

*David Truxall, Ph.D.*

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# Everyday Animations

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# About Me

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@davetrux



<https://davidtruxall.com>

# Slides and Code

<https://github.com/davetrux/everyday-animation>

Why?

# Expectation

Continuity

Narrative

# Relationship

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# Agenda

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Animation Basics in Android

Specific Use Cases

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# Animation Types

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- ❖ View Animation
- ❖ Property Animation
- ❖ Layout Animation
- ❖ MotionLayout

# View Animations

```
<set xmlns:android="http://schemas.android.com/apk/res/android"  
      android:fillafter="true">  
    <alpha android:duration="1000"  
          android:fromalpha="1.0"  
          android:interpolator="@android:animaccelerate_interpolator"  
          android:toalpha="0.0">  
    </alpha>  
</set>  
  
val view = AnimationUtils.loadAnimation(context, R.anim.fade)  
view.startAnimation(fade)
```

# Property Animations

```
view.setOnClickListener { onStartAnimation() }

.....

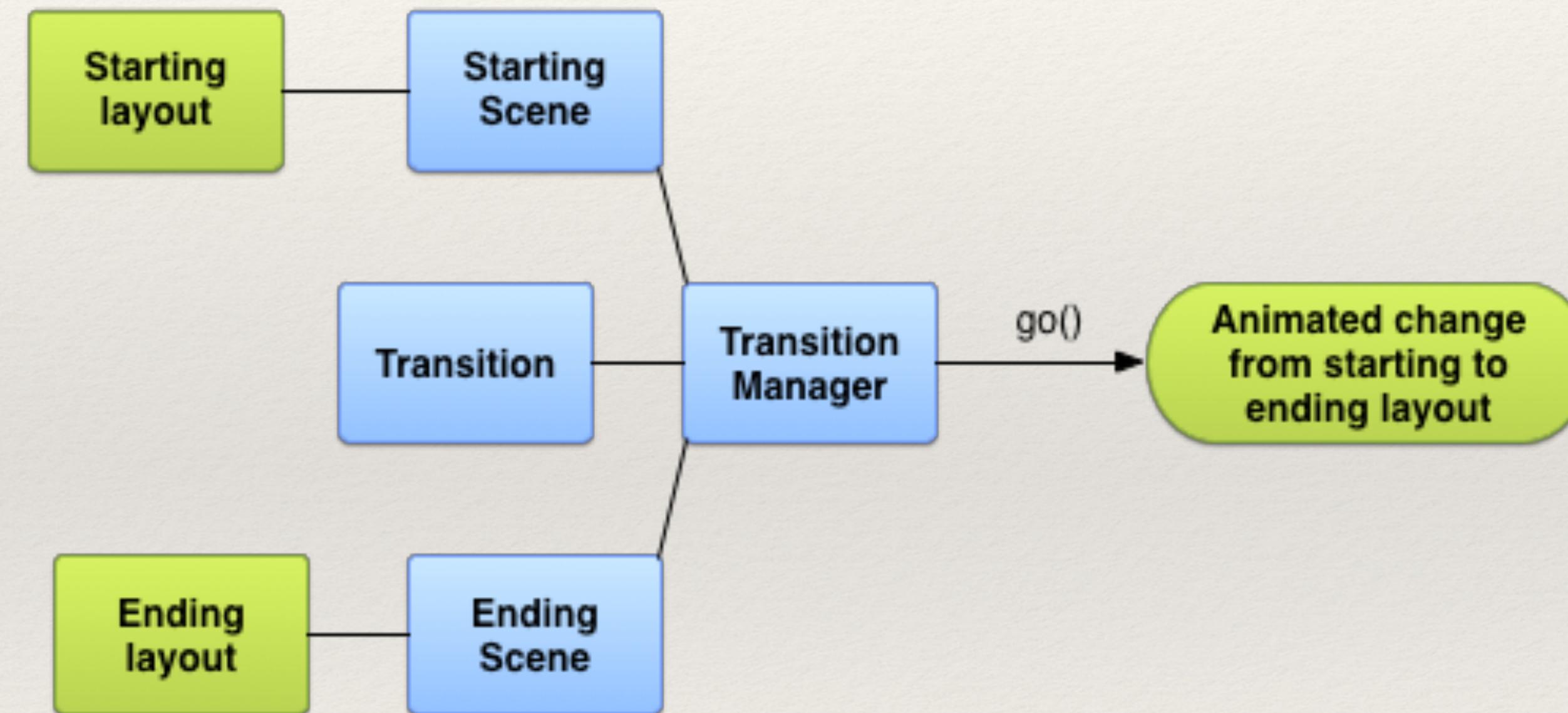


fun onStartAnimation() {
    val animator = ValueAnimator.ofFloat(0f, -screenHeight)

    animator.addUpdateListener {
        val value = it.animatedValue as Float
        rocket.translationY = value
    }

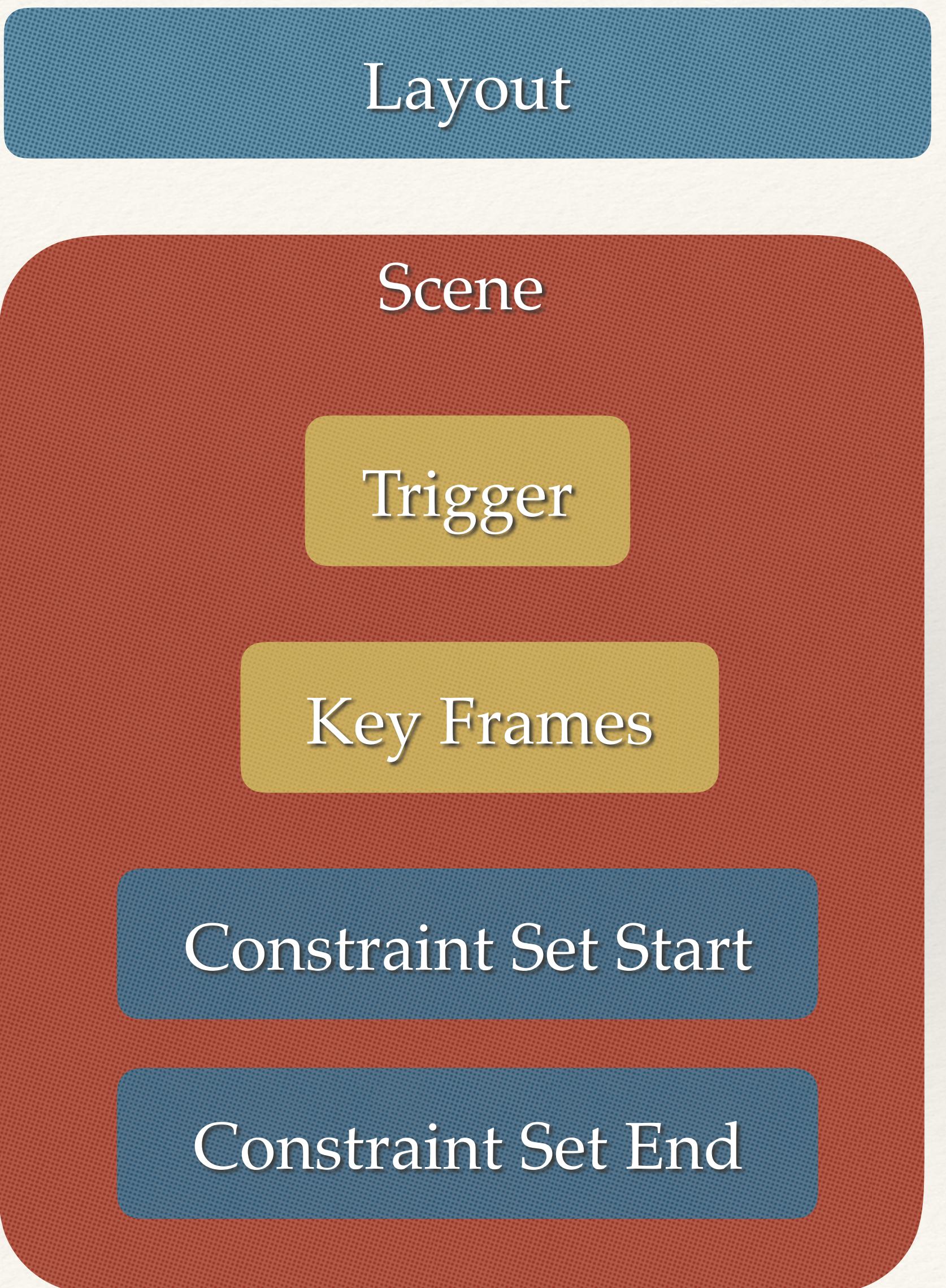
    animator.interpolator = LinearInterpolator()
    animator.duration = 1000
    animator.start()
}
```

# Layout Animations



# MotionLayout

1. Define starting and ending layouts
2. Move constraints to a MotionScene XML file
3. Define a trigger



# Use Cases

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# Caveats

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- ❖ No Libraries
- ❖ Complexity == High
- ❖ Slow animations

