



CSS Animations

Topics

- CSS Animation Properties
- Creating Keyframes
- What CSS Properties Can Be Animated
- Performance
- Browser Support

CSS Animation Properties

animation-name: <name>

animation-duration: 1s | 100ms

animation-timing-function: ease | ease-in | ease-out | ease-in-out | linear | ...

animation-delay: 1s | 100ms

animation-direction: normal | reverse | alternate | alternate-reverse

animation-iteration-count: 1 | infinite

animation-fill-mode: none | forwards | backwards | both

animation-play-state: running | paused

animation: <name> 1s ease 0 alternate infinite none running;

<https://developer.mozilla.org/en-US/docs/Web/CSS/animation>

Keyframes

```
.element {  
  animation: fade 1s infinite;  
}
```

```
@keyframes fade {  
  0%    { background: red; }  
  100% { background: blue; }  
}
```

<https://developer.mozilla.org/en-US/docs/Web/CSS/@keyframes>

Keyframes

```
.element {  
  animation: fade 1s infinite;  
}
```

```
@keyframes fade {  
  from { background: red; } to { background: blue; }  
}
```

<https://developer.mozilla.org/en-US/docs/Web/CSS/@keyframes>

Accepted Animation Properties

Not all CSS properties can be smoothly animated. Some properties do not have the ability to adjust gradually between states. The full list of CSS properties that can be animated is listed at the link below:

https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_animated_properties

Animation Performance

Some CSS properties will definitely achieve smooth 60 fps (frames per second) animations in all browsers. The following are properties that have shown good performance in all supporting browsers.

`transform: translate(npx, npx);`

`transform: scale(n);`

`transform: rotate(ndeg);`

`opacity: 0..1;`

<https://www.html5rocks.com/en/tutorials/speed/high-performance-animations/>

Browser Support

To get the current browser support you will have to check based on your specific use cases in terms of which animation properties you are using in whether you are animating traditional DOM elements or SVGs. At the time of creating these slides global support for animation features are at 92%. To see the most up to date, check the link at the bottom:

<http://caniuse.com/#search=animation>

Browser Support

To support older browsers you can link to JavaScript poly-fills such as the ones provided with Modernizr:

1. Visit the link at bottom and click the plus button to include poly-fills for CSS animations.
2. Then click the build button and download the JS file and move it into your project.
3. Link to the file inside your pages `<head>` section like so:

```
<script src="modernizr-custom.js"></script>
```

<https://modernizr.com/download?cssanimations-setclasses>