


# Animating Custom Directives with CSS and JavaScript



Kevin Weeks

@thetallweeks

---



The `$animate` service provides animation detection support while performing DOM operations (enter, leave and move) as well as during `addClass` and `removeClass` operations.

— [https://docs.angularjs.org/api/ngAnimate/service/\\$animate](https://docs.angularjs.org/api/ngAnimate/service/$animate)



# Using \$animate

ngAnimate module  
dependency

\$animate  
dependency

Call to \$animate  
method

```
var promise = $animate.leave($element);  
promise.then(function() {  
    // Execute after animation completes  
});
```

## \$animate Promises

Returned by \$animate methods

Wait until animation completes or cancels

Chain-able

# JavaScript Animations

```
angular.module('app').animation('.list-item', function() {  
  return {  
    enter : function(element, done) {  
      // Animation code here  
      done();  
    }  
  }  
});
```

# JavaScript Animations

.animation attached  
to module

Name starts with .

Class added to  
element

# 3<sup>rd</sup> Party Libraries for JavaScript and CSS Animation



JavaScript animations

Complete control

Browser support

<http://greensock.com/tweenmax>



Animate.css

CSS keyframe animations

Simple to use

Performant

<http://daneden.github.io/animate.css/>

# TweenMax vs. Animate.css

## TweenMax

- Control with pause, resume, reverse, etc
- Separate easing functions for each property
- No vendor prefixes/better browser support
- Plugins

## Animate.css

- Performant
- React to media queries
- No JavaScript dependency
- Angular supports stagger for CSS animations

Does animation belong in  
CSS or JavaScript?

# Animations in JavaScript vs. CSS

## JavaScript

- Developers don't need to learn CSS to be able to add animation
- JavaScript is likely already required
- Keeps DOM manipulation and animation together

## CSS

- Allows non-developers to modify animations
- Change UI experience without affecting core JavaScript code
- Seems to be preferred by Angular

# Summary

\$animate

JavaScript animations

3<sup>rd</sup> party libraries

Up next

