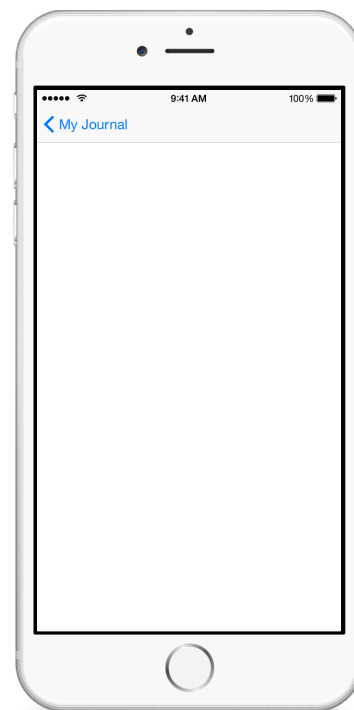# Journal
Lesson 7

Description

Add a navigation controller to manage the relationship between a the table view controller and another view controller.

Learning Outcomes

• Discover how navigation controllers and table view controllers work together to manage common user interaction.
• Practice arranging multiple view controllers within a storyboard.
• Discover how segues represent transitions between individual view controllers.

Vocabulary

UITableViewDelegate	navigation controller	initial view controller
root view controller	segue	

Materials

• **Journal Lesson 7** Xcode project
• **Navigation Controllers** presentation

Opening

How might we add the ability to view a journal entry's contents when we tap on a cell in the table view?

Agenda

- Discuss the common iOS interface idiom of being able to tap on a table cell to view the details of the cell.

- Run the app (⌘R), tap on a table cell, and observe how the cell becomes highlighted but nothing happens.

- Using the Documentation and API Reference (⇧⌘0), explore the `UITableViewDelegate` protocol reference, drawing attention to the `tableView:didSelectRowAtIndexPath:` method.

- Discuss the `JournalTableViewController` implementation of `tableView:didSelectRowAtIndexPath:`.

- Discuss how one could add a new view controller to the project, establish a segue relationship to display `JournalEntry contents`, and implement the code to move back and forth between the view controllers.

- Explain how a common Interface Builder idiom is to embed a table view controller within a navigation controller that manages moving back and forth between table views and detail views.

- Present the concept of navigation controllers.

- Using Interface Builder, zoom out of the storyboard, and use the Object Library (⌥⌘L) to drag a Navigation Controller into the storyboard.

- Observe how Interface Builder includes a table view controller with the navigation controller by default.

- Delete the default table view controller associated with the navigation controller.

- Drag the arrow associated with the journal table view controller to the navigation controller, establishing the navigation controller as the storyboard entry point.

- Control-drag a connection from the Navigation Controller to the Journal Table View Controller, select the **root view controller** Relationship Segue, and observe how Interface Builder adds a navigation bar to the top of the Journal Table View Controller.

- Change the title of the Journal View Controller scene Navigation item to **My Journal**.

- Run the app (⌘R), and observe the navigation bar appear at the top of the table view.

- Discuss how the app might display the contents of a `JournalEntry` object when a cell in the table view is tapped.

- Using Interface Builder and the Object Library (⌥⌘L), drag a new View Controller to the storyboard, placing it to the right of the table view controller.

- Use the Document Outline (▭) to rename the new View Controller to **Journal Entry View Controller**.

- Control-drag a connection from the prototype cell in the Journal Table View Controller scene to the Journal Entry View Controller, and select the **show** Selection Segue.
- Run the app (⌘R), tap on a table cell, and observe the journal entry view controller scene appear. Tap the back button, and observe the table view reappear.

Closing

Although the navigation controller is managing the segue between table cells and the new view controller, some controller methods are called when you tap on a table cell. What are the methods?

Modifications and Extensions

- Remove the segue relationship between the prototype cell and the new view controller, and implement the `tableView:didSelectRowAtIndexPath:` method, such that the new view controller is displayed.

Resources

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

Xcode Overview: Build a User Interface https://developer.apple.com/library/ios/documentation/ToolsLanguages/Conceptual/Xcode_Overview/edit_user_interface.html

Table View Programming Guide for iOS https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/TableView_iPhone/AboutTableViewsiPhone/AboutTableViewsiPhone.html

View Controller Catalog for iOS: Navigation Controllers https://developer.apple.com/library/ios/documentation/WindowsViews/Conceptual/ViewControllerCatalog/Chapters/NavigationControllers.html

UITableViewController Class Reference https://developer.apple.com/library/ios/documentation/UIKit/Reference/UITableViewController_Class/index.html

UITableViewDelegate Protocol Reference https://developer.apple.com/library/ios/documentation/UIKit/Reference/UITableViewDelegate_Protocol/