

Flutter Animations

<https://github.com/mjohnsullivan/dashcast/tree/flutterEurope>

2. How to Idea

- Look at the user actions in your app
- Emulate the physical world when possible, or use it for inspiration.
- Subtle and short is good, generally.
- [Sine](#) is your friend!

Animation? AnimationController?

Animation

- Status (running, dismissed, etc)
- Value (double, Color, etc)
- Listeners

AnimationController



AnimatedIcon

[snippet.dart](#)

```
IconButton(  
  icon: AnimatedIcon(  
    progress: _animationController,  
    icon: AnimatedIcons.play_pause,  
  ),  
  onPressed: () {  
    if (playStatus.isPlaying) {  
      _animationController.reverse();  
      _stop();  
    } else {  
      _animationController.forward();  
      _play(downloadLocation ?? item.guid);  
    }  
  }  
)
```

AlertWiggle

We need...

- Positive and negative values
 - (wiggling up and down)
- A continuous function to get those values
 - (so that the movement to each value is smooth)

[snippet.dart](#)

```
static final sinePeriod = 2 * pi;
double _endValue = 0;

if (episode.percentDownloaded == 1 && !episode.hasNotified){
  _endValue = sinePeriod;
  episode.downloadNotified();
}

TweenAnimationBuilder(
  tween: Tween<double>(begin:0, end:_endValue),
  duration: Duration(milliseconds: 200),
  child: child,
  builder: (_, double value, Widget child){
    double offset = sin(value);
    return Transform.translate(
      offset: Offset(0, offset * 2),
      child: child,
    );
  }
)
```

AnimatedOpacity

[snippet.dart](#)

```
AnimatedOpacity(
  child: child,
  opacity: _getOpacity(value.percentDownloaded),
  duration: Duration(milliseconds: 100),
)

double _getOpacity(double percentDownloaded) => percentDownloaded * (1 -
_defaultOpacity) + _default...
```

Try the simplest thing first



Is my animation more like a drawing - [Rive](#)

“Pure Flutter Animations”: Two kinds

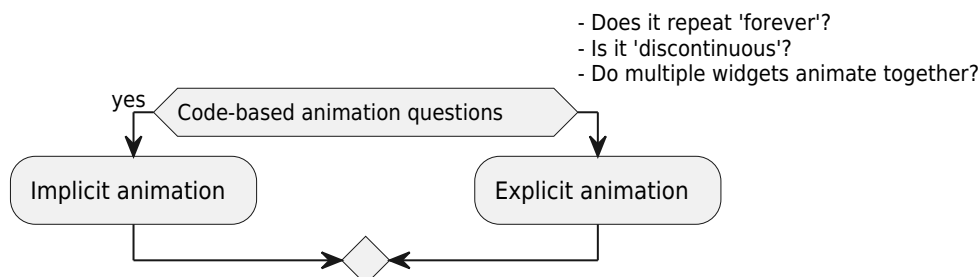
- Implicit Animations
 - Duration, and transition method (curve) are defined. Implicitly starts and stops when “end value” is set.
- Explicit Animations
 - Animations is fully defined, will 'go' on command, with a controller

Does my animation repeat forever? Is it discontinuous? Are multiple widgets animating together?

- If YES, use an Explicit animation



- Code based Animations
- Drawing based Animations



- Does it repeat 'forever'?
- Is it 'discontinuous'?
- Do multiple widgets animate together?

Implicit animation

Built-in implicit animation `TweenAnimationBuilder`

Explicit animation

- Built-in explicit animation



- Custom explicit animation

1. Flutter code or plugin?

1. Is my animation more like a drawing?

2. Implicit or Explicit?

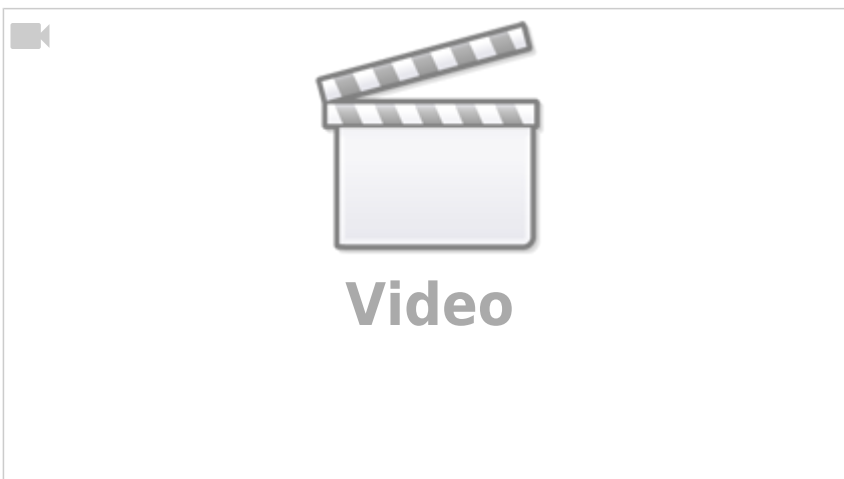
1. Does my animation repeat 'forever'?
2. Is it 'discontinuous'?
3. Are multiple widgets animating together?

3. Built-in or custom?

1. Is there a built-in widget for my needs?

Animated

- AnimatedContainer



Links

- <https://flutter.dev/docs/development/ui/animations>

- [Flutter Package](#)

From:

<http://jace.link/> - **Various Ways**

Permanent link:

<http://jace.link/open/flutter-animations>

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