

MOBILE DEVELOPMENT GIT & GITHUB

INTRO TO INTERFACE BUILDER AND STORYBOARDS

Tedi Konda

Executive Director, Technology

GETTING STARTED

LEARNING OBJECTIVES

- GitHub and git cont'd
- Outline developer workflow and tools on a high level
- Create the first iOS project outlining the development process of an app
- Label Xcode workspace window
- Add multiple View Controllers to storyboard and link them together with segues
- Use Navigation Controller to link scenes

GETTING STARTED

DEV WORKFLOW

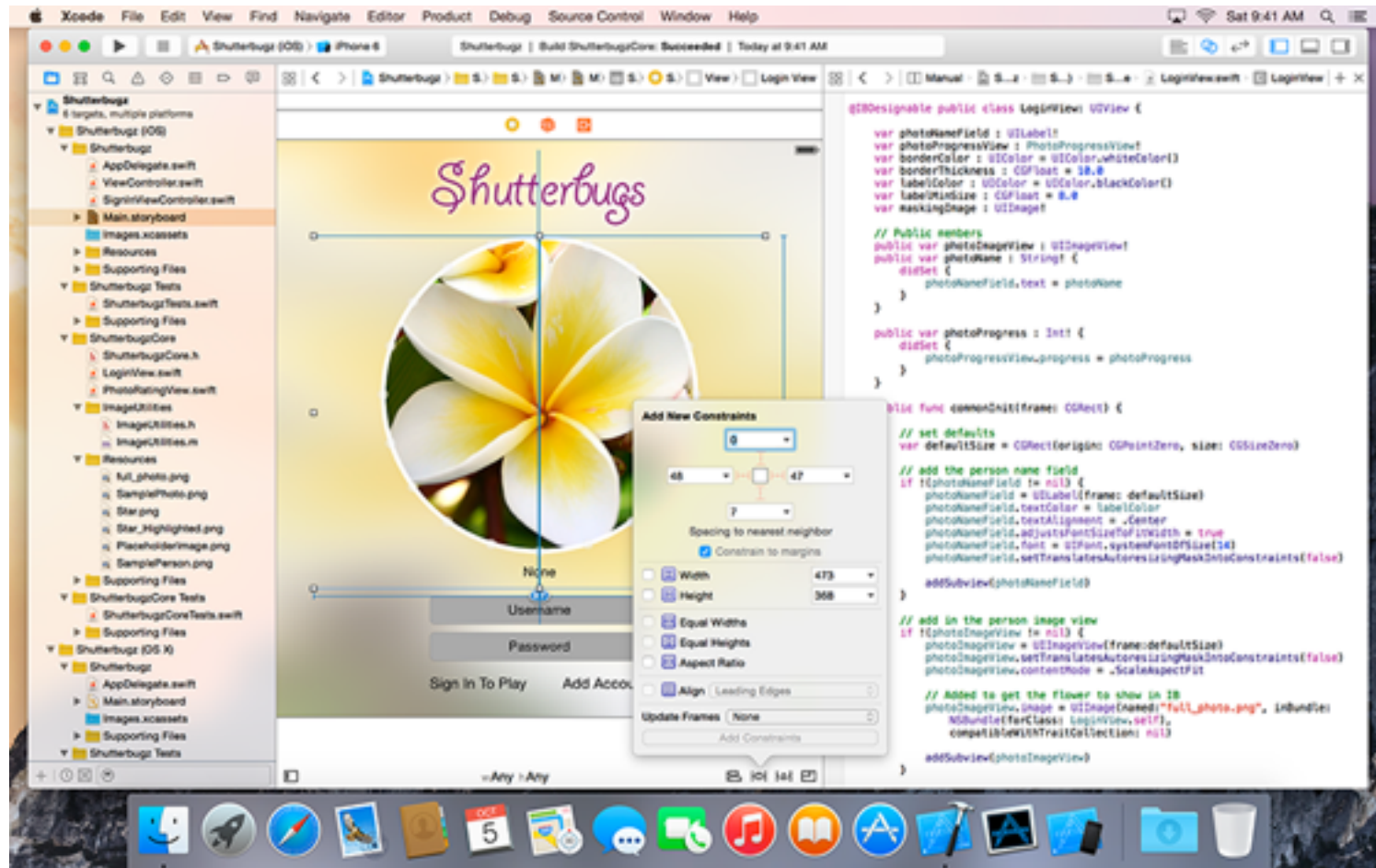
INTRODUCTION TO IOS DEVELOPMENT

WHAT IS COCOA TOUCH?



