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We know how
We know how
We know how

OK

ackee

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BI-IOŠ

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Lecture 3 - SwiftUI

SwiftUI

Declarative UI

Based on existing UI libraries (UIKit / AppKit)

One "language" for all the platforms

Interactful

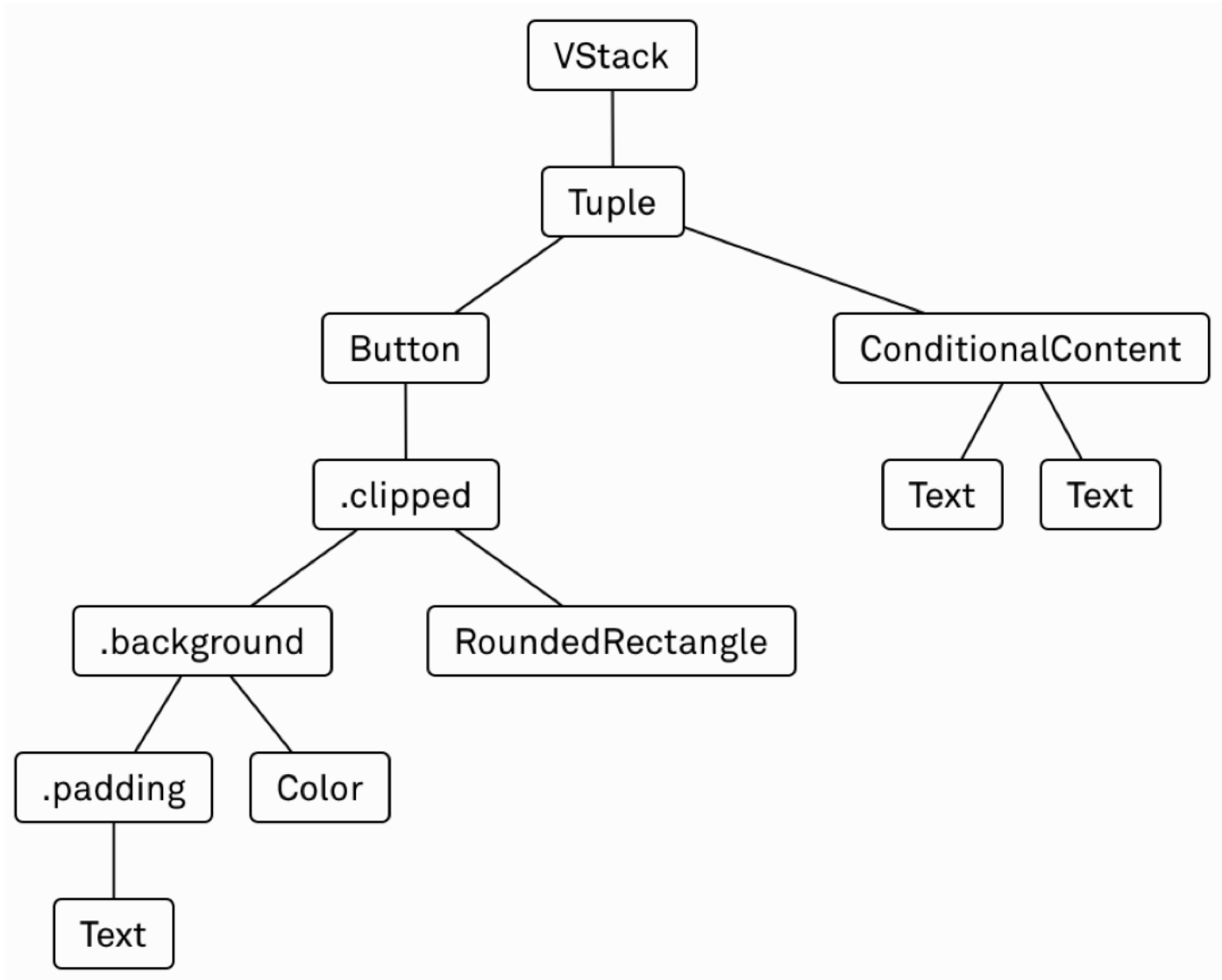
Views

Everything is `View`

Everything is `struct`

A tree representing the UI is created by successive assembly

Tree



some View

Opaque type

Resolves generics - no need to specify explicitly

Compiler does know about the exact type it's working with

Return type has to be the same for all possible passes




Xcode

Questions?

