adtrak

CSS Keyframe Animation Training

Stephen Greig

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- **An introduction to animation in CSS**

- **What goes into a CSS keyframe animation?**
  - The basic requirements
  - The additional/optional controls

- **CSS keyframe animation in action**

An introduction to animation in CSS

Animation in CSS has come a long way since the days where we had to rely on JavaScript for the simplest hover effects

We now have **two animation modules in CSS** that are supported across the board, without the need for vendor prefixes*

*apart from previous versions of the Android browser, which require the `-webkit-` prefix for keyframe animations

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CSS Transitions

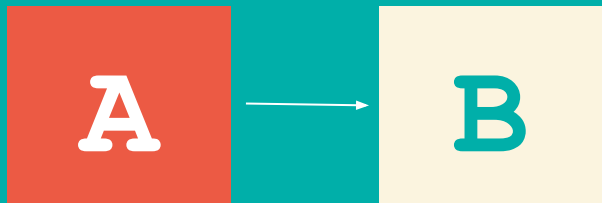Uses up to 4 properties to animate an element from one state to another

```css
div {
    transition-duration: .5s;
    transition-property: all;
    transition-delay: 1s;
    transition-timing-function: ease;
}
```

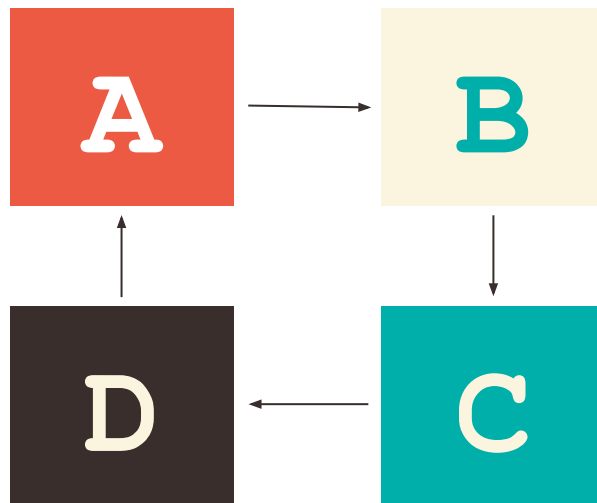Usually always combined into the shorthand `transition` property

```css
div {
    transition: .5s;
}
```

Do **not** need to use `transition: 1s all ease;`

So CSS Transitions animate changes between one state and another

A → B

But what if you wanted to animate between multiple states?

A → B
↑ ... ↓
D ← C

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What goes into a CSS keyframe animation?

The first step is to define your keyframes

These are **defined completely separately** to the element you want to apply them to, allowing them to be **reused on multiple elements**

They're also **defined using percentages**, allowing you to use the keyframes over different durations on different elements

```
@keyframes myFirstAnimation {

  25% {
    background-color: red;
  }

  50% {
    background-color: blue;
  }

  75% {
    background-color: green;
  }

}
```

```
@keyframes myFirstAnimation {

  25% {
    background-color: red;
  }

  50% {
    background-color: blue;
  }

  75% {
    background-color: green;
  }

}
```
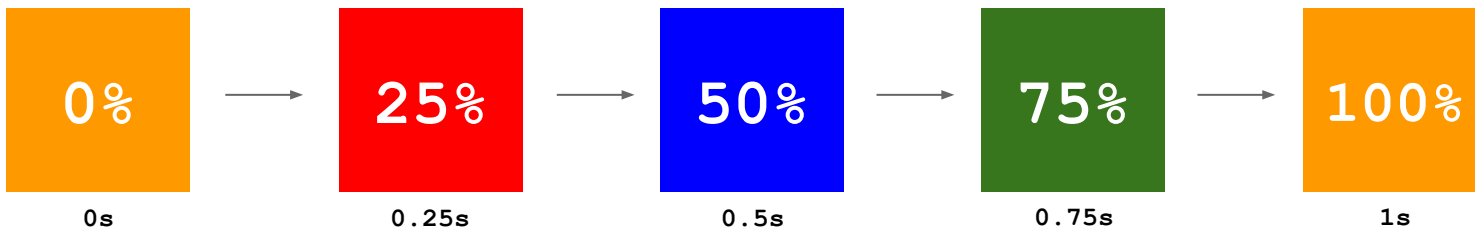
The second step is to apply the keyframes

Only 2 properties are *required* to apply an animation...

```
div {
  background-color: orange;
  animation-name: myFirstAnimation;
  animation-duration: 1s;
}
```

Can be combined into the shorthand `animation` property

```
div {
  background-color: orange;
  animation: myFirstAnimation 1s;
}
```

0%	→	25%	→	50%	→	75%	→	100%
0s		0.25s		0.5s		0.75s		1s

Full range of animation controls

animation-name	`[keyframes-name]` (required)
animation-duration	`0s` `500ms` (required)
animation-delay	`0s` `500ms`
animation-timing-function	`ease` `ease-in` `ease-out` `ease-in-out` `linear` `cubic-bezier()` `steps()`
animation-iteration-count	`1` `infinite`
animation-direction	`normal` `reverse` `alternate` `alternate-reverse`
animation-play-state	`running` `paused`
animation-fill-mode	`none` `forwards` `backwards` `both`

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CSS Keyframe Animation in Action!

http://dev-server/_resources/learn-css-animation/