

MOBILE DEVELOPMENT

LESSON 02 DEEPER DIVE INTO XCODE'S INTERFACE BUILDER

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GETTING STARTED

WHAT DID WE LEARN IN LESSON 01?

- Course Expectations
- Nomenclature
 - iOS, Swift, Cocoa Touch, etc.
- Overview of Developer Tools
 - Xcode, iOS Simulator, Github, Slack
- Git and Github (on Web and for Mac)
- Hands on Demo with Storyboards in Xcode's Interface Builder tool

GETTING STARTED

LEARNING OBJECTIVES

GETTING STARTED

LEARNING OBJECTIVES

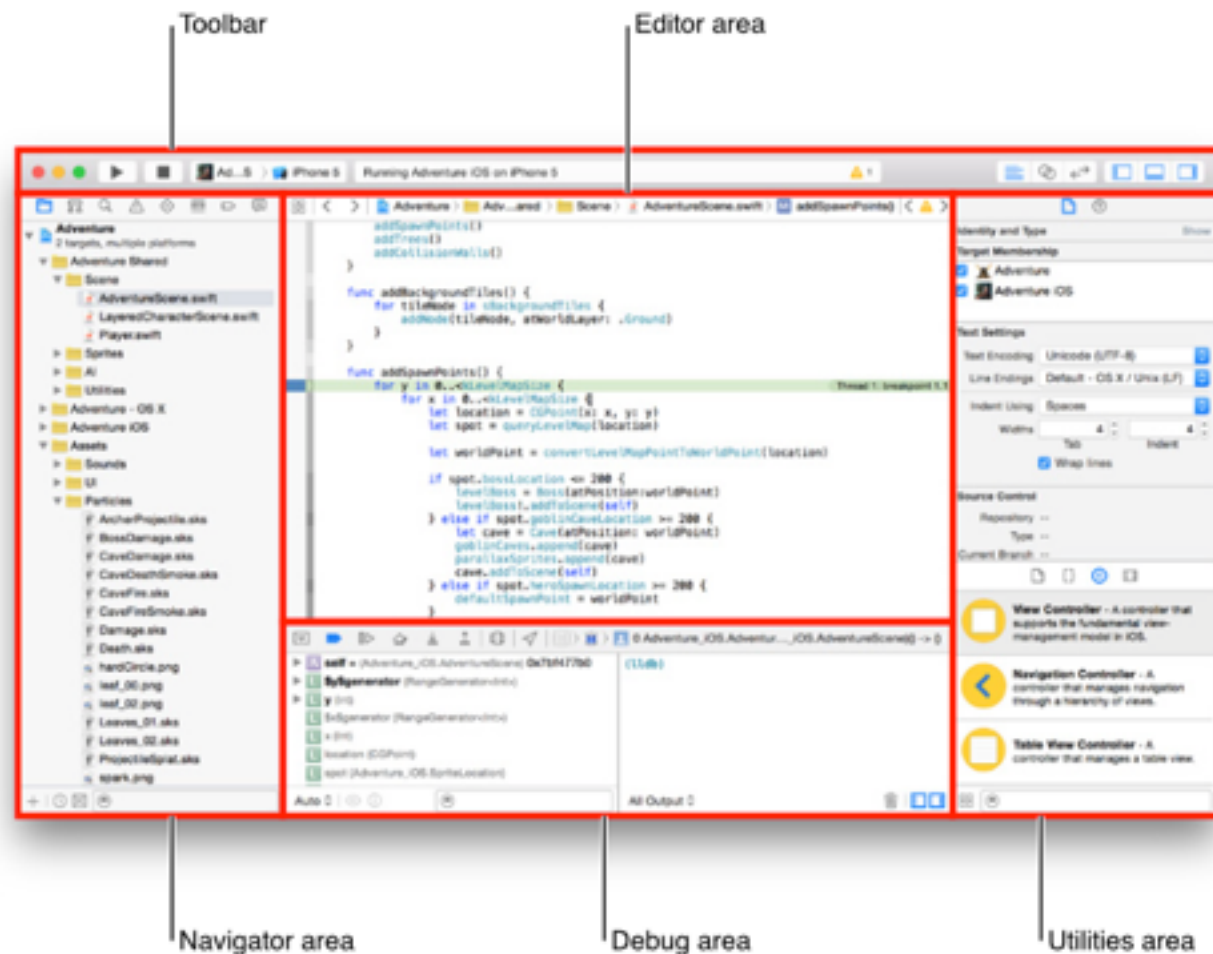
- Label everything in the Xcode window
- Storyboards vs. Xibs
 - Review of Storyboards
 - Review of Xibs (pronounced nibs)
- Learn about View Controllers (High-level)
 - Add multiple View Controllers to the storyboard
 - Link multiple View Controllers together with segues
- Learn about Navigation Controllers
 - Use Navigation Controller to link scenes

