

# Journal

## Lesson 7

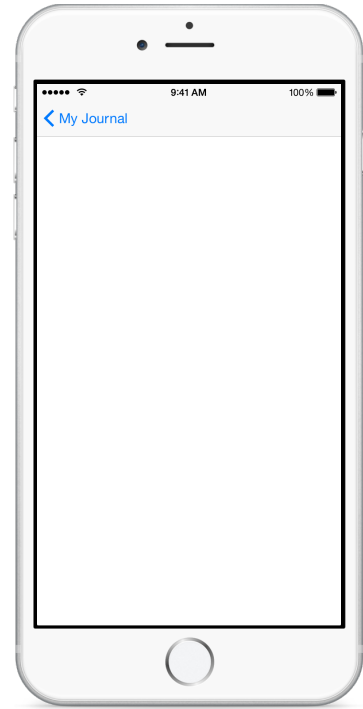


### Description

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 (⇧⌘O) 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](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](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](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/](https://developer.apple.com/library/ios/documentation/UIKit/Reference/UITableViewDelegate_Protocol/)