

# RSSReader

## Lesson 3

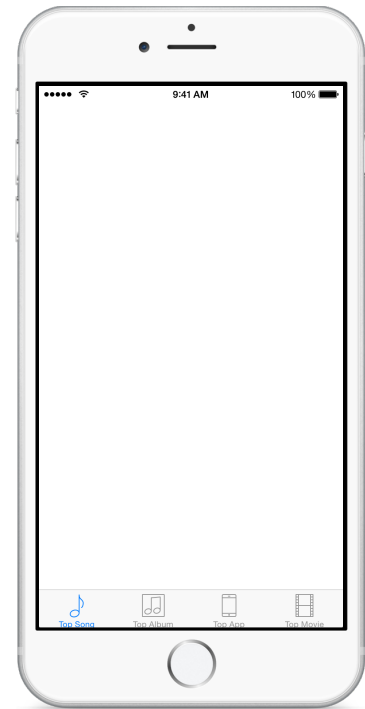


### Description

Customize four view controllers associated with the tab bar controller.

### Learning Outcomes

- Practice adding view controllers to a storyboard.
- Discover how to customize the tab bar buttons managed by a tab bar controller.
- Discover how to connect relationship segues between a tab bar controller and other view controllers.



### Vocabulary

tab bar controller	view controller	storyboard
asset catalog	image set	tab bar button item
relationship segue		

### Materials

- **RSSReader Lesson 3** Xcode project
- **Tab Bar Controllers** presentation



## Opening

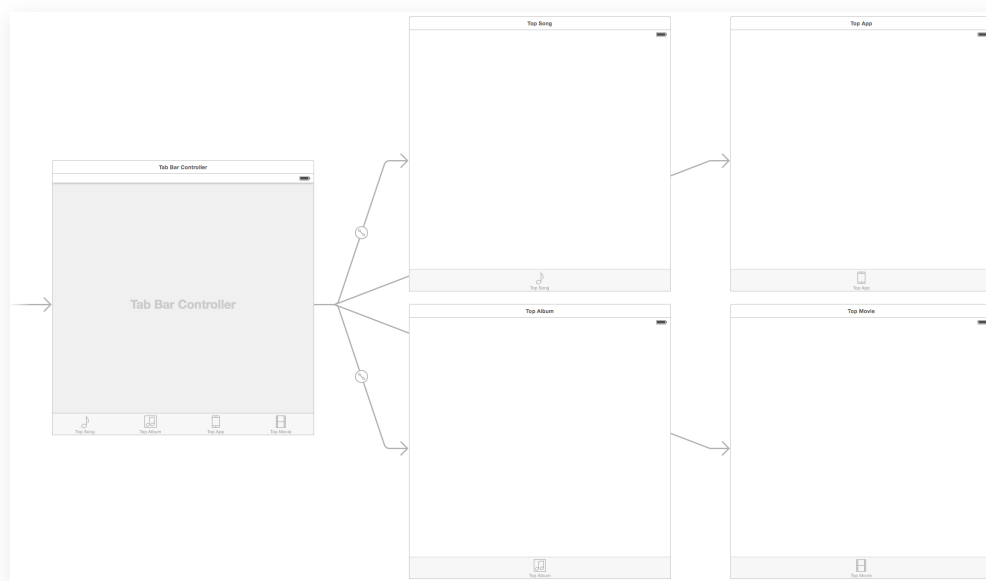
What does a tab bar controller give us, and how might we customize it for our app?


## Agenda

- Observe the main storyboard, which displays the default tab bar controller scene and two default view controller scenes.
- Discuss how the default tab bar controller consists of two tabs, with relationships bound to the two view controllers.
- Present the concept of tab bar controllers.
- Using the Project Navigator (⌘1), explore the **Images.xcassets** asset catalog and observe the image sets, where icons have been provided for the project.
- Using Interface Builder, select the Item 1 tab bar button at the bottom of the Item 1 view controller, open the Attributes Inspector (⌘4), and change the Title attribute to **Top Song**, the Image attribute to **Top Song Icon**, and observe how the canvas reflects the change.
- Select the Item 2 tab bar button at the bottom of the Item 2 view controller, open the Attributes Inspector (⌘4), change the Title attribute to **Top Album**, change the Image attribute to **Top Album Icon**, and observe how the canvas reflects the change.
- Zoom out of the storyboard, and, using the Object Library (⌘L), drag a new View Controller onto the storyboard. Use the Document Outline (⌘O) to rename it to **Top App**.



- Using the Document Outline () , Control-drag a connection from the Tab Bar Controller to the Top App controller, select the Relationship Segue called **view controllers**, and observe how the connection and new tab appear within the canvas.
- Explain how a tab bar controller manages an array of view controllers using a relationship segue.
- Zoom in to the storyboard, select the Item bar button item in the Top App controller, use the Attributes Inspector () to change the Title attribute to **Top App**, change the Image attribute to **Top App Icon**, and observe how the canvas reflects the change.
- Repeat the same procedure to add a fourth view controller to the storyboard, using **Top Movie** and **Top Movie Icon** for the tab bar button attributes.



- Run the app () and interact with the four tabs.

## Closing

How might you add your own tab bar button icons to the app? What do the Apple Human Interface Guidelines suggest?

## Modifications and Extensions

- Instead of using Interface Builder, implement the app delegate method `application:didFinishLaunchingWithOptions:` to build the four-tab interface.

Compare the benefits and drawbacks of both approaches to building the app interface.

## Resources

View Controller Programming Guide for iOS <https://developer.apple.com/library/ios/featuredarticles/ViewControllerPGforiPhoneOS/index.html>

Cocoa Application Competencies for iOS: Storyboard <https://developer.apple.com/library/ios/documentation/General/Conceptual/Devpedia-CocoaApp/Storyboard.html>

View Controller Catalog for iOS: Tab Bar Controllers <https://developer.apple.com/library/ios/documentation/WindowsViews/Conceptual/ViewControllerCatalog/Chapters/TabBarController.html>

About Asset Catalogs [https://developer.apple.com/library/ios/recipes/xcode\\_help-image\\_catalog-1.0/Recipe.html](https://developer.apple.com/library/ios/recipes/xcode_help-image_catalog-1.0/Recipe.html)

iOS Human Interface Guidelines: Tab Bar [https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/Bars.html#//apple\\_ref/doc/uid/TP40006556-CH12-SW52](https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/Bars.html#//apple_ref/doc/uid/TP40006556-CH12-SW52)

Xcode Overview: Build a User Interface [https://developer.apple.com/library/ios/documentation/ToolsLanguages/Conceptual/Xcode\\_Overview/edit\\_user\\_interface.html](https://developer.apple.com/library/ios/documentation/ToolsLanguages/Conceptual/Xcode_Overview/edit_user_interface.html)

Storyboard Help: Adding a Scene to a Storyboard [https://developer.apple.com/library/ios/recipes/xcode\\_help-IB\\_storyboard/chapters/StoryboardScene.html](https://developer.apple.com/library/ios/recipes/xcode_help-IB_storyboard/chapters/StoryboardScene.html)

View Controller Programming Guide for iOS: Using Segues <https://developer.apple.com/library/ios/featuredarticles/ViewControllerPGforiPhoneOS/UsingSegues.html>

Storyboard Help: Adding a Segue Between Scenes in a Storyboard [https://developer.apple.com/library/ios/recipes/xcode\\_help-IB\\_storyboard/chapters/StoryboardSegue.html](https://developer.apple.com/library/ios/recipes/xcode_help-IB_storyboard/chapters/StoryboardSegue.html)