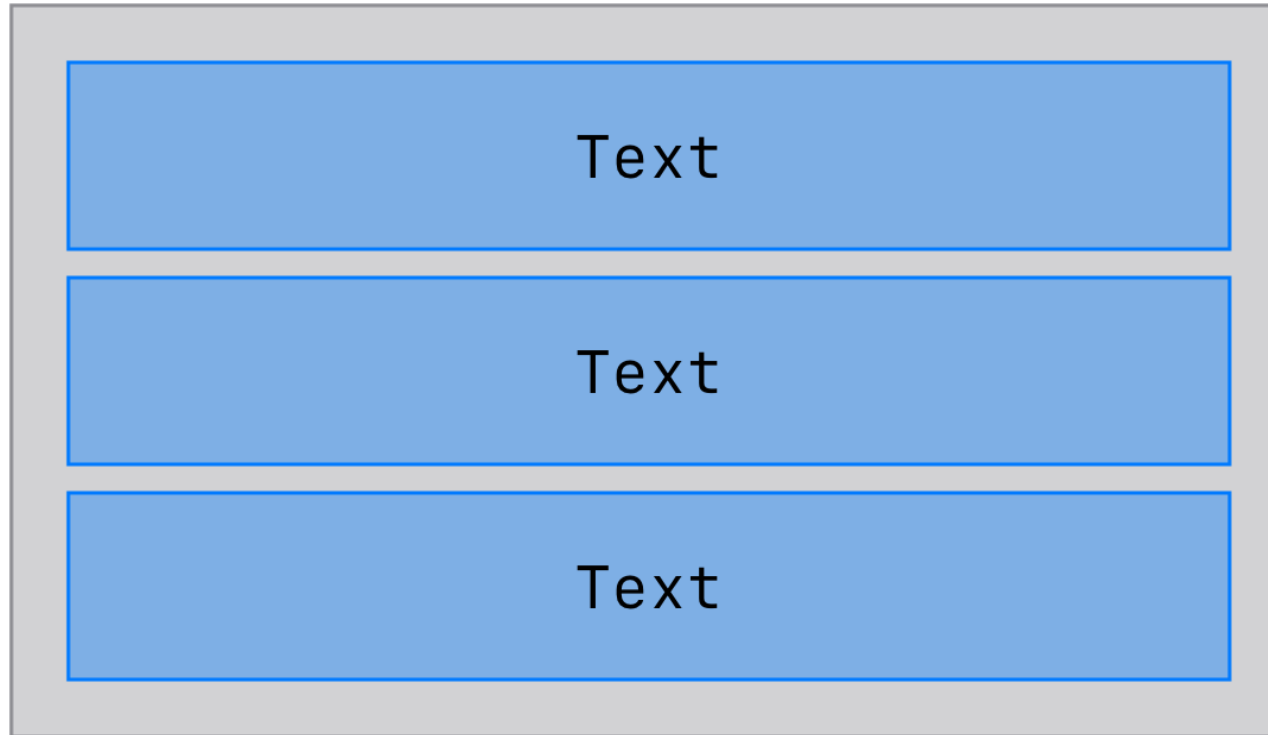
 SwiftUI

 Views

 some View

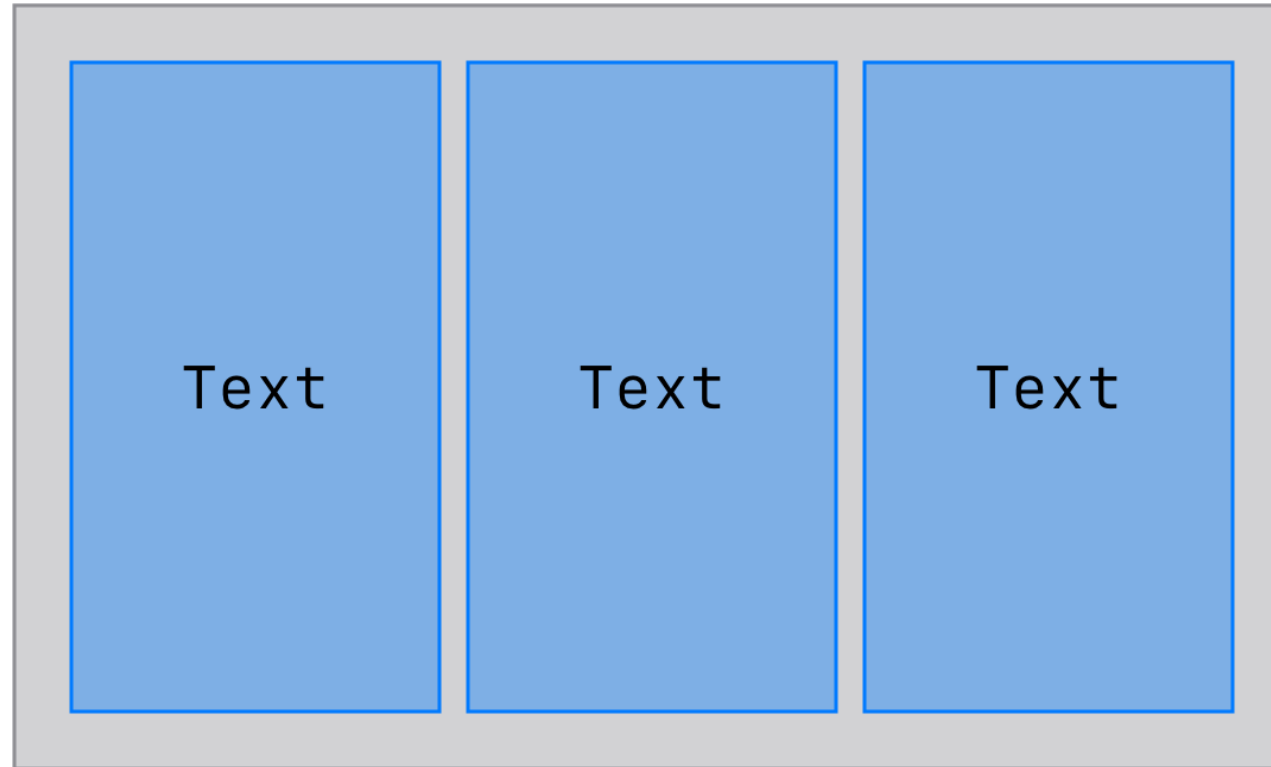
 Xcode

VStack



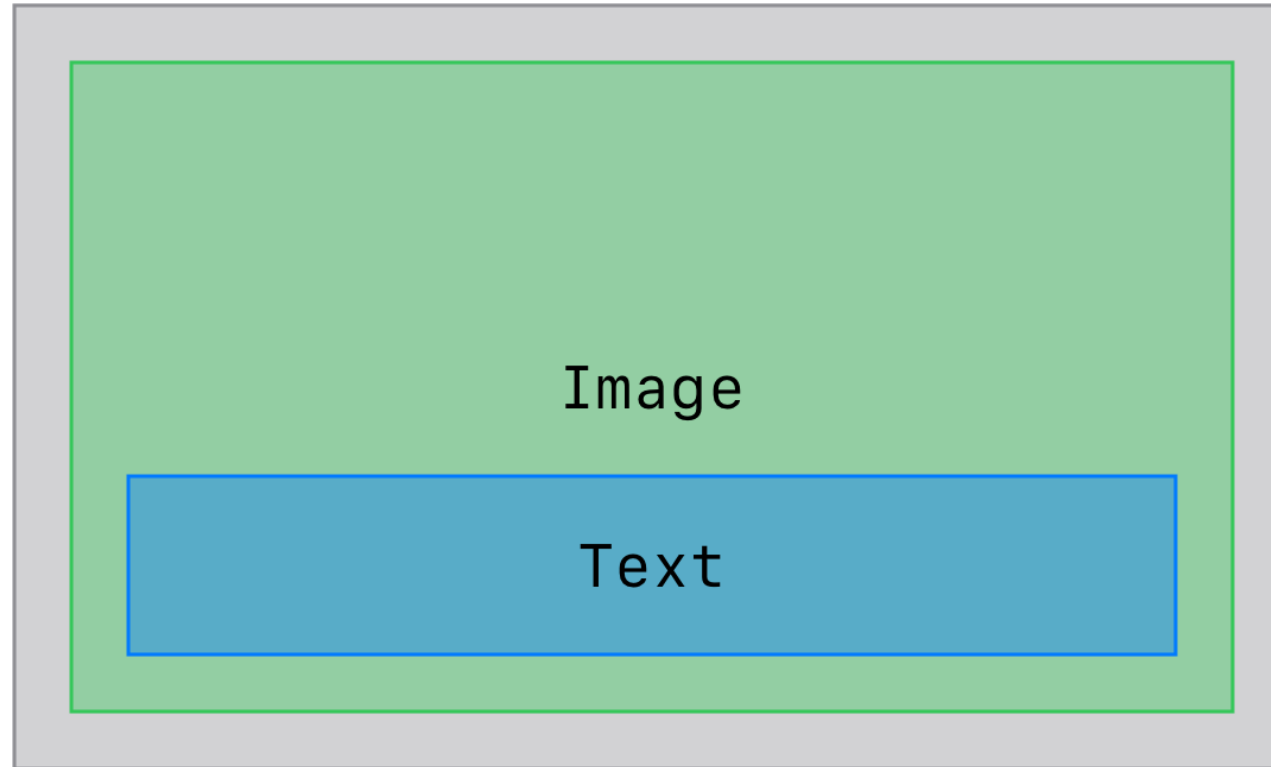
alignment a spacing can be customized

HStack



alignment a spacing can be customized

ZStack

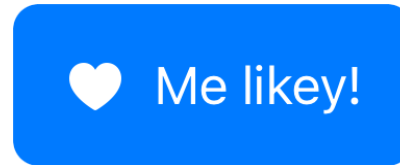


Only `alignment`, but has more options

Text

A simple representation of a text string in UI

Button



Consists of two parts:

- ❑ action – what should happen after tap
- ❑ label – how the button should look

Don't forget about the pressed/highlighted state!

It should be clear at first glance what user can interact with

Image

Representation of image in UI

Images are stored in Asset catalog

Apple system icons can be used