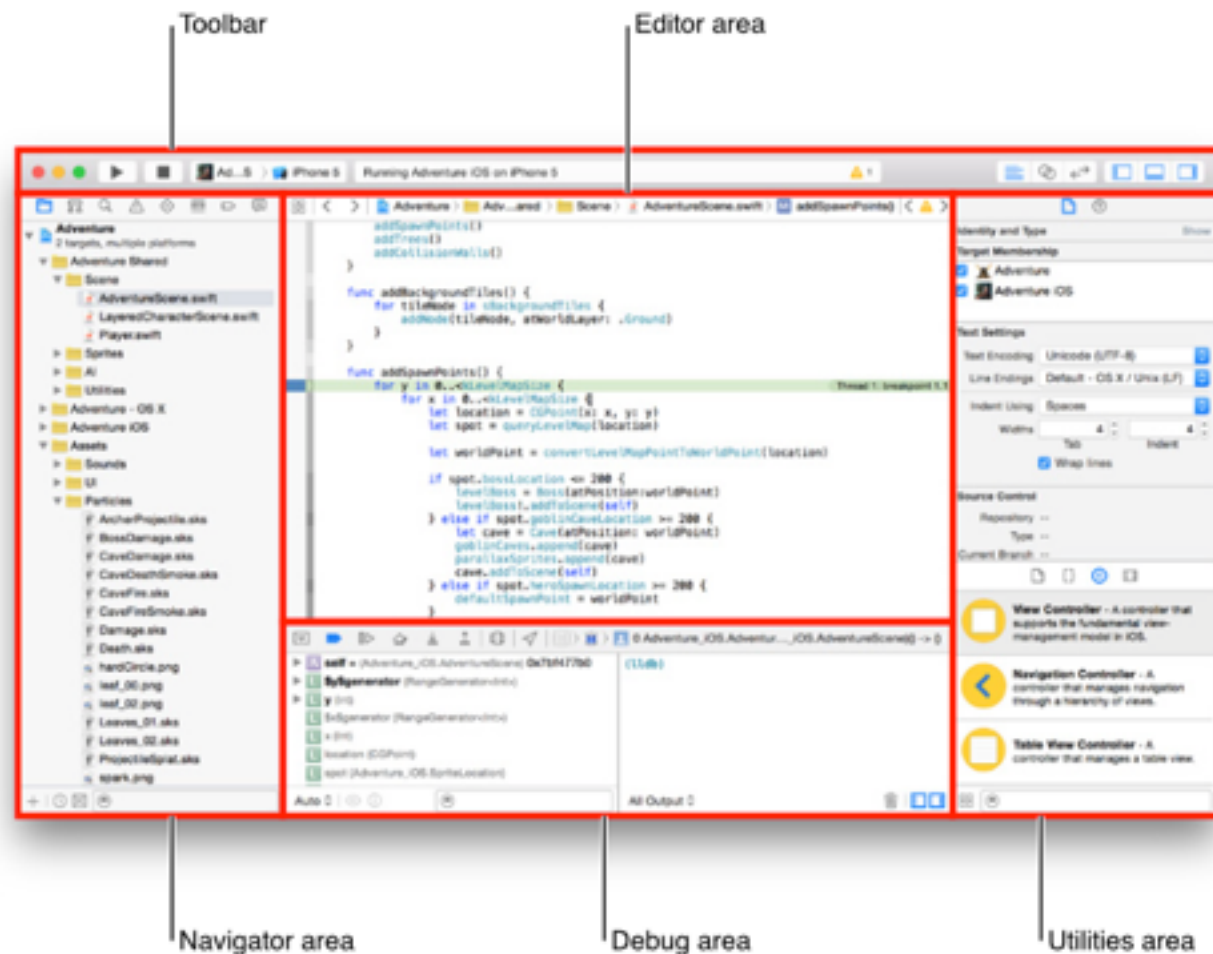
INTRODUCTION TO IOS DEVELOPMENT

WHAT IS XCODE?



