

# WordCollage

## Lesson 1



### Description

Gain familiarity with Xcode and Interface Builder by establishing a basic workflow of making changes and running the app in the iOS Simulator.

### Learning Outcomes

- Operate Xcode and run an existing project in the iOS Simulator.
- Modify the visual scale of the iOS Simulator.
- Experiment with stopping apps in the iOS Simulator.
- Contrast mobile iOS apps with traditional desktop applications.
- Experiment with Interface Builder to change the visual appearance of an app interface.



### Vocabulary

iOS	operating system	Xcode
project	source code	IDE
Interface Builder	user interface	frameworks
compiler	iOS Simulator	Label

### Materials

- **Flashlight** Xcode project

## Opening

How do you build iOS apps?

## Agenda

- Open and run ( $\text{⌘R}$ ) the **Flashlight** project.
- Observe the size of the simulator on the screen. Use the menu item *Window > Scale* to adjust the size of the simulator screen.
- Discuss what happens when opening a project and running it in the iOS Simulator, using the vocabulary terms as a guide.
- Demonstrate keyboard shortcuts  $\text{⌘R}$ ,  $\text{⌘TAB}$  and  $\text{⌘.}$  to run the app; switch to the simulator and back; and to stop the app from Xcode.
- Present the Xcode interface anatomy.
- Open and run ( $\text{⌘R}$ ) the **WordCollage Lesson 1** project.
- Using the Project Navigator ( $\text{⌘1}$ ), explore **Main.storyboard**.
- Using the Show Document Outline control ( $\square$ ) in the lower left corner of the canvas, ensure that the document outline is visible.
- Double-click a Label in the collage to change its contents.
- Emphasize using the  $\text{⌘R}$  shortcut to run the app.
- Run the app ( $\text{⌘R}$ ), and witness the change in the iOS Simulator.
- Experiment with changing the content of the remaining labels to topics you care about.
- Run the app ( $\text{⌘R}$ ), and witness the changes in the Simulator.

## Closing

In what ways are mobile iOS apps different from applications that run on a desktop computer or game console?

## Modifications and Extensions

- Create a new Single View Application from scratch.
- Explore the concepts of Auto Layout, Size Classes and Constraints. Reposition the labels, and use the *Editor > Resolve Auto Layout Issues* menu items to quickly resolve the differences between visual components and their constraints.

## Resources

iOS Developer Program <https://developer.apple.com/programs/ios/>

Start Developing iOS Apps Today <https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/>

iOS Technology Overview <https://developer.apple.com/library/ios/documentation/Miscellaneous/Conceptual/iPhoneOSTechOverview/>

iOS App Programming Guide: About iOS App Programming <https://developer.apple.com/library/ios/documentation/iPhone/Conceptual/iPhoneOSProgrammingGuide/Introduction/Introduction.html>

Xcode Overview [https://developer.apple.com/library/ios/documentation/ToolsLanguages/Conceptual/Xcode\\_Overview/index.html](https://developer.apple.com/library/ios/documentation/ToolsLanguages/Conceptual/Xcode_Overview/index.html)

Xcode Basics Help [https://developer.apple.com/library/ios/recipes/xcode\\_help-general/\\_index.html](https://developer.apple.com/library/ios/recipes/xcode_help-general/_index.html)

Auto Layout Guide <https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/AutolayoutPG/Introduction/Introduction.html>

Adaptive User Interfaces <https://developer.apple.com/design/adaptivity/>