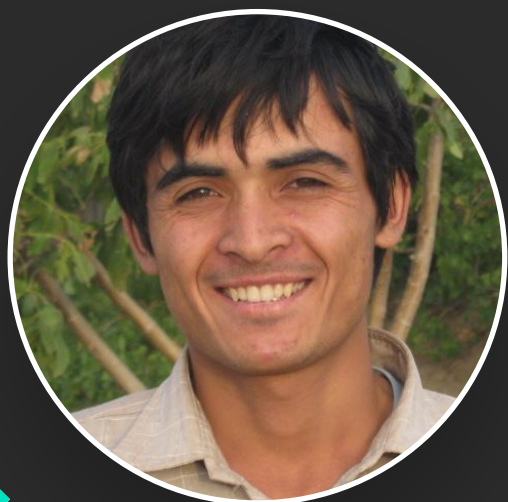




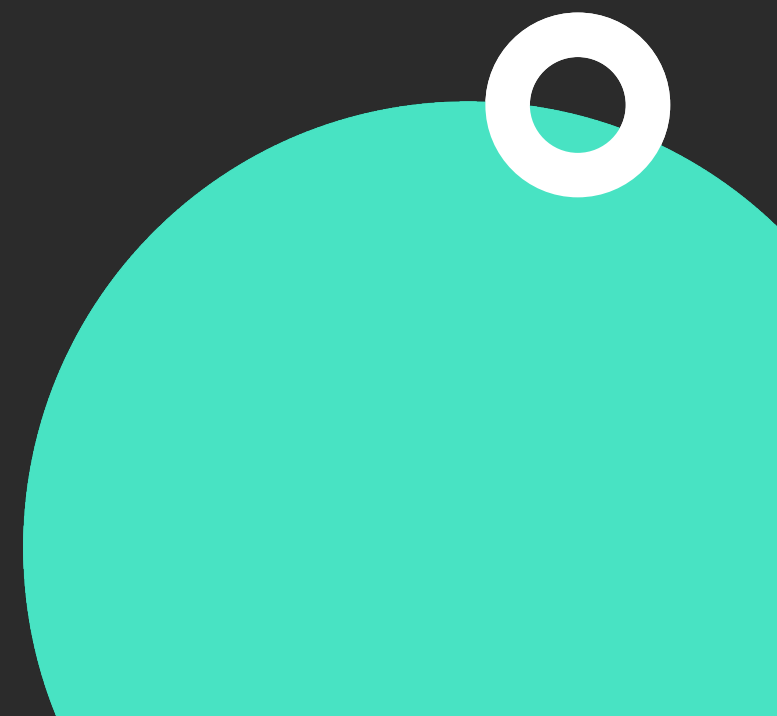
# Animating Layout Change : High-Level Animations