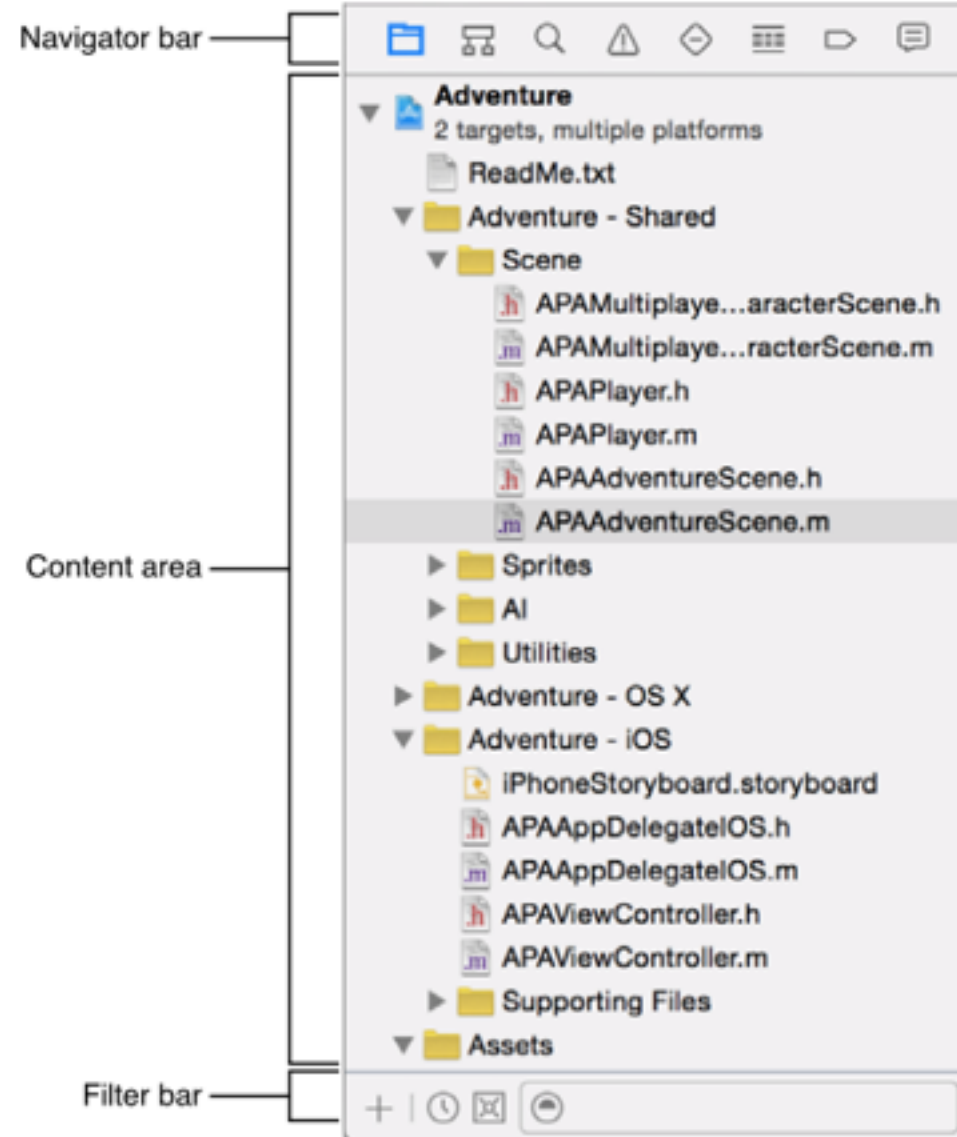
INTRODUCTION TO IOS DEVELOPMENT

NAVIGATING XCODE



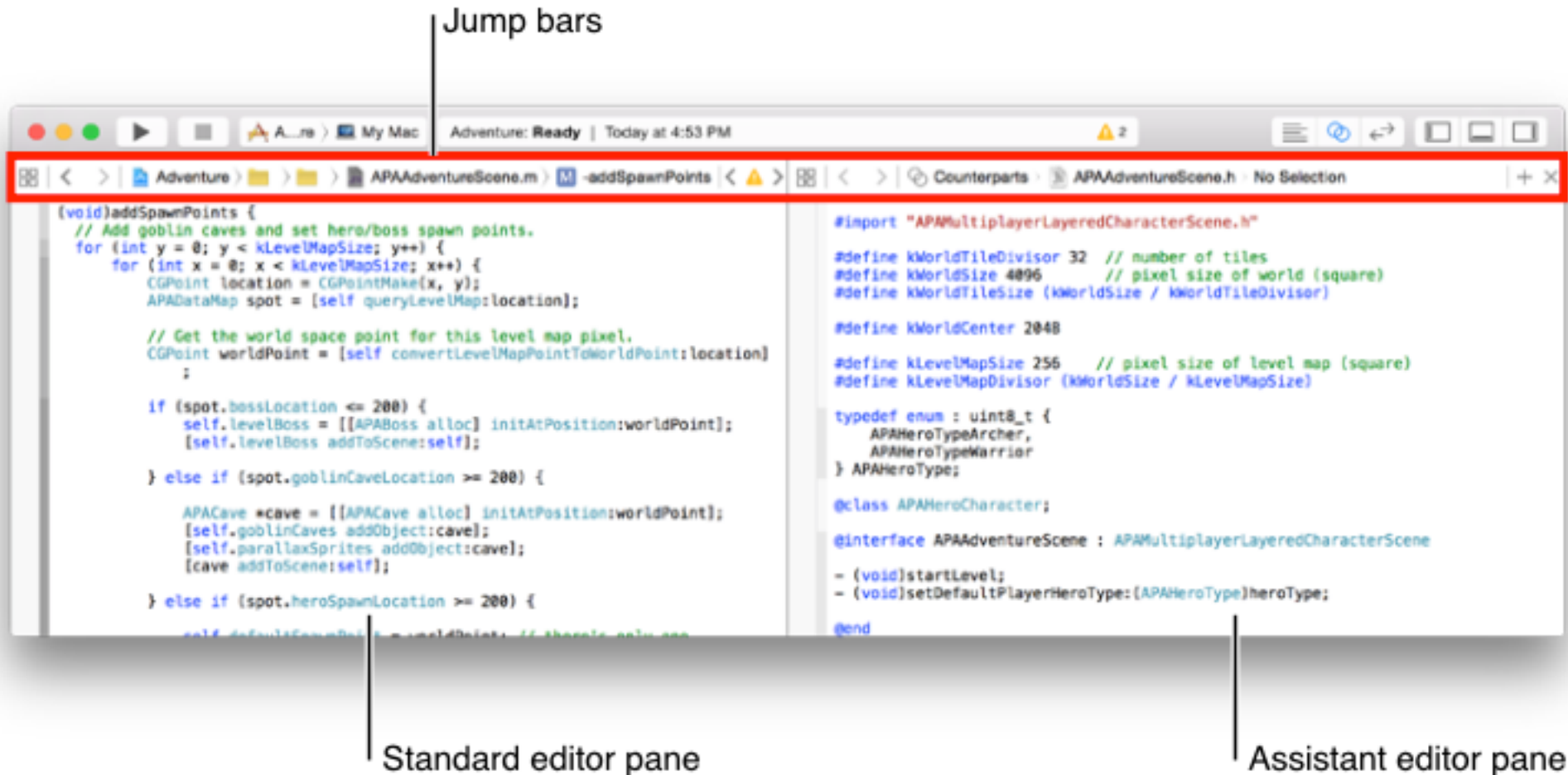
INTRODUCTION TO IOS DEVELOPMENT

NAVIGATOR AREA



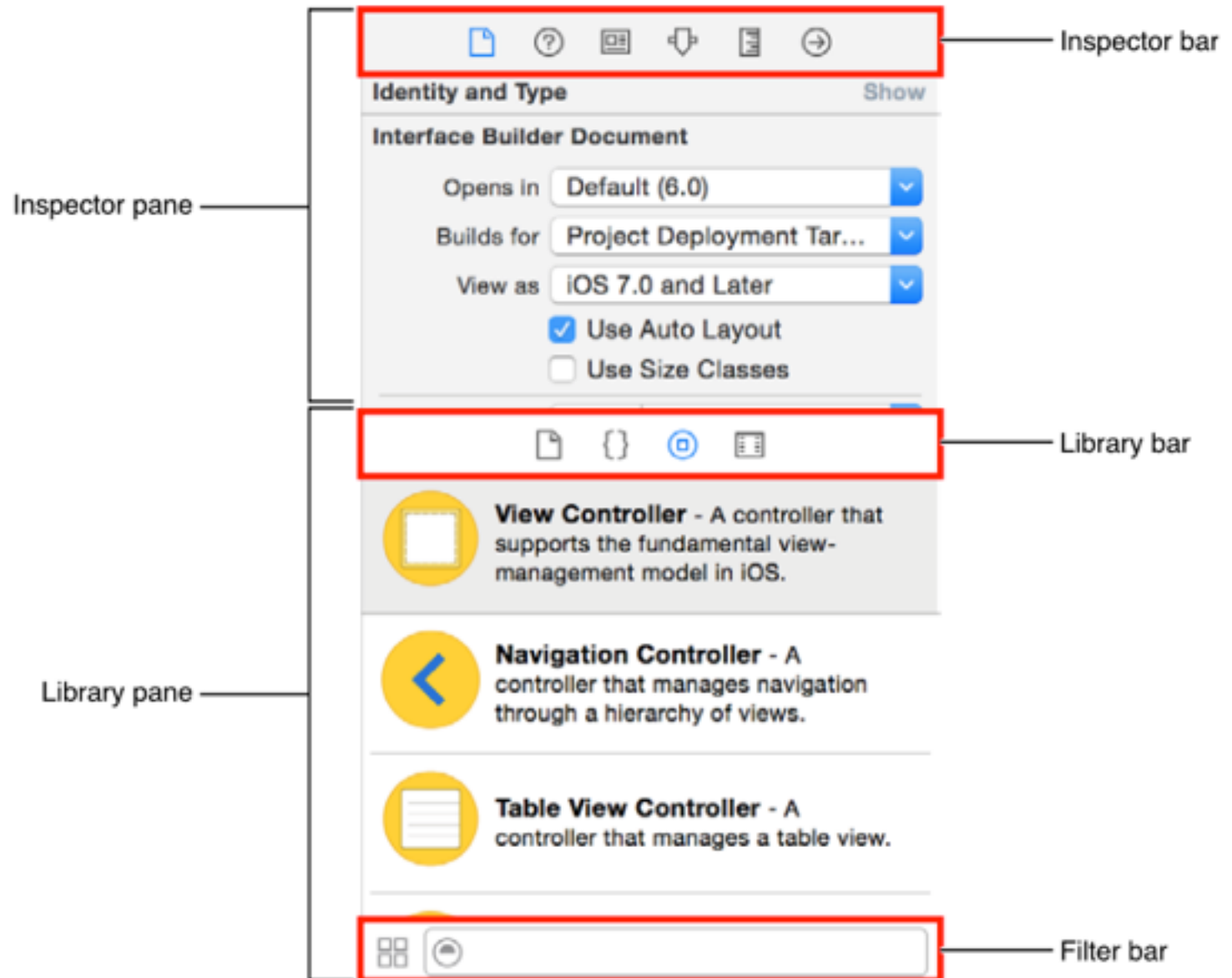
INTRODUCTION TO IOS DEVELOPMENT