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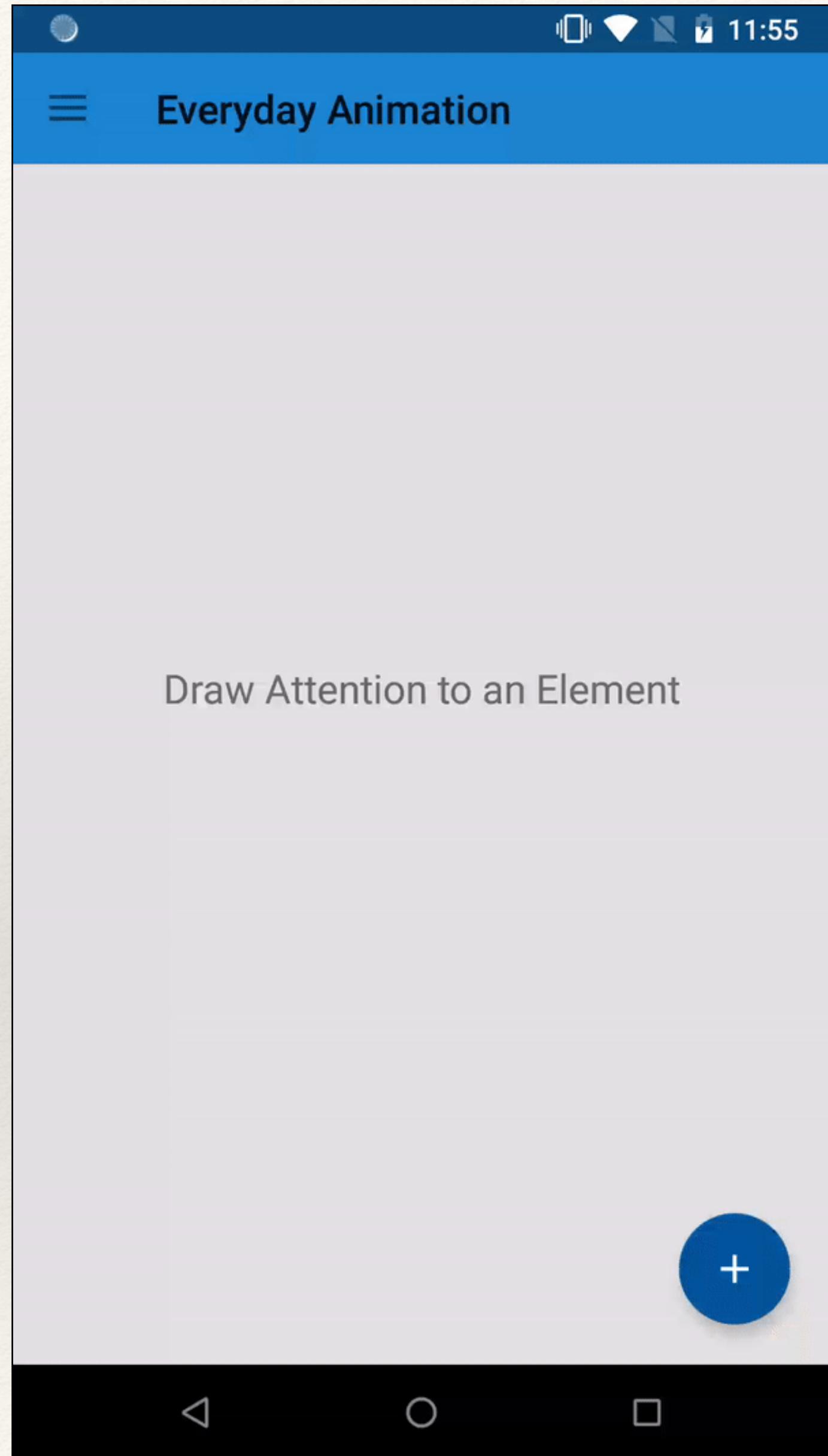
# App Architecture

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- ❖ Architecture Components
  - ❖ MVVM
  - ❖ LiveData
  - ❖ Room
  - ❖ Navigation
  - ❖ Fragments

