

# Journal

## Lesson 9



### Description

Add a button to the navigation bar that triggers a segue to a new view controller for composing a journal entry.

### Learning Outcomes

- Practice adding a view controller to the storyboard, and adding interface components to views.
- Describe how an interactive interface element, such as a button, can be connected to another view controller with a segue.
- Describe the visual differences between a push and modal segue.
- Discover how to assign segue identifiers, and how to use segue identifiers to distinguish one segue from another.



### Vocabulary

text view	bar button item	segue
segue identifier	UIViewController	UIStoryboardSegue

### Materials

- **Journal Lesson 9** Xcode project

### Opening

How can we let the user add new journal entries?

## Agenda

- Discuss how an additional view controller can manage an interface for creating new journal entries.
- Using Interface Builder, zoom out of the storyboard, use the Object Library (⌘L), to drag a new view controller onto the storyboard, and use the Document Outline (⌘O) to rename the new view controller to **New Journal Entry View Controller**.
- Zoom into the New Journal Entry View Controller and, using the Object Library (⌘L), drag a text view onto the new view, adjust its size such that it only occupies the top half of the view, and delete the placeholder text.
- Use Control-dragging to add constraints for the top, leading, trailing and bottom edges of the text view.
- Using the Object Library (⌘L), add a new Bar Button Item to the right side of the navigation bar at the top of the Journal Table View Controller, and use the Attributes Inspector (⌘4) to set the Identifier to Compose.
- Discuss the intent of having Interface Builder manage the behavior of the compose button, such that when the user taps it, the New Journal Entry View Controller scene is displayed.
- Using the Document Outline (⌘O), Control-drag a connection from the Compose button to the New Journal Entry View Controller, and select the **present modally** Action Segue.
- Run the app (⌘R), tap the compose button, and observe the New Journal Entry View Controller scene appear.
- Discuss how the Journal Table View Controller now has two segues: one that transitions to the Journal Entry View Controller Scene, and one that transitions to the New Journal Entry View Controller scene.
- Add a custom breakpoint to the first line of the body of the `JournalTableViewController prepareForSegue:sender:` method with an action that prints the log message **Preparing for Segue** and that automatically continues.
- Run the app (⌘R), tap a table row, observe the log message appear in the console, and tap the back button. Tap the compose button, and observe the log message appear in the console.
- Discuss how the `JournalTableViewController prepareForSegue:sender:` method is called for both segues, and how the current implementation of `prepareForSegue:sender:` assumes that the segue is between the `JournalTableViewController` and a `JournalEntryViewController`.
- Using the Documentation and API Reference (⇧⌘0), explore the `UIStoryboardSegue` class reference, drawing attention to the `identifier` property.
- Using Interface Builder, select the segue indicator between the Journal Table View Controller and the Journal Entry View Controller scenes, and use the Attributes Inspector (⌘4) to set the Identifier attribute to **journalEntry**.

- Add a new property to the `JournalTableViewController` to represent the segue identifier.

```
let journalEntrySegueIdentifier = "journalEntry"
```

- Update the `JournalTableViewController` implementation of `prepareForSegue:sender:`.

```
override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
    if segue.identifier == journalEntrySegueIdentifier {
        if let journalEntryViewController =
            segue.destinationViewController as? JournalEntryViewController,
            cell = sender as? UITableViewCell,
            indexPath = self.tableView.indexPathForCell(cell),
            entry = journal.entry(indexPath.row) {
                journalEntryViewController.journalEntry = entry
            }
    }
}
```

- Run the app (⌘R), tap a table row, observe the log message appear in the console, and tap the back button. Tap the compose button, and observe that the new `if` statement prevents the breakpoint log message appearing in the console.
- Discuss how the data preparation for the `JournalEntryViewController` will only be executed if the segue is between the `JournalTableViewController` and the `JournalEntryViewController`, indicated by the segue identifier property.
- Run the app (⌘R), tap on a table row, navigate back, tap on the compose button, and tap on the text field to enter a new journal entry.
- Discuss the differences between "modal" and "show" segues.

## Closing

Why doesn't the New Journal Entry View Controller scene have a navigation bar?

## Modifications and Extensions

- Instead of using a segue identifier, use the sender parameter of `prepareForSegue:sender:` to determine which interface element triggered the segue.
- Replace the outer `if` statement in `prepareForSegue:sender:` with a `where` clause at the end of the `if let` statement.
- Delete the segue between the Compose button and the New Journal Entry View Controller. Connect the Compose button to a new action in the `JournalTableViewController`, and use code to create a modal segue to the `NewJournalEntryViewController`.

## 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)

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

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

Storyboard Help: Adding a Segue Between Scenes [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)

UIViewController Class Reference [https://developer.apple.com/library/ios/documentation/UIKit/Reference/UIViewController\\_Class/index.html](https://developer.apple.com/library/ios/documentation/UIKit/Reference/UIViewController_Class/index.html)

UINavigationController Class Reference [https://developer.apple.com/library/ios/documentation/UIKit/Reference/UINavigationController\\_Class/index.html](https://developer.apple.com/library/ios/documentation/UIKit/Reference/UINavigationController_Class/index.html)

The Swift Programming Language: Properties [https://developer.apple.com/library/ios/documentation/Swift/Conceptual/Swift\\_Programming\\_Language/Properties.html](https://developer.apple.com/library/ios/documentation/Swift/Conceptual/Swift_Programming_Language/Properties.html)

The Swift Programming Language: Control Flow [https://developer.apple.com/library/ios/documentation/Swift/Conceptual/Swift\\_Programming\\_Language/ControlFlow.html](https://developer.apple.com/library/ios/documentation/Swift/Conceptual/Swift_Programming_Language/ControlFlow.html)