



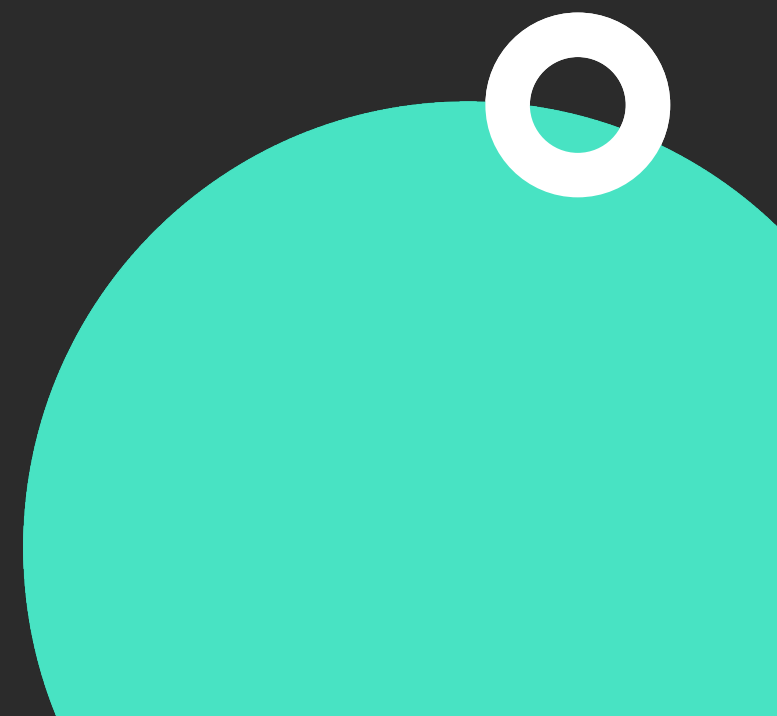
Android Animations and Transitions with Jetpack Compose