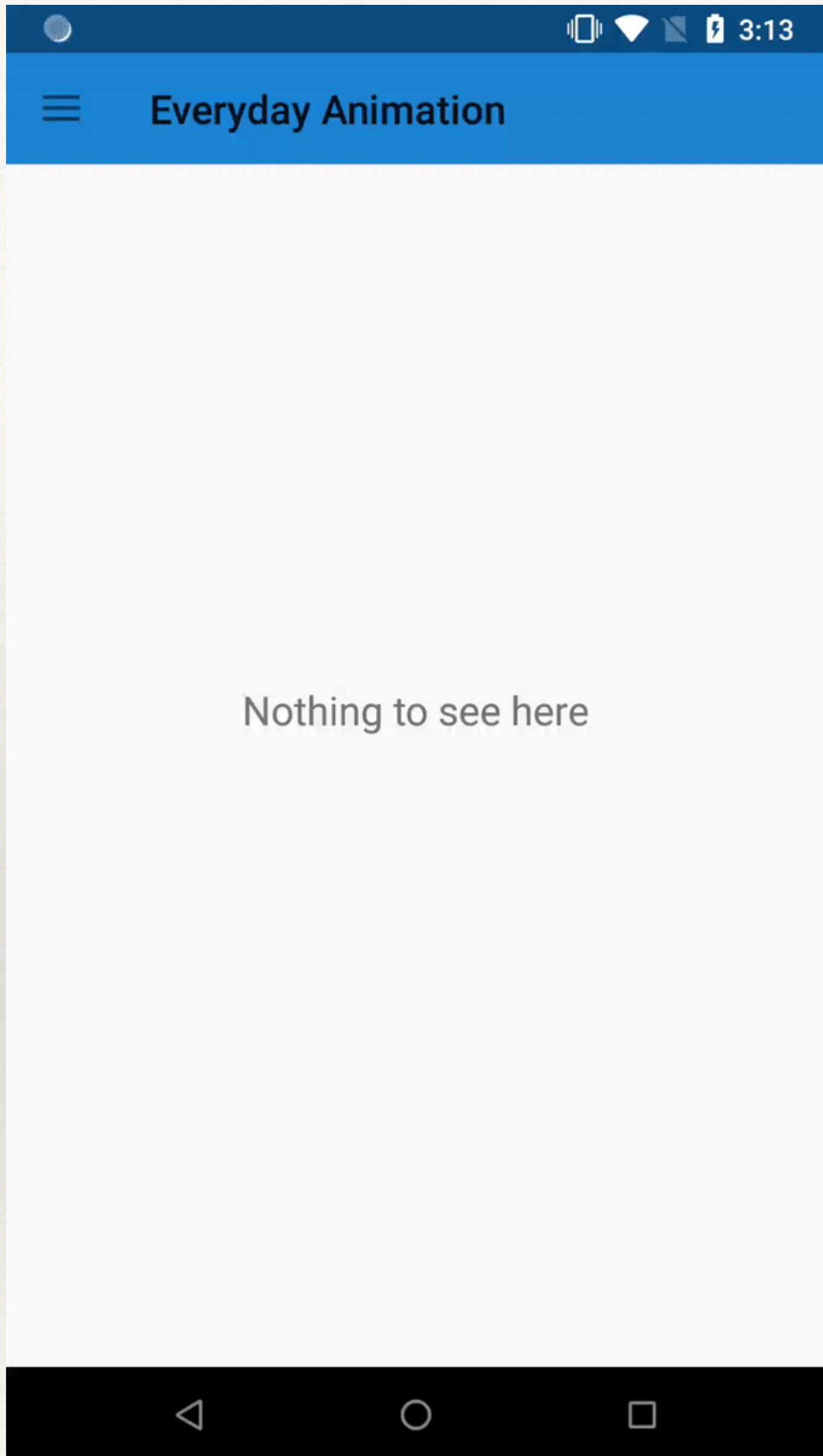
# Call Attention to Element

Draw Attention to an Element



# Cascade Tiles in A List

Nothing to see here