Mehdi Haghgoo

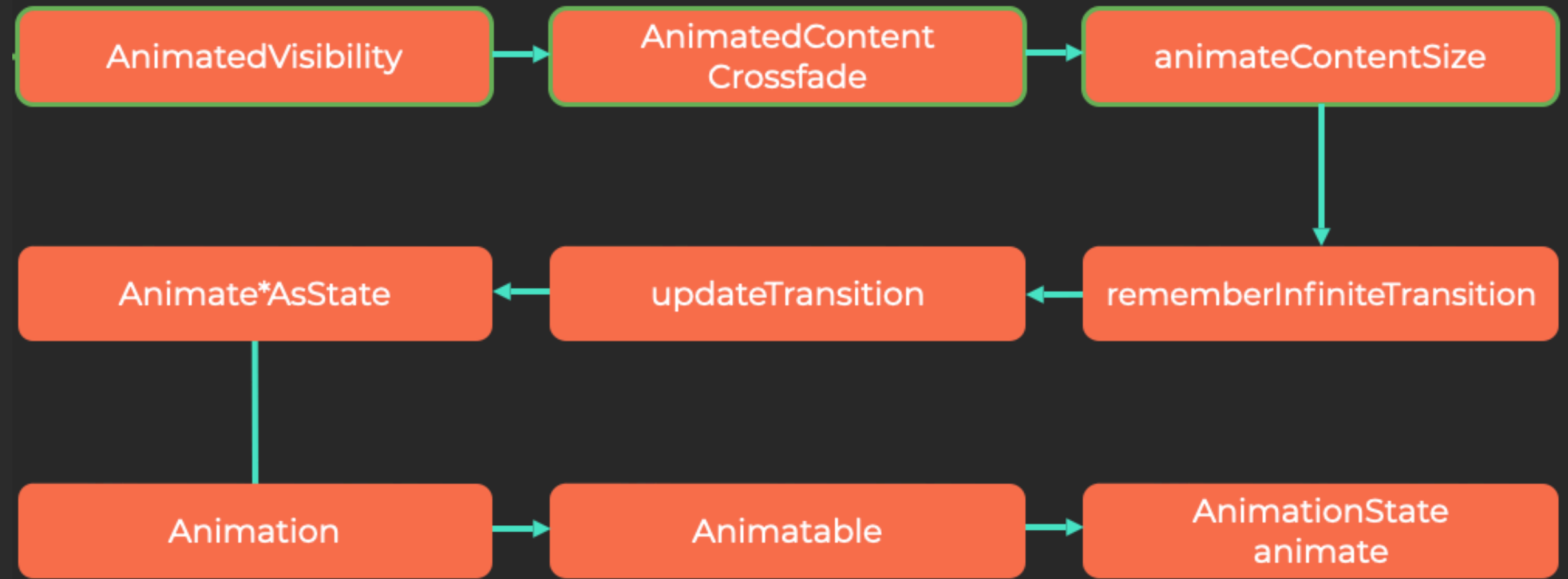
 @IAmMehdiHaghgoo

 in/mehdihaghgoo



# Section Overview

- Learn animation APIs :
  - AnimatedVisibility
  - AnimatedContent
  - Crossfade
  - animateContentSize
- Code
- Recap



# AnimatedVisibility

- Animate appearance or disappearance of content
  - Animate when some condition is true
  - Custom appearance / disappearance animation can be used
  - Enter animation : when content appears
    - e.g. fadeIn, slideIn, scaleIn
  - Exit animation : when content disappears
    - e.g. fadeOut, slideOut, scaleOut

```
AnimatedVisibility(  
    visible = booleanState,  
    enter = ...,  
    exit = ...,  
    label = "My Label"  
) {  
    GreetingBox()  
}
```



# AnimatedContent

- Animates its content based on a target state
  - Supports custom ContentTransform via transitionSpec parameter
  - You should use the lambda parameter passed to the AnimatedContent body

```
AnimatedContent(targetState = someState,  
label = "MyLabel", transitionSpec = {  
    fadeIn() with fadeOut() using  
    SizeTransform()  
}) { targetState ->  
    SomeContent(targetState)  
}
```



# Crossfade

- Toggles between two layouts with a crossfade animation
- Change in target state triggers animation

```
Crossfade (targetState = someState,  
           animationSpec = ...,  
           label = "My Crossfade"  
) { state->  
    when(state) {  
        A -> BoxA( )  
        B -> BoxB( )  
    }  
}
```



# animateContentSize

- Modifier that animates a component's size change
- Customize using animationSpec parameter

```
Box(Modifier
    .animateContentSize(
        animationSpec = spring()
    ) //Be sure to put this before size
    modifiers
    .size(
        if (someCondition) 200.dp else
150.dp
    )
)
```



# Tips

- The label parameter allows easier preview and debugging in Android Studio
- AnimatedVisibility and AnimatedContent let their children use animateEnterExit for custom animation



# Code Time



- Folder : s2-animating-layout-changes/starter-project
- Files:
  - AnimatedVisibilitySheet.kt
    - AnimatedVisibility
  - AnimatedContentCrossfadeSheet.kt
    - AnimatedContent
    - Crossfade
  - AnimateContentSizeSheet.kt
    - animateContentSize





# Section Summary

- Animate layout change using :
  - AnimatedVisibility
  - AnimatedContent
  - Crossfade
  - animateContentSize





# High-level animations continued...

## Transitions and Value Animations

Up Next