Other Basic Views

Color

Shapes (Rectangle , RoundedRectangle , Capsule , Ellipse , Circle)

Label

Group

Spacer

Divider

SFSymbols

Apple system icons

Simple and good-looking icons that match the native system style

Native app for browsing the icons

Questions?



VStack , HStack , ZStack



Text



Button



Image



SFSymbols

Sizing

Two phases

1. Top-down

`View` receives the maximum possible size to render from its parent

- ❑ If it's a leaf, the top-down does not continue
- ❑ If it's not a leaf, `View` gradually passes size for his descendants

Sizing

Two phases

2. Bottom-up

- ❑ Starts in a leaf, which is rendered to given size and then sends its size to parent
- ❑ Parent collects the sizes of its children, renders itself, and sends the size to its parent

View modifiers

Modifies given `View`, or all its nested descendants

Applying view modifier creates a new `View`

Are propagated top-down

Order matters !

Live coding! 🎉

jmeno.uzivatele



176 240 To se mi líbí

jmeno.uzivatele Super popisek mého příspěvku na FITstagram, který bude mít určitě hromady lajků.

Zobrazit všechny komentáře (2 356)

VStack

HStack

Text

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Button



Image



HStack

Button



Button



Button



Button



Text

176 240 To se mi líbí

Text

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Text

Zobrazit všechny komentáře (2 356)

Questions?



Thank you very much,
see you next week!