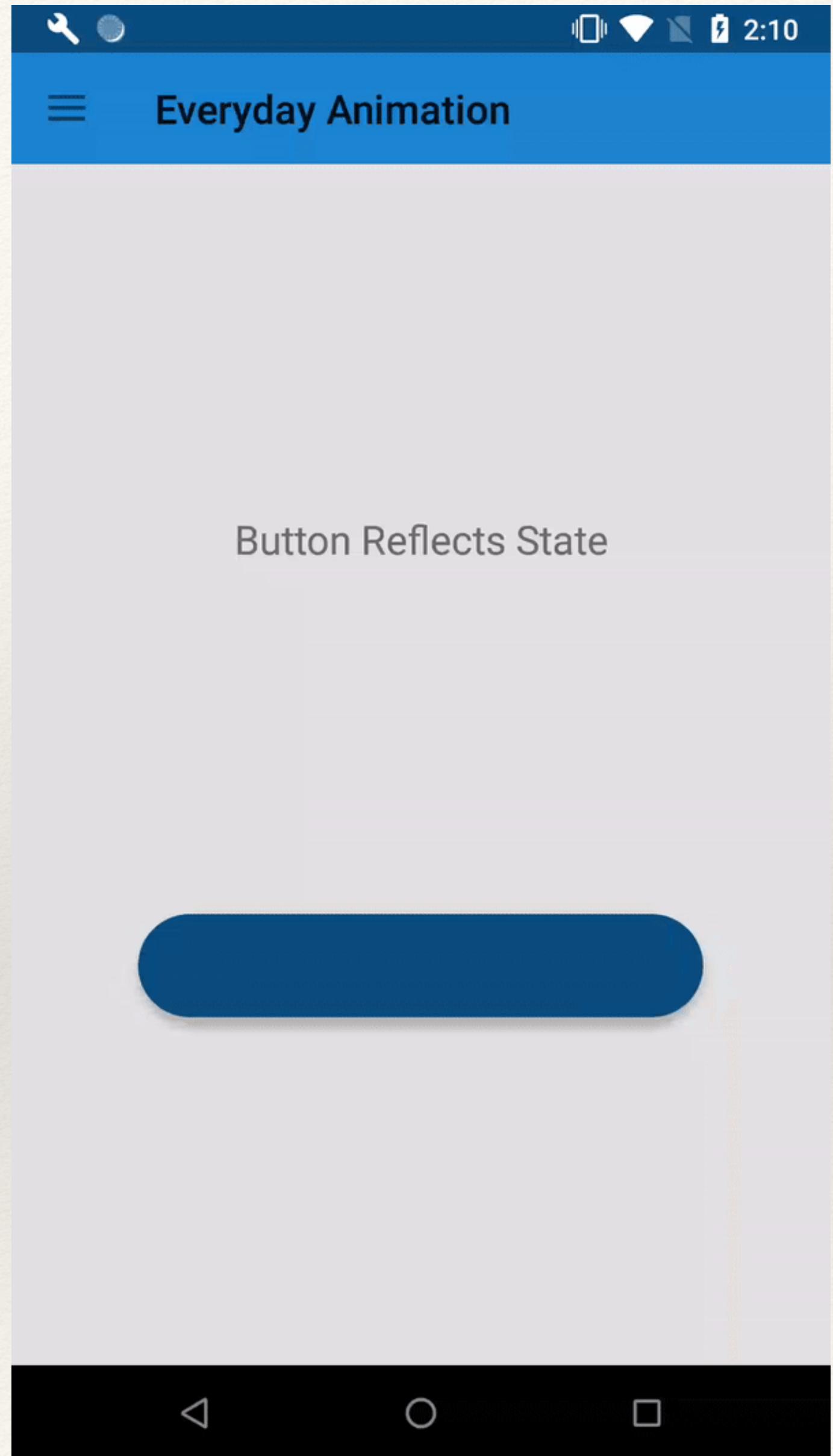


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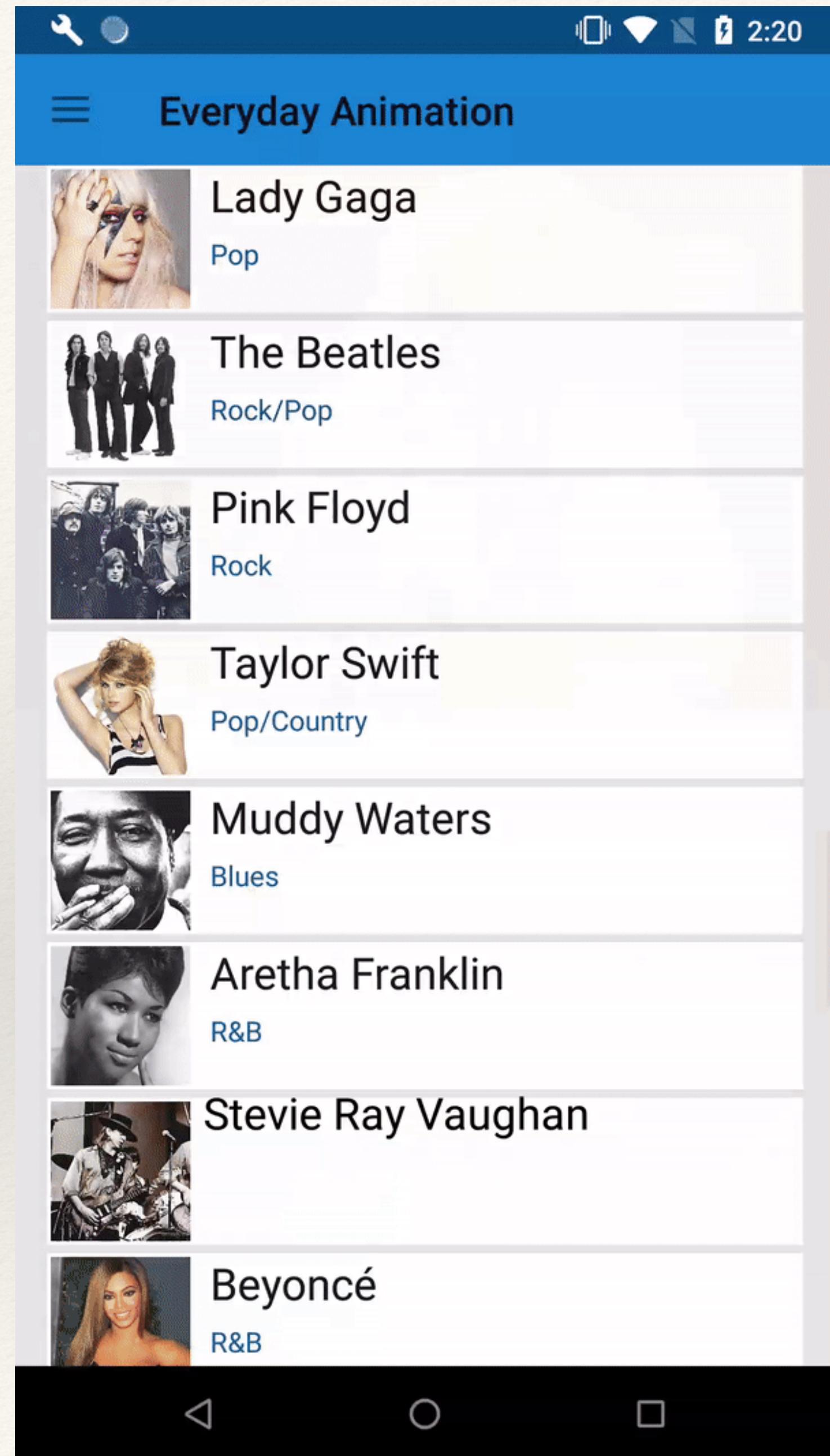
# Button Reflects State

