Animating Angular Apps

Animating Core Directives



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Which Directives Support Animation?

ngInclude/View/ ngClass ngRepeat If/Switch form/ngModel ngShow/Hide ngMessages

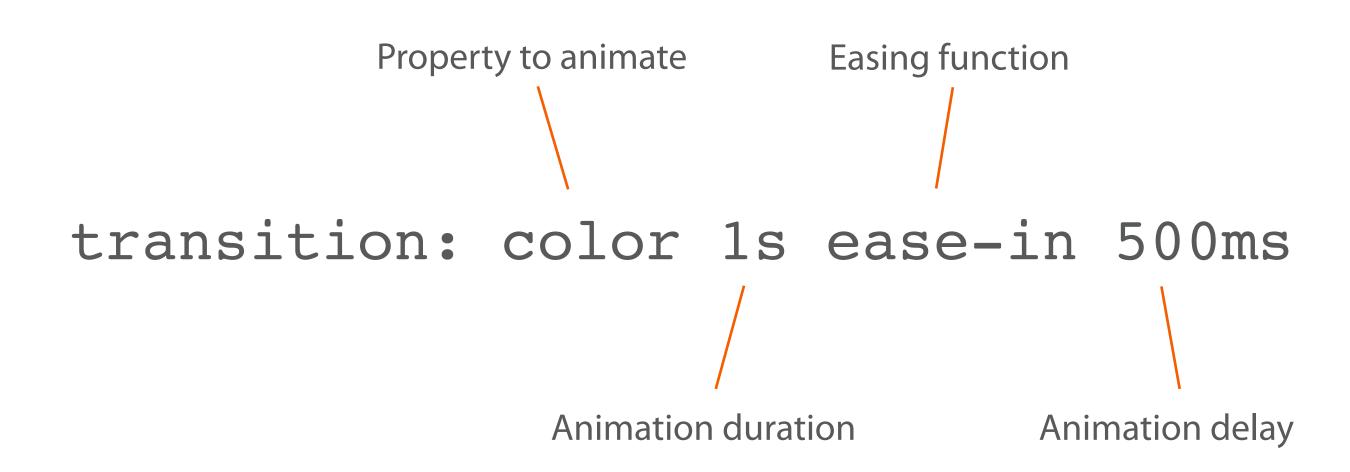
ngClass Add

```
.selected—add {
    transition: color 1s linear;
.selected,
.selected-add-active {
    color: blue;
```

ngClass Remove

```
.selected—remove {
    transition: color 1s linear;
}
.selected-remove-active {
    color: blue;
}
```

Anatomy of a CSS Transition



Animatable Properties

Color	color, background-color, border-color, opacity
Position	top, left, bottom, right, translate
Size	height, width, padding, margin, scale
Text	font-size, font-weight, line-height

http://www.w3.org/TR/css3-transitions/#properties-from-css-

ngInclude/View/If/Switch Enter

```
.ng-enter {
    opacity: 0;
    transition: opacity 1s linear;
.ng-enter-active {
    opacity: 1;
```

ngInclude/View/If/Switch Leave

```
.ng-leave {
    opacity: 1;
    transition: opacity 1s linear;
.ng-leave-active {
    opacity: 0;
```

Keep in mind that, by default, if an animation is running, any child elements cannot be animated until the parent element's animation has completed. This blocking feature can be overridden by placing the **ng-animate- children** attribute on a parent container tag.

https://docs.angularjs.org/api/ngAnimate

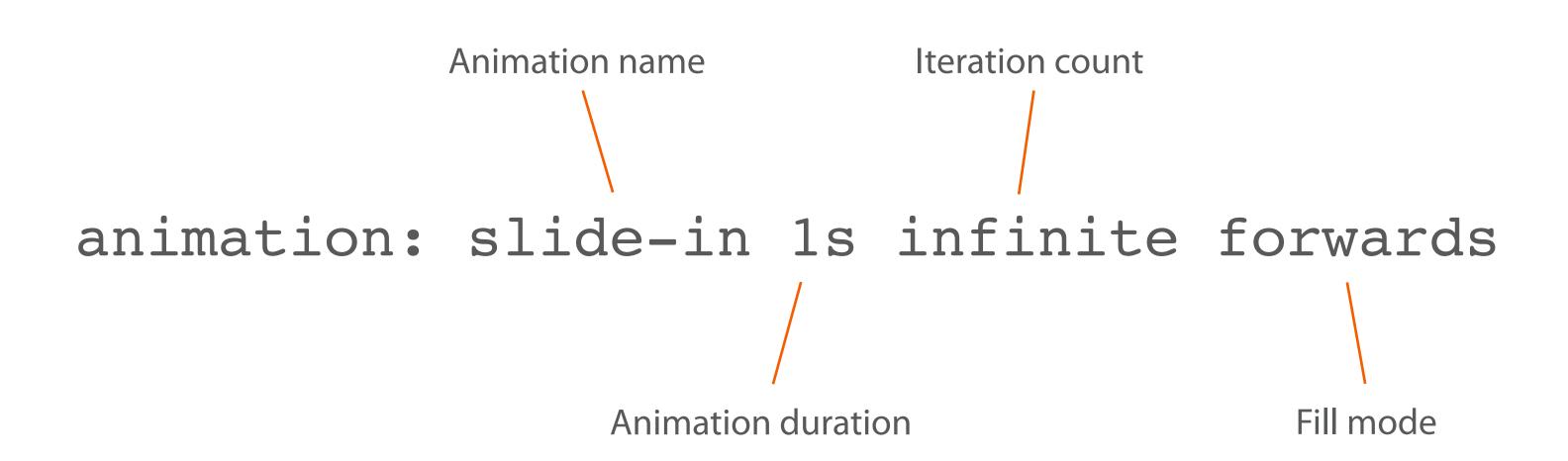
ngRepeat Move

```
.list-item.ng-move {
 transition: background 1s;
 background: gold;
.list-item.ng-move-active {
 background: transparent;
```

Stagger Animations

```
.ng-enter-stagger,
.ng-leave-stagger {
  transition-delay: 200ms;
  transition-duration: 0s;
}
```

Anatomy of a CSS Keyframe Animation



CSS Keyframe Animations

```
@keyframes slide-in {
 0% { opacity: 0; transform: translate3d(100%, 0, 0); }
 100% { opacity: 1; transform: none; }
.ng-enter {
 animation: slide-in 1s;
```

```
@-webkit-keyframes slide-in {...}

.ng-enter {
   -webkit-animation: slide-in 1s;
   animation: slide-in 1s;
}
```

Vendor Prefixes

-webkit is the only required prefix for animations Check <u>caniuse.com</u>

Prefixes should go before standard property

ngShow/Hide

```
.ng-hide-remove {
 opacity: 0;
 transition: 1s opacity;
.ng-hide-remove-active {
 opacity: 1;
```

ngShow/Hide

```
.ng-hide-add {
 opacity: 1;
 transition: 1s opacity;
.ng-hide-add-active {
 opacity: 0;
```

form/ngModel

```
.ng-invalid-add,
.ng-invalid-remove {
    transition: border-color 250ms;
}
.ng-invalid { border-color: red; }
```

ngMessage

```
.message-enter,
.message-leave {
    transition: opacity 500ms;
.message-enter-active {
    opacity: 1;
```

Syntax Recap

- .classname-add
- .classname-remove
- .ng-hide-add
- .ng-hide-remove

- .ng-enter
- .ng-leave
- .ng-move

- .classname-add-active
- .classname-remove-active
- .ng-hide-add-active
- .ng-hide-remove-active

- .ng-enter-active
- .ng-leave-active
- .ng-move-active

Summary

ngAnimate class name syntax

CSS Transitions

CSS Keyframe Animations

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