**

**100% {background-color: green;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**position: relative;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

## Delay an Animation

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**position: relative;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-delay: 2s; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**animation-delay: 2s;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

## Set How Many Times an Animation Should Run

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**position: relative;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-iteration-count: 3; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**animation-iteration-count: 3;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

The following example uses the value "infinite" to make the animation continue for ever:

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**position: relative;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-iteration-count: infinite; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**animation-iteration-count: infinite;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

## Run Animation in Reverse Direction or Alternate Cycles

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**position: relative;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-iteration-count: 3; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-direction: reverse; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**animation-iteration-count: 3;**

**animation-direction: reverse;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background-color: red;**

**position: relative;**

**-webkit-animation-name: example; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-duration: 4s; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-iteration-count: 3; /\* Chrome, Safari, Opera \*/**

**-webkit-animation-direction: alternate; /\* Chrome, Safari, Opera \*/**

**animation-name: example;**

**animation-duration: 4s;**

**animation-iteration-count: 3;**

**animation-direction: alternate;**

**}**

**/\* Chrome, Safari, Opera \*/**

**@-webkit-keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**/\* Standard syntax \*/**

**@keyframes example {**

**0% {background-color:red; left:0px; top:0px;}**

**25% {background-color:yellow; left:200px; top:0px;}**

**50% {background-color:blue; left:200px; top:200px;}**

**75% {background-color:green; left:0px; top:200px;}**

**100% {background-color:red; left:0px; top:0px;}**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**</body>**

**</html>**

## CSS3 Transitions

CSS3 transitions allows you to change property values smoothly (from one value to another), over a given duration.

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background: red;**

**-webkit-transition: width 2s; /\* For Safari 3.1 to 6.0 \*/**

**transition: width 4s;**

**}**

**div:hover {**

**width: 500px;**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**<p>Hover over the div element above, to see the transition effect.</p>**

**</body>**

**</html>**

## Change Several Property Values

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background: red;**

**-webkit-transition: width 2s, height 4s; /\* For Safari 3.1 to 6.0 \*/**

**transition: width 2s, height 4s;**

**}**

**div:hover {**

**width: 300px;**

**height: 300px;**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**<p>Hover over the div element above, to see the transition effect.</p>**

**</body>**

**</html>**

## Transition + Transformation

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background: red;**

**-webkit-transition: width 2s, height 2s, -webkit-transform 2s; /\* Safari \*/**

**transition: width 2s, height 2s, transform 2s;**

**}**

**div:hover {**

**width: 300px;**

**height: 300px;**

**-webkit-transform: rotate(180deg); /\* Safari \*/**

**transform: rotate(180deg);**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**<p>Hover over the div element above, to see the transition effect.</p>**

**</body>**

**</html>**

## Delay the Transition Effect

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background: red;**

**-webkit-transition: width 3s; /\* Safari \*/**

**-webkit-transition-delay: 1s; /\* Safari \*/**

**transition: width 3s;**

**transition-delay: 1s;**

**}**

**div:hover {**

**width: 300px;**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div></div>**

**<p>Hover over the div element above, to see the transition effect.</p>**

**<p><b>Note:</b> The transition effect has a 1 second delay before starting.</p>**

**</body>**

**</html>**

## Specify the Speed Curve of the Transition

The transition-timing-function property can have the following values:

* ease - specifies a transition effect with a slow start, then fast, then end slowly (this is default)
* linear - specifies a transition effect with the same speed from start to end
* ease-in - specifies a transition effect with a slow start
* ease-out - specifies a transition effect with a slow end
* ease-in-out - specifies a transition effect with a slow start and end
* cubic-bezier(n,n,n,n) - lets you define your own values in a cubic-bezier function

**<!DOCTYPE html>**

**<html>**

**<head>**

**<style>**

**div {**

**width: 100px;**

**height: 100px;**

**background: red;**

**-webkit-transition: width 2s; /\* Safari \*/**

**transition: width 2s;**

**}**

**/\* For Safari 3.1 to 6.0 \*/**

**#div1 {-webkit-transition-timing-function: linear;}**

**#div2 {-webkit-transition-timing-function: ease;}**

**#div3 {-webkit-transition-timing-function: ease-in;}**

**#div4 {-webkit-transition-timing-function: ease-out;}**

**#div5 {-webkit-transition-timing-function: ease-in-out;}**

**/\* Standard syntax \*/**

**#div1 {transition-timing-function: linear;}**

**#div2 {transition-timing-function: ease;}**

**#div3 {transition-timing-function: ease-in;}**

**#div4 {transition-timing-function: ease-out;}**

**#div5 {transition-timing-function: ease-in-out;}**

**div:hover {**

**width: 300px;**

**}**

**</style>**

**</head>**

**<body>**

**<p><b>Note:</b> This example does not work in Internet Explorer 9 and earlier versions.</p>**

**<div id="div1">linear</div><br>**

**<div id="div2">ease</div><br>**

**<div id="div3">ease-in</div><br>**

**<div id="div4">ease-out</div><br>**

**<div id="div5">ease-in-out</div><br>**

**<p>Hover over the div elements above, to see the different speed curves.</p>**

**</body>**

**</html>**