#### Swift & iOS Workshop März 2015

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### iOS Workshop

16. März: Swift

Playgrounds

+ Übungen 1 & 2

23. März: iOS & UIKit

Präsentation

+ Übung 3: Wetter-App (1)

30. März: iOS Teil 2

Präsentation

+ Übung 4: Wetter-App (2)

#### iOS & UIKit Outline

- •iOS
  - Overview
- App lifecycle
- View hierarchy
- View controller lifecycle
- MVC
- Interface Builder
- Exercise

# iOS – Layers

Apps

Cocoa Touch

Media Layer

Core Services

Core OS

Kernel

UΙ

Audio/Video 20,3D

Core Data, Core Location

System Dock, Security

#### iOS Frameworks

UIKit, MapKit, Standard System View Controllers (Contact, E-Mail, Calendar, ...), etc. Cocoa Touch CoreGraphics, CoreAnimation, Media Layer OpenGL, AVFoundation, etc. Core Services CoreData, CoreLocation, EventKit, Foundation, etc. Core OS CoreBluetooth, External Accessory, Security Framework Kernel

#### iOS Frameworks

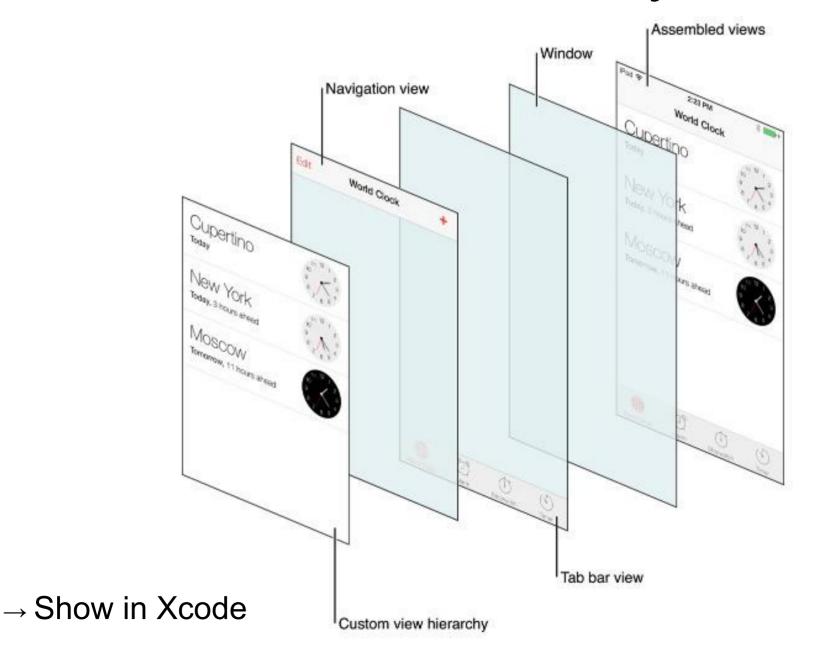
• Complete list of iOS frameworks

http://goo.gl/Ju4e6c

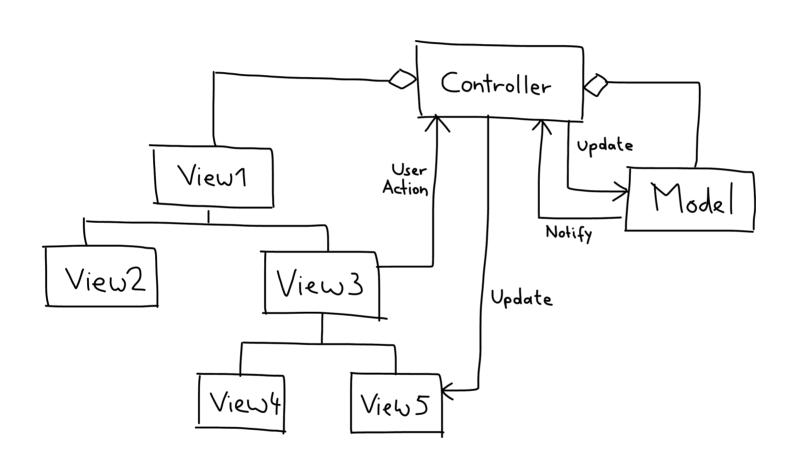
### App Lifecycle

- Each app has exactly one App Delegate
- App Delegate receives notifications
  - Launch terminated
  - App will terminate
  - App goes to background / comes to foreground
  - App receives a notification
  - 0 ...
  - → Show in Xcode

# View Hierarchy



### **MVC**



### View Controller Lifecycle

- Receives notifications for its main view
  - Loaded
    - viewDidLoad
  - Will appear, appeared
    - viewWillAppear, viewDidAppear
  - Will disappear, disappeared
    - viewWillDisappear, viewDidDisappear
  - Will be deallocated
    - dealloc
  - → Show in Xcode

# Interface Builder



- NextStep (1986)
- •Since Xcode 4: part of the IDE
- Screen & storyboards

### Interface Builder



- NextStep (1986)
- •Since Xcode 4: part of the IDE
- Screen & storyboards
- Link items in IB with code
  - Class
  - Outlet of a view
  - Callback method (user event)
  - → Show in Xcode

#### Break

**●**17:00 − 17:15

#### iOS & UIKit

- •Exercise 3
  - Build a weather app

#### References

- UIKit User Interface Catalog <a href="http://goo.gl/5Bkf6V">http://goo.gl/5Bkf6V</a>
- App iOS Programming Guide <a href="http://goo.gl/wzyMTQ">http://goo.gl/wzyMTQ</a>
- Stanford University iOS/Swift: <a href="http://cs193p.stanford.edu/">http://cs193p.stanford.edu/</a>