JUMP BAR AND EDITOR PANES



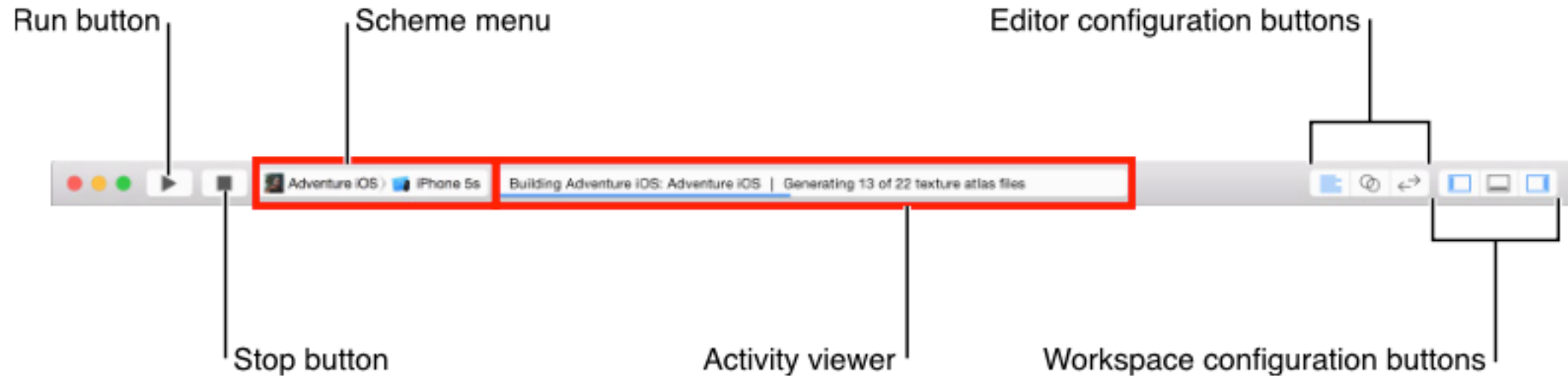
INTRODUCTION TO IOS DEVELOPMENT

UTILITIES AREA



INTRODUCTION TO IOS DEVELOPMENT

WORKSPACE TOOLBAR



GETTING STARTED

DEV WORKFLOW

- Run Xcode
- Create new project
- Add user interface elements to project
- Change user interface element properties
- Discuss the different project templates

GETTING STARTED

**TO THE
PLAYGROUNDS!**

ACTIVITY



KEY OBJECTIVE(S)

Learn the flow of building a new project. Add UI elements to a project and modify their properties.

TIMING

10 min 1. A volunteer who has travelled recently

5 min 2. Debrief

DELIVERABLE

A new project with a label displaying student bio and a button labeled “Goals”.

GETTING STARTED

RUNNING YOUR APP

GETTING STARTED

RUNNING YOUR APP

- Run app on simulator
- Outline the steps for deploying an app to device

GETTING STARTED

RUNNING APP ON SIMULATOR

- Select iOS version in toolbar area
- Select “Build and then Run” in toolbar area (⌘R)

Note

- iPad apps only run on iPad simulator
- iPhone and universal apps run on both iPad and iPhone simulators

GETTING STARTED

NAVIGATING SIMULATOR

- To run Simulator without running a project select
Xcode -> Open Developer Tool -> iOS Simulator
- To select the “Home” button on simulator press ⌘+⇧+H

GETTING STARTED

RUNNING APP ON DEVICE

- Deploying an app to a device or publishing to the App Store requires participating in the developer program (\$99/year)
- Get UDID number (<http://whatsmyudid.com/>)
- Add device to Xcode (Windows->Devices)
- Create development certificate and provisioning profile

GETTING STARTED

CLASS REVIEW

- How often do students submit assessments?
- What is a typed language? Is Swift typed?
- What is the difference between a compiled and scripted language?
Which one is Swift?
- How does layout sizing work?
- What are the requirements for deploying to device?

INTRO TO NIBS/STORYBOARD

LEARNING OBJECTIVES

- Define and implement nibs
- Differentiate between storyboards and nibs

GETTING STARTED

STORYBOARD MULTIPLE SCENES

INTRO TO NIBS/STORYBOARD

STORYBOARDS

- Link multiple scenes together
- Transition between scenes. These transitions are represented by segues

INTRO TO NIBS/STORYBOARD

XCODE DEMO: STORYBOARDS

ACTIVITY



EXERCISE

KEY OBJECTIVE(S)

Link multiple scenes together.

TIMING

15 min 1. A volunteer who has travelled recently

5 min 2. Debrief

DELIVERABLE

- Pair up and build an app with four scenes linking to each other in the form of book pages.
- Add UI Elements and appropriately link them to other slides.

INTRO TO NIBS/STORYBOARD

STORYBOARDS RECAP

PROS

- Performance
- Simplify the prototyping process

CONS

- Reusability
- Data flow between scenes

INTRO TO NIBS/STORYBOARD

WHEN TO USE STORYBOARDS

- Multi step flows
- Index and detail views
- A grouped set of views (ex: registration)

GETTING STARTED

INTRO TO NIBS

INTRO TO NIBS/STORYBOARD

INTRO TO NIBS

- Old file format was .nib, new file format is .xib, but the pronunciation persisted
- Like storyboards, NIBs let you create and manipulate user interfaces graphically
- Each NIB file corresponds to a single view

INTRO TO NIBS/STORYBOARD

XCODE DEMO: NIBS

INTRO TO NIBS/STORYBOARD

NIBS RECAP

PROS

- Backwards compatible
- Easier to version control than storyboards
- Reusability: views become more modular
- Nibs don't stay loaded in memory unless they're being used

CONS

- Lack of a way to represent graphical relationships between screens
- Takes longer to load than story boards

INTRO TO NIBS/STORYBOARD

WHEN TO USE NIBS

- Pop up windows
- Side menus
- Reusable templates
- Settings screens

GETTING STARTED

Q&A

- Compare nibs and storyboards again. Highlight benefits of each.
- Mention that the benefit of storyboards is the ability to gauge relationships between views and feasibility of implementation.
- Storyboard cons: more difficult to collaborate because it's one file, not modular like nibs, they can get messy if architecture is not accounted for correctly.
- Make the point that it's not one or the other, but both are useful tools. Mention that you can have multiple storyboards to organize your scenes, but we will cover that at a later time.
- Discuss examples from real life apps for nibs and storyboards.