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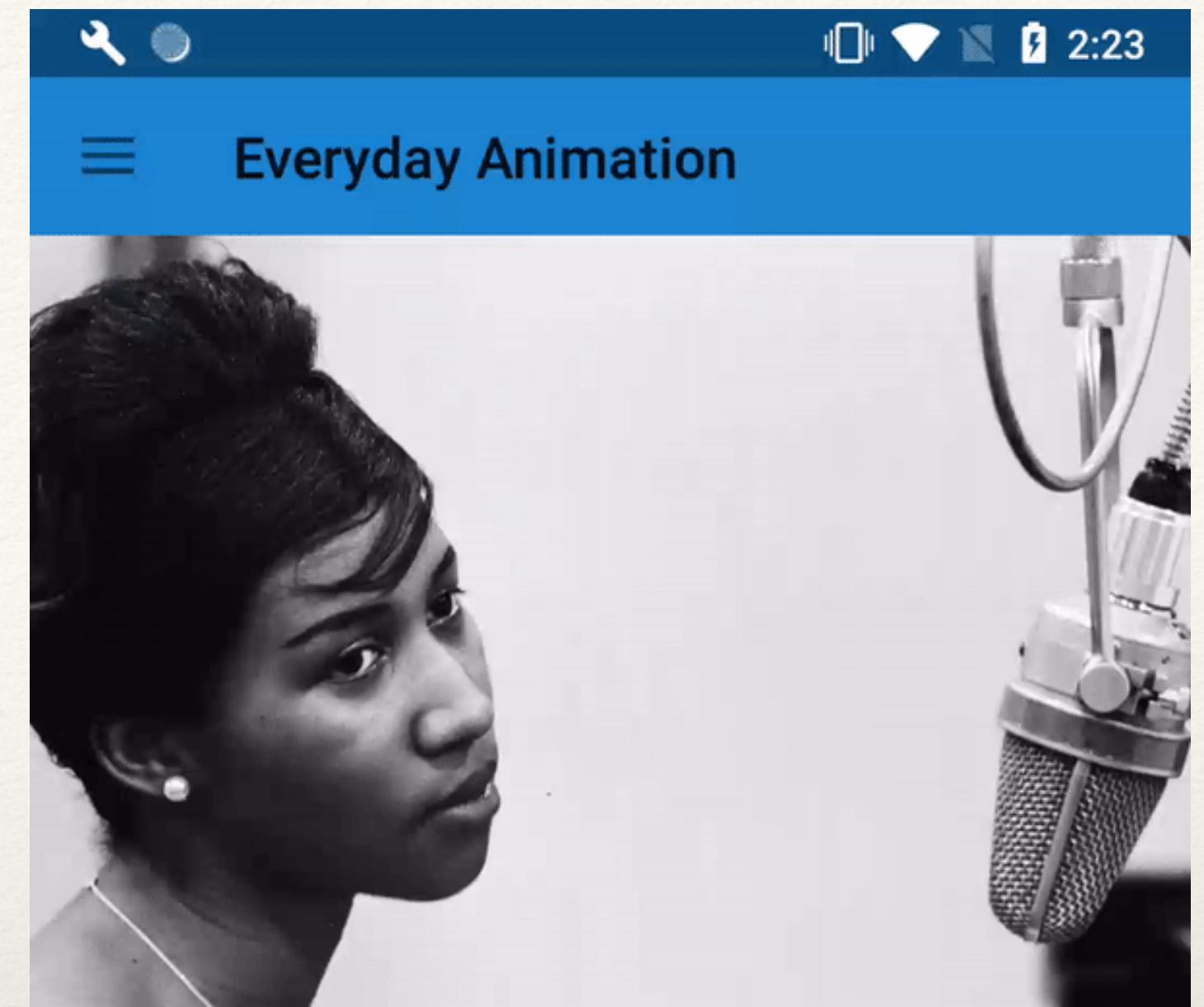
Button Reflects State



