

Washington State University  
School of Electrical Engineering and Computer Science  
Spring 2018

CptS 479 Mobile Application Development

**Homework 6**

Due: February 20, 2018 (11:59pm)

**General Instructions:** Rename your project folder to be lastname-firstname. Create a compressed zip file of this entire directory and submit as an attachment under Content → Homework 6 for this course on the Blackboard Learn system by the above deadline. You may submit multiple times, but only the most recent entry submitted before the above deadline will be graded. Make sure all files are actually copied into the app directory and not just referenced elsewhere on your computer.

For this homework you will implement a standalone app called TravelerSettings to manage local and device settings for an app. You should start a new Xcode project for this homework; do not work from your previous Traveler apps. You will manage two local settings (set within the app) and two device settings (set in the device's settings). The two local settings will control how trips would be sorted in the table (by Destination or by Start Date), and whether the trips in the table are shown with their image or not. The two device settings will store the user's name, and whether distances should be shown in kilometers or miles. See screenshots below. Specifically,

1. Create a new Xcode project for a single view application called TravelerSettings.
2. Add a Settings Bundle to your app. Modify the Root.plist under the Settings.bundle to contain a text field item for the setting "Name" and a multi-value item for the setting "Distances" with titles "Kilometers" and "Miles".
3. Embed your Main view in a navigation controller.
4. The Main view should display the two local settings ("Sort By" and "Show Image") and the two device settings ("Name" and "Distances"). The "Sort By" setting is a string whose value is either "Destination" (default) or "Start Date". The "Show Image" setting is a Boolean, which is displayed as "On" (default) or "Off". The "Name" setting is an arbitrary string (default is the empty string). The "Distances" setting is a string whose value is either "Kilometers" (default) or "Miles".
5. Add a button "Change Device Settings" to the Main view that opens the device settings for this app. See code snippet below.

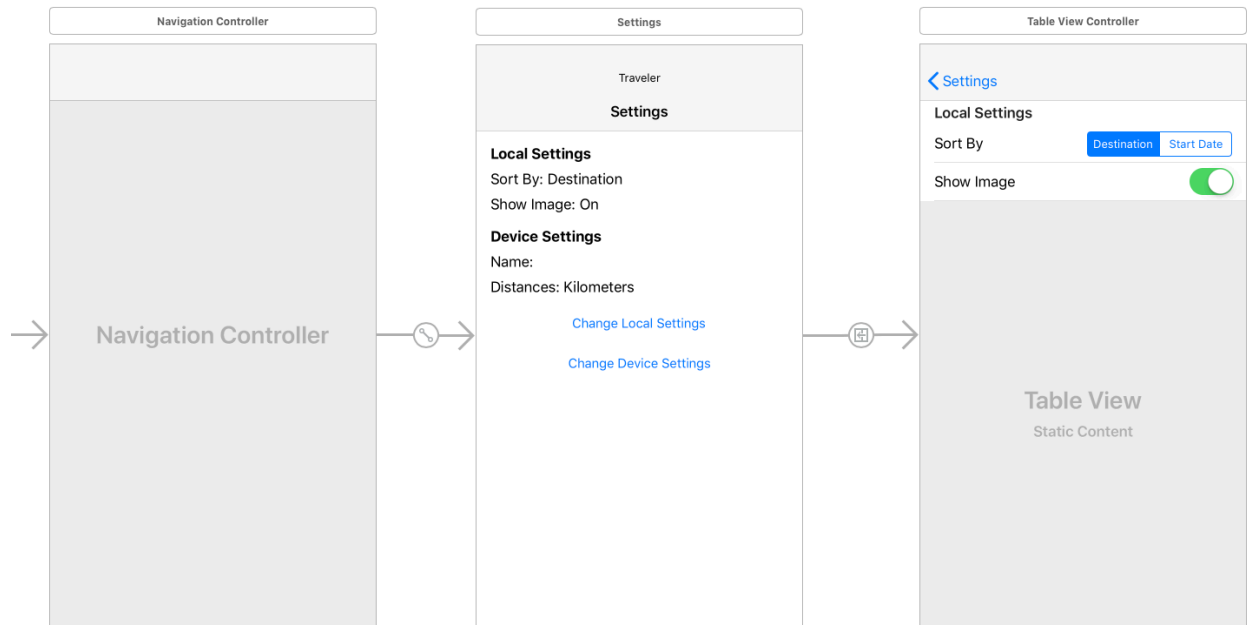
```
if let settingsURL = URL(string: UIApplicationOpenSettingsURLString) {  
    UIApplication.shared.open(settingsURL, options: [:], completionHandler: nil)  
}
```

6. The Main view should be updated whenever the view appears. Note, you will also need to update the Main view when the app returns from the device settings to the foreground via the “applicationWillEnterForeground” AppDelegate method. Below is a code snippet showing how to call a method “updateSettings()” in your main view controller from within the AppDelegate.

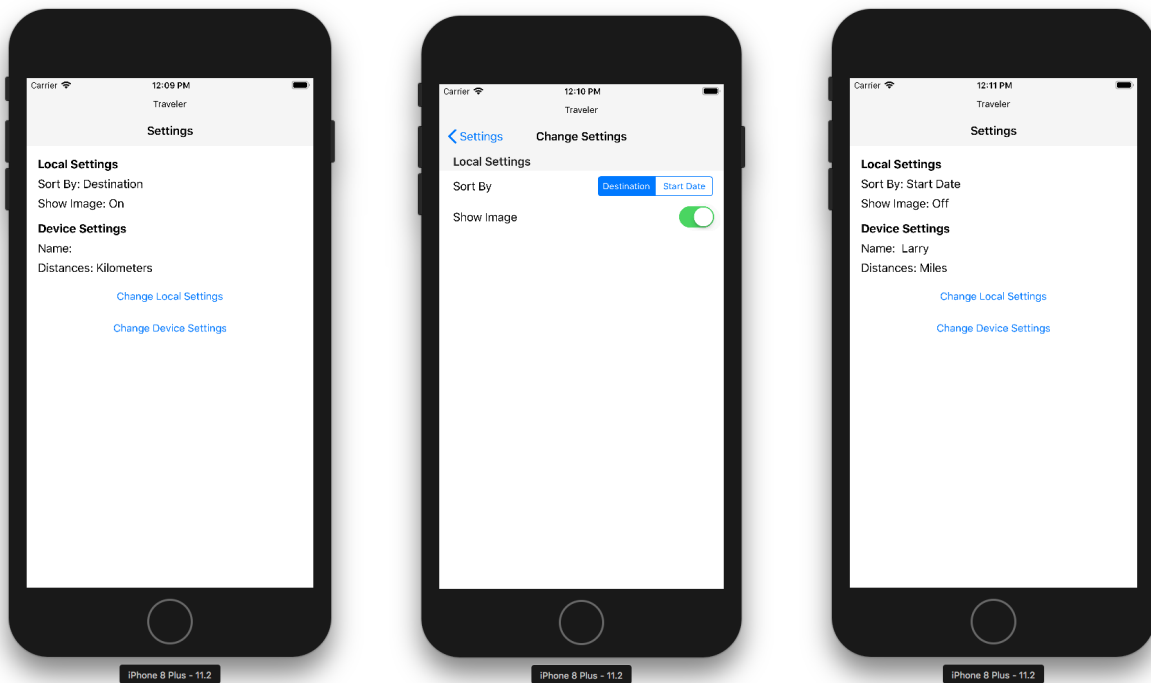
```
let navVC = self.window!.rootViewController as! UINavigationController
let mainVC = navVC.topViewController as! ViewController
    // or navVC.viewControllers[0]
mainVC.updateSettings()
```

7. Add a Table View Controller to the Storyboard. Create and assign a new UITableViewController class to this view. Add a button “Change Local Settings” to the Main view that segues to this Table view. Setup the navigation title and prompt on each view appropriately.
8. In the Table view, set the table to be Static and Grouped with one section and two rows. Give the section a header “Local Settings”. The first row should display the “Sort By” setting and use a segmented control to choose between “Destination” and “Start Date”. The second row should display the “Show Image” setting and use a switch to choose between “On” and “Off”.
9. The UserDefaults.standard shared instance should be appropriately modified when the “Sort By” or “Show Image” settings are changed. This same shared instance can be accessed in the Main view, so there is no need for any prepare-for-segue or unwind-segue operations. Also be sure to set all the settings to their defaults the first time the app is run in the didFinishLaunchingWithOptions AppDelegate method.
10. Be sure auto layout constraints are set so that all the view elements are appropriately placed regardless of device orientation.

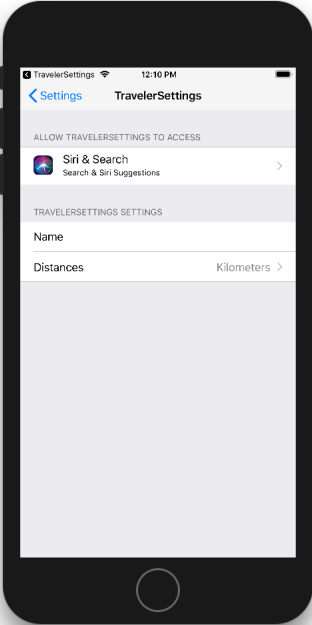
## Screenshot: Storyboard