Mehdi Haghgoo

 @IAmMehdiHaghgoo

 in/mehdihaghgoo





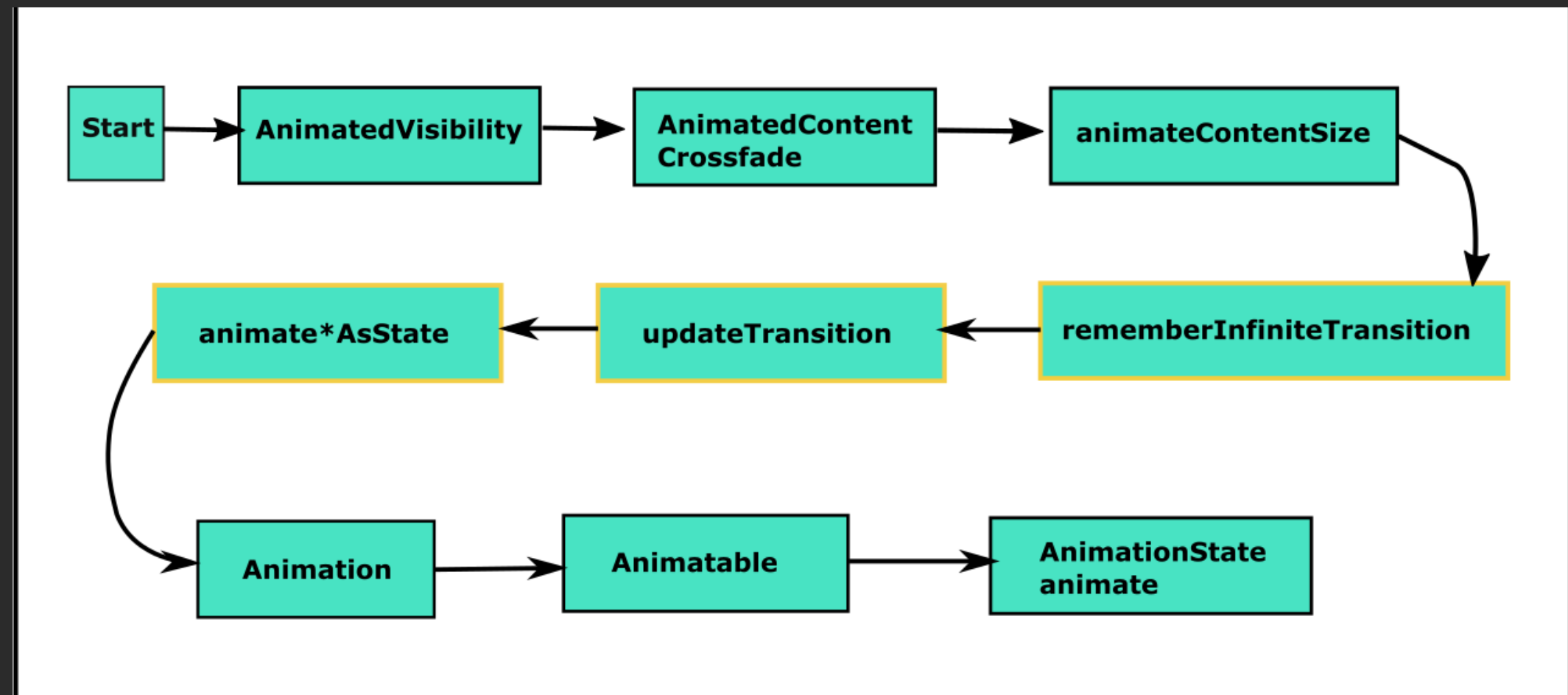
Section 3

Transitions and Value Animations : High-Level Animations



Section Overview

- High-Level Animations
 - rememberInfiniteTransition
 - updateTransition
 - animate*AsState
- Code
- Recap



rememberInfiniteTransition

- Create instance of InfiniteTransition
- InfiniteTransition holds infinite transition objects
- An infinite transition runs as long as it is in the composition

```
val infinite =  
rememberInfiniteTransition()  
val color by infinite.animateColor(  
    initialValue = Color.Red,  
    targetValue = Color.Blue,  
    animationSpec = infiniteRepeatable(  
        animation = tween(2000)  
    )  
)  
  
Box(Modifier  
    .size(300.dp)  
    .background(color)  
)
```



updateTransition

- Creates a Transition
- A Transition manages animations as children
- Child animations created using animate* extension functions
 - Transition.animateFloat()
 - Transition.animateColor()
 - ...
- Animation can be customized with transitionSpec

```
enum class Favorite{INITIAL, STARTED}

val transition =
    updateTransition(targetState =
        favoriteState, "Favorite")

val sweep by
    transition.animateFloat(label = "Sweep",
        transitionSpec = {
            tween(durationMillis = 1000)
        }) {
        when(it.value) {
            Favorite.INITIAL -> 0f
            Favorite.STARTED -> -360f
        }
    }
```



animate*AsState

- Simplest animation APIs in Compose
- Animating many types is supported
 - Int, Float, Color, Dp, Offset, Rect, Size
 - Use animateValueAsState with custom TwoWayConverter for other types
- Animation can be customized with animationSpec

```
val corner by animateDpAsState(  
    targetValue = if (selected) 64.dp else  
0.dp,  
    label = "Corner",  
    animationSpec = tween(durationMillis =  
CORNER_DURATION)  
)
```



Code Time

- Folder : s3-transitions-and-value-animations/starter-project
- Files:
 - InfiniteTransitionSheet.kt
 - rememberInfiniteTransition
 - UpdateTransitionSheet.kt
 - updateTransition
 - AnimateAsStateSheet.kt
 - animate*AsState



Section Summary

- Transitions and Value Animations
 - `animate*AsState`
 - `updateTransition`
 - `rememberInfiniteTransition`
- What's next?
 - Low-level animations for ultimate control!