# Connect Shared Elements



# Moving Content



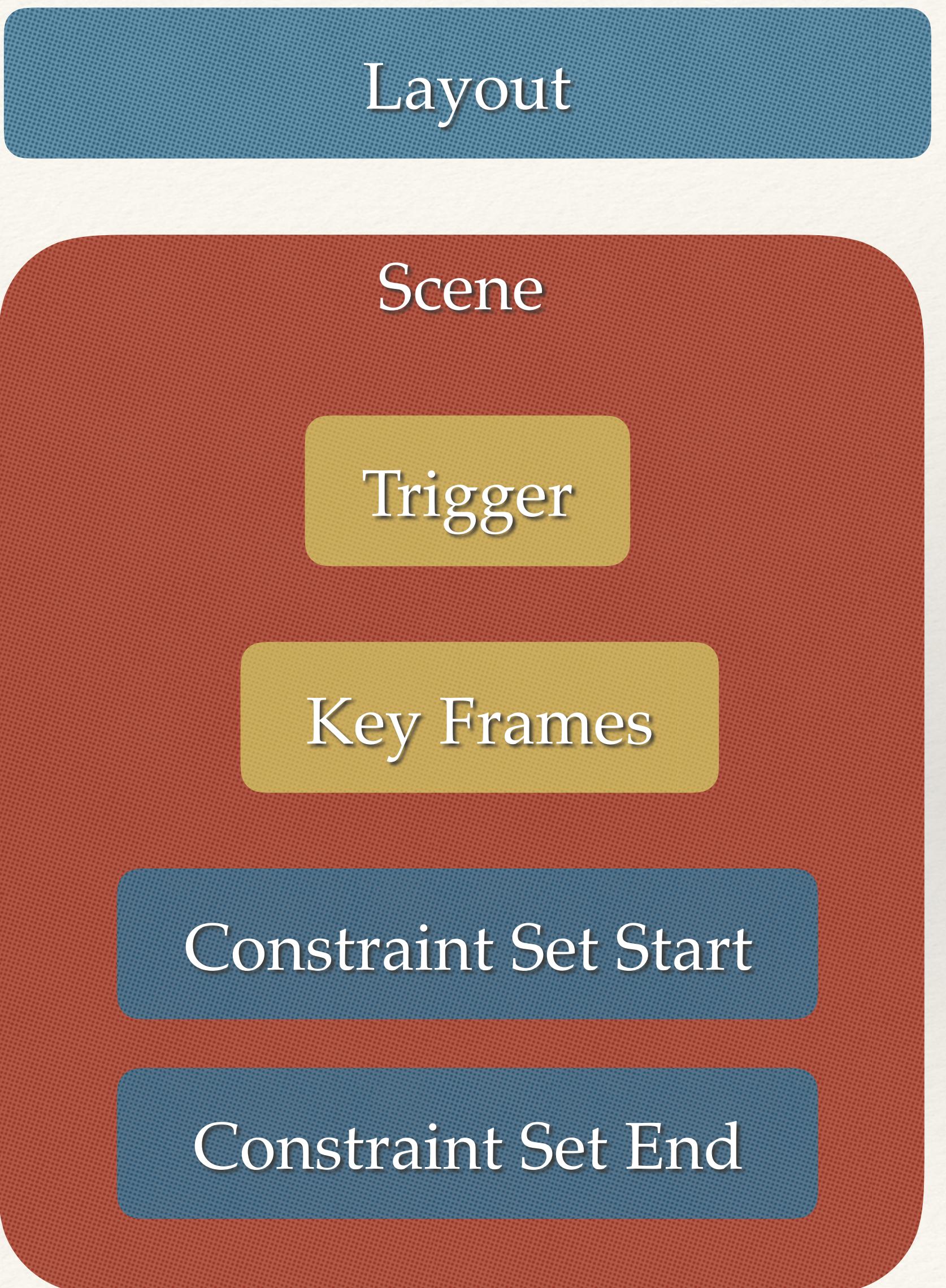
The image shows a mobile phone screen displaying a music application. The top status bar shows signal strength, battery level, and the time 2:23. Below the status bar is a blue header with the text "Everyday Animation" and a menu icon. The main content area features a black and white photograph of Aretha Franklin in profile, facing right. She is wearing a dark top and a small earring. To her right is a vintage-style microphone mounted on a stand. The bottom of the screen has a black navigation bar with three white icons: a triangle pointing left, a circle, and a square.

**Aretha Franklin** R&B

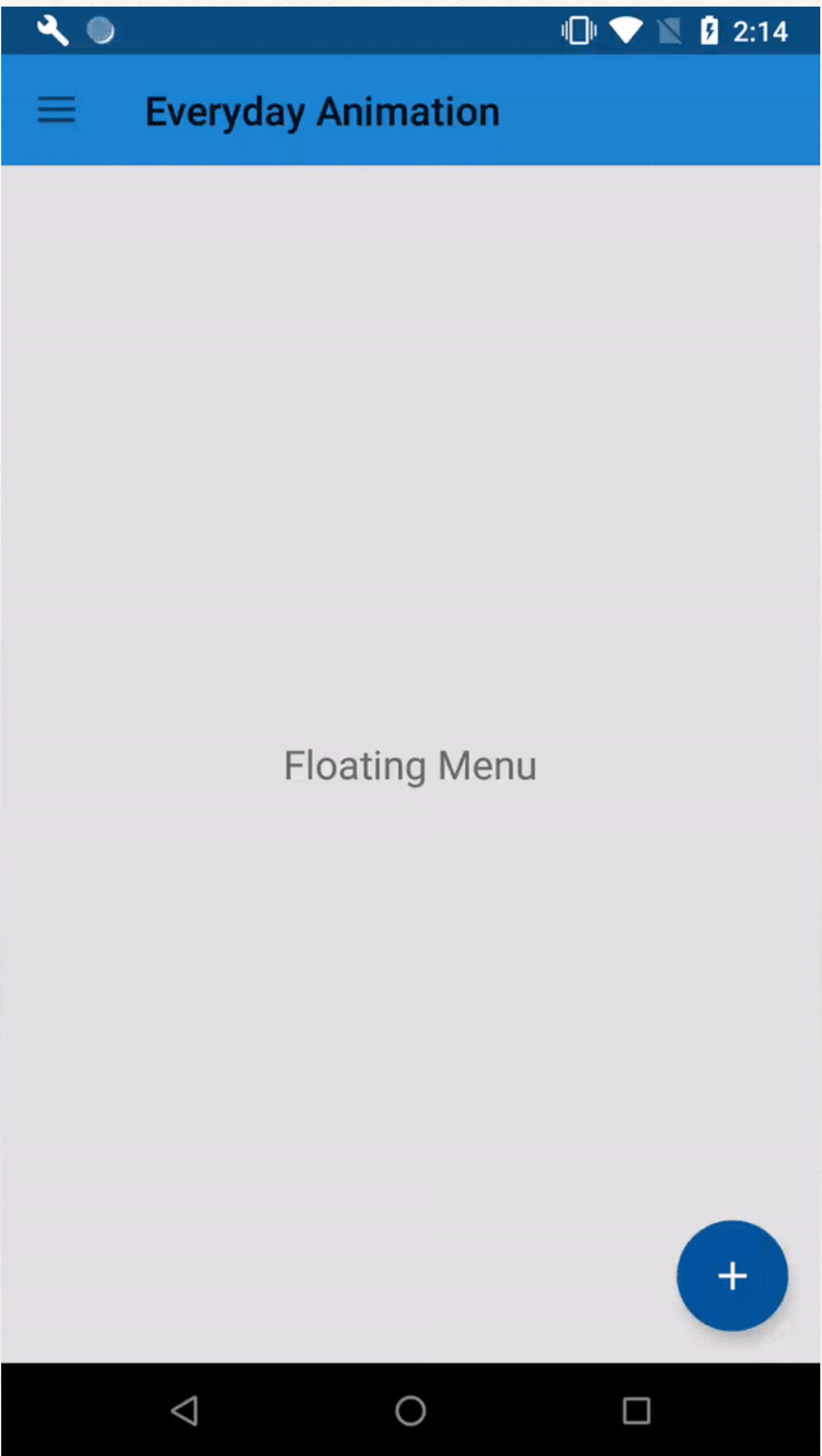
Aretha Louise Franklin (born March 25, 1942) is an American musician, singer, songwriter, and pianist. In a recording career that has spanned over half a century, Franklin's repertoire has included gospel, jazz, blues, R&B, pop, rock and funk. Franklin is known as one of the most important popularizers of the soul music genre and is referred to as the Queen of Soul, a title she was given early in her career. Franklin, the daughter of prominent Baptist minister and activist C. L. Franklin, began her singing career singing in her father's church at the age of ten and started recording four years later. After several years in the gospel circuit and with her father's blessing, she formed a secular pop music career at the age of eighteen, signing with Columbia Records, where she was branded by its CEO John Hammond as his most important act since Billie Holiday. Franklin's Columbia period wasn't as successful as hoped and in late 1966,

# MotionLayout

1. Define starting and ending layouts
2. Move constraints to a MotionScene XML file
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# Menu In Context



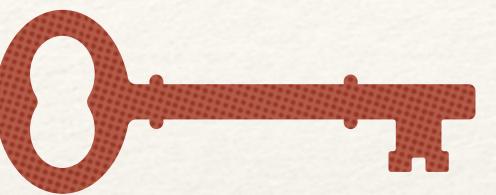
# Accessibility

Layout Animation

Property Animation

View Animation

MotionLayout



# User Experience

Continuity

Relationship

Narrative

Expectation

XML

Code

Constraints

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# Shameless Plug

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