GETTING STARTED

LABEL XCODE WINDOW

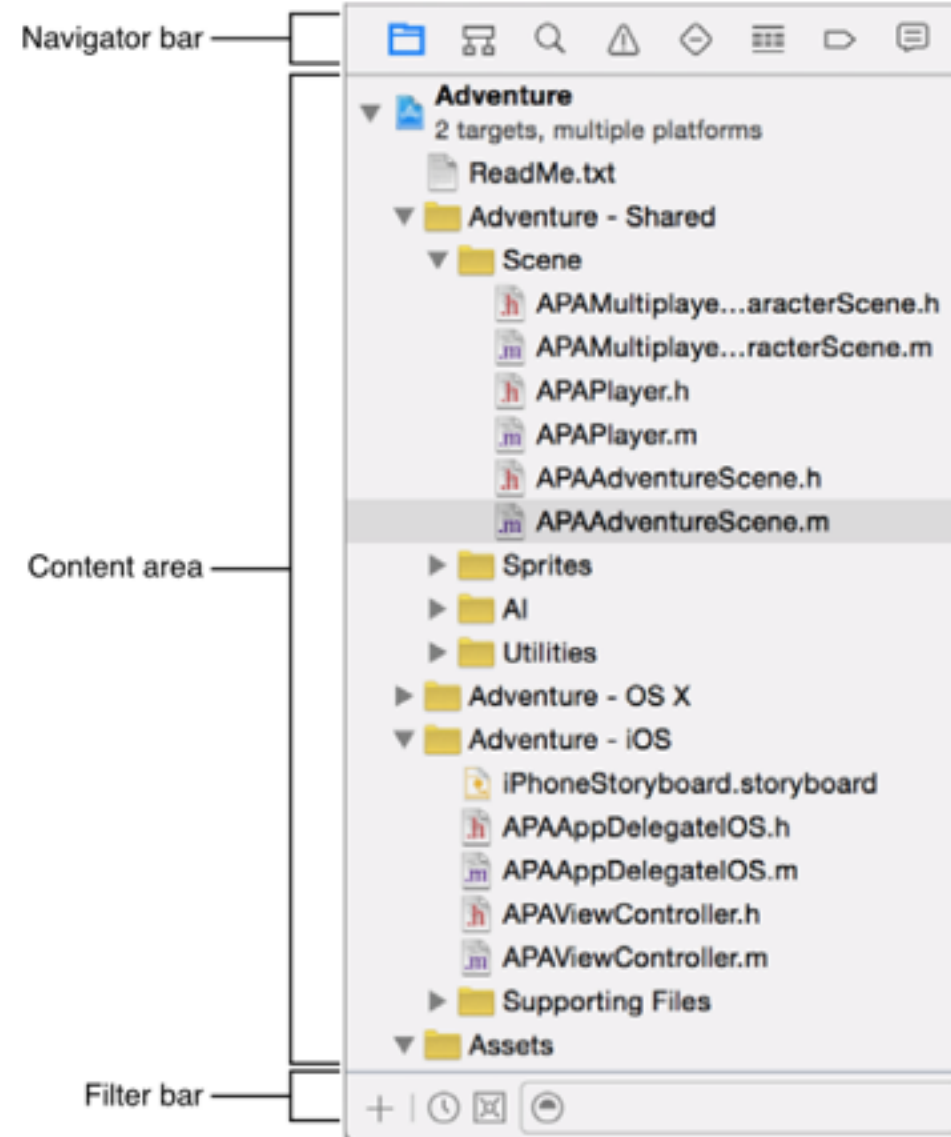
GETTING STARTED

NAVIGATING XCODE



GETTING STARTED

NAVIGATOR AREA



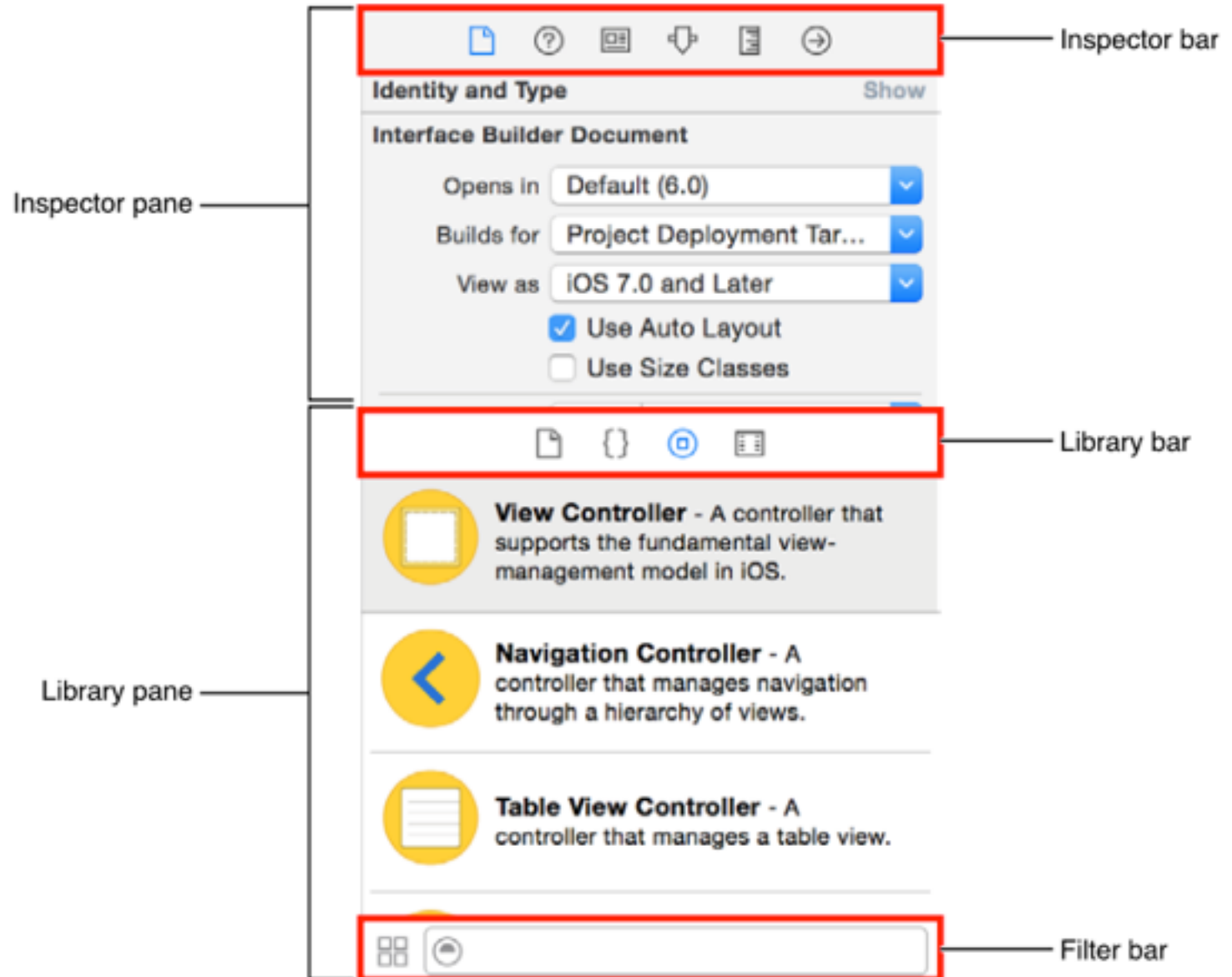
GETTING STARTED

JUMP BAR AND EDITOR PANES



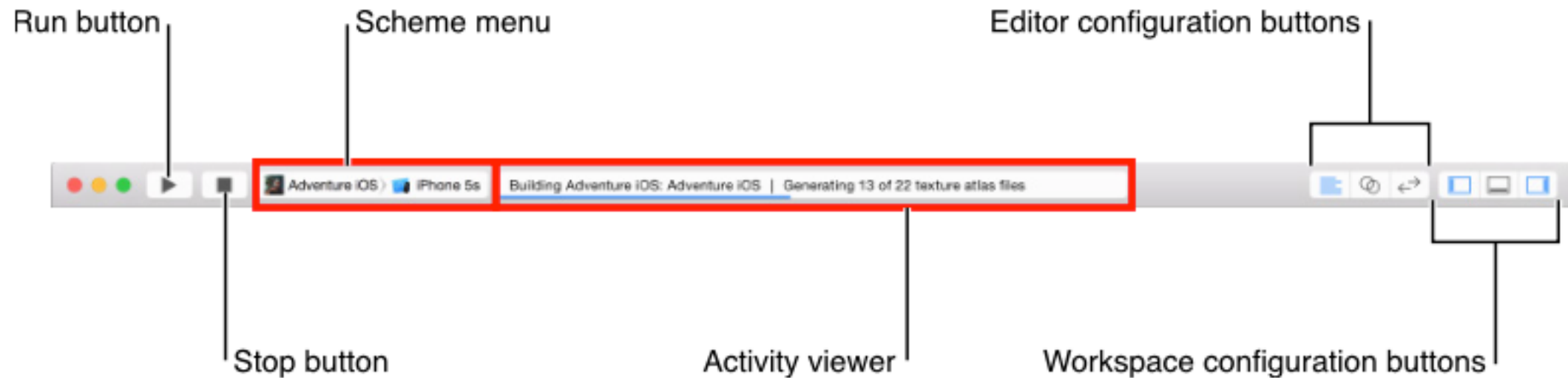
GETTING STARTED

UTILITIES AREA



GETTING STARTED

WORKSPACE TOOLBAR



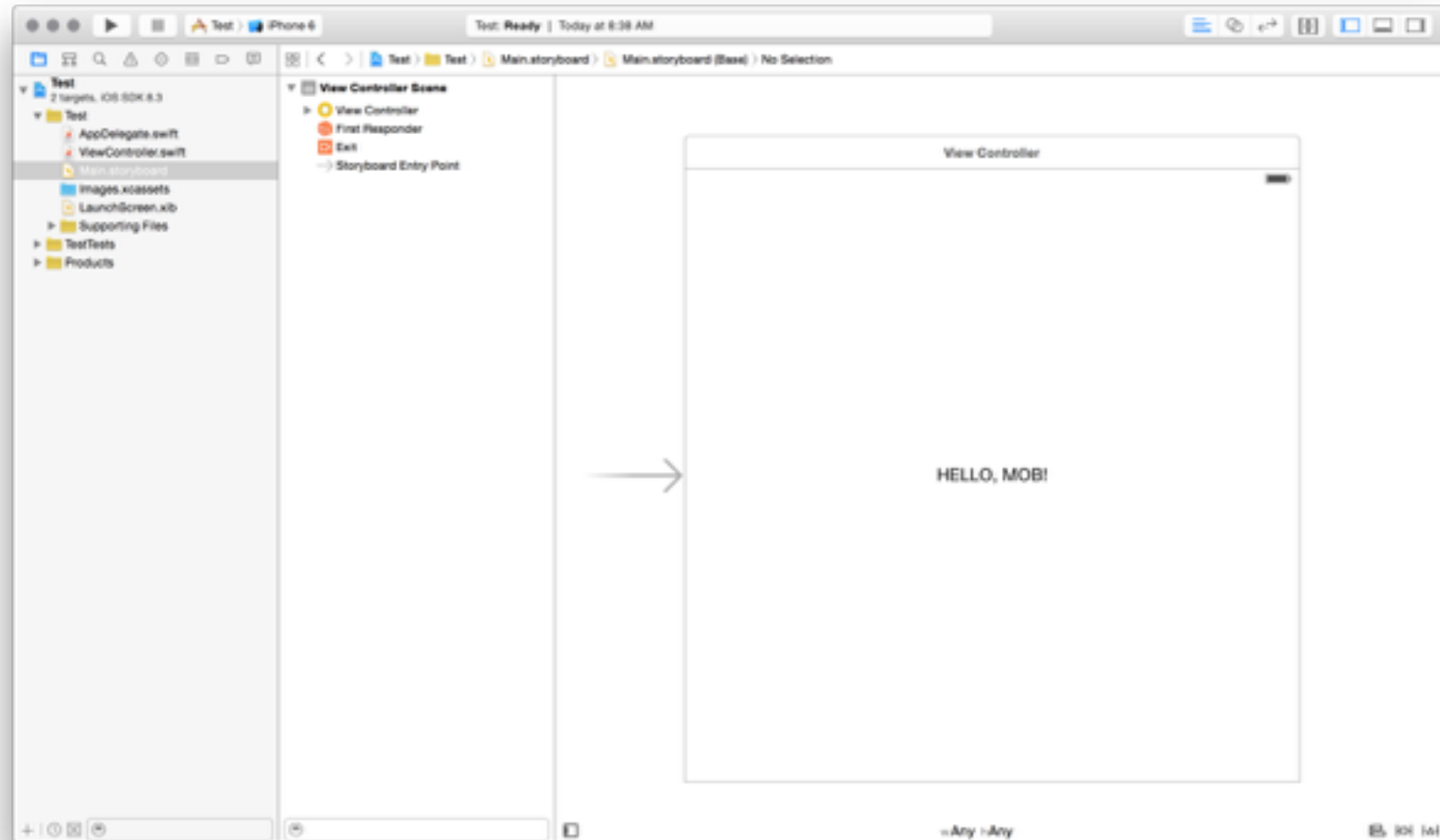
GETTING STARTED

VIEW CONTROLLERS

GETTING STARTED

VIEW CONTROLLERS (PT. 1)

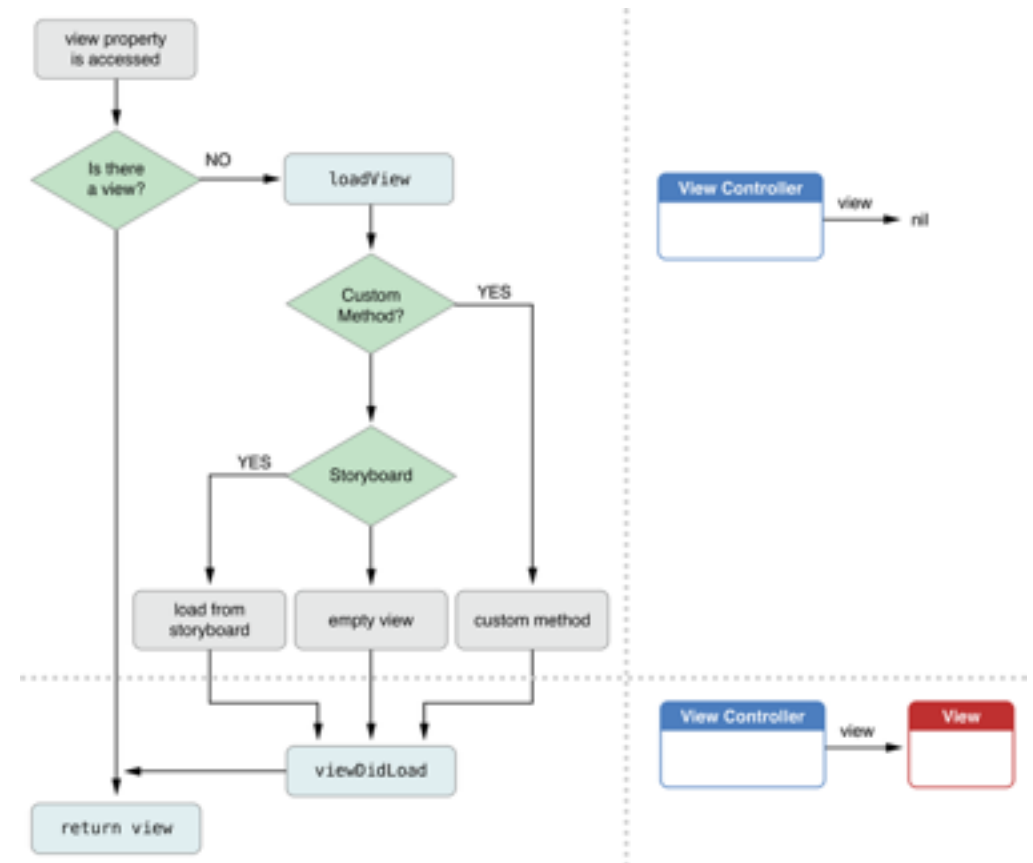
- Each *View Controller* represents one screen in our app
- *Each View Controller represents one scene in our Storyboard*



GETTING STARTED

VIEW CONTROLLERS (PT. 2)

- A view controller manages the lifecycle of its views
- Resource management in View Controllers:
<https://developer.apple.com/library/ios/featuredarticles/ViewControllerPGforiPhoneOS/ViewLoadingandUnloading/ViewLoadingandUnloading.html>



GETTING STARTED

VIEW CONTROLLERS (PT. 3)

- A view is a User Interface (UI) element (e.g., label, button, etc.)
 - A view has two intrinsic properties:
 - **Size**: Width and height
 - **Point**: The specific location (x & y coordinates) of where it's drawn on the screen
 - Combined, the **size** and **point** make the **frame** of the View Controller.
- Views can contain other views; ***subviews***
- View controllers can contain other view controllers; ***child view controllers***

GETTING STARTED

NAVIGATION CONTROLLERS

GETTING STARTED

NAVIGATION CONTROLLERS

- Navigation controllers are view controllers that manage a stack of view controllers
- One view (the top of the stack) is presented at a time
- By default, navigation controllers come with a customizable navigation bar



GETTING STARTED

STORYBOARDS VS XIBS

GETTING STARTED

STORYBOARDS

- A way to visually represent your entire app
- Each scene in a storyboard can be connected to another scene
- See how data flows between the screens in your app

GETTING STARTED

XIBS

- A way to visually represent one view controller
- A way to visually represent one view and its subviews
- Allows for reusability (DRY Principle)
- Historical note:
 - XML Interface Builder files (.xib) were introduced in Xcode 3 in 2007.
 - .xib files are turned into .nib files when your application is compiled
 - More info here:
 - <http://www.speirs.org/blog/2007/12/5/what-are-xib-files.html>
 - https://developer.apple.com/library/ios/documentation/General/Conceptual/

GETTING STARTED

STORYBOARDS VS XIBS

PROS (STORYBOARDS)

- Simplify the prototyping process
- Easy to see application flow

PROS (XIBS)

- Easier to version control than storyboards
- Reusability

CONS (STORYBOARDS)

- Lacks Reusability
- Hard to version control
and have multiple developers
work on a single storyboard

CONS (XIBS)

- Lack of a way to represent
graphical relationships between screens
- Takes longer to load into than storyboards

GETTING STARTED

WHEN TO USE STORYBOARDS

- Scoping out the application flow
- When creating one-time use view controllers

GETTING STARTED

WHEN TO USE NIBS

- Creating reusable view controllers
- Creating custom views
 - For example:
 - Pop up windows
 - Menus
 - Buttons
 - Settings screens

GETTING STARTED

IN-CLASS EXERCISE

GETTING STARTED



EXERCISE

KEY OBJECTIVE(S)

Create a view with your bio (including image).
Create multiple views inside of a Navigation Controller

TIMING

30 min 1. Work in pairs.

10 min 2. Debrief

DELIVERABLE

- Pair up and build an app with multiple scenes linking
- Add UI Elements and appropriately link them to other slides.

GETTING STARTED

HOMEWORK

GETTING STARTED

HOMework

- Homework 1 (Lessons 1-2)
 - Link: [HW 1 for Lessons 1-2](#)
 - Due: Sunday, June 14, 2015 at 6pm.
 - Read Chapter 2 in the Gitbook:
 - Link: [Chapter 2 in MOB Gitbook](#)
 - Read The Basics Chapter in Apple's Swift iBook
 - Link: [The Basics in the Official Swift Book](#)

GETTING STARTED

Q&A