

Animating Angular Apps

Animating Core Directives



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Which Directives Support Animation?

ngClass

ngInclude/View/
If/Switch

ngRepeat

ngShow/Hide

form/ngModel

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

Property to animate Easing function

`transition: color 1s ease-in 500ms`

Animation duration Animation delay

The diagram illustrates the components of a CSS transition. It features a central line of code: `transition: color 1s ease-in 500ms`. Four labels are positioned around this code, with orange lines pointing to specific parts: 'Property to animate' points to 'color', 'Easing function' points to 'ease-in', 'Animation duration' points to '1s', and 'Animation delay' points to '500ms'.

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

Animation name Iteration count

`animation: slide-in 1s infinite forwards`

Animation duration Fill mode

The diagram illustrates the components of a CSS keyframe animation. It features a central code snippet: `animation: slide-in 1s infinite forwards`. Four labels are positioned around this snippet, with orange lines pointing to specific parts of the code: 'Animation name' points to 'slide-in', 'Iteration count' points to 'infinite', 'Animation duration' points to '1s', and 'Fill mode' points to 'forwards'. The labels are in a dark gray sans-serif font, and the code is in a dark gray monospace font.

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 caniuse.com

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-add-active`

`.classname-remove`

`.classname-remove-active`

`.ng-hide-add`

`.ng-hide-add-active`

`.ng-hide-remove`

`.ng-hide-remove-active`

`.ng-enter`

`.ng-enter-active`

`.ng-leave`

`.ng-leave-active`

`.ng-move`

`.ng-move-active`

Summary

ngAnimate class name syntax

CSS Transitions

CSS Keyframe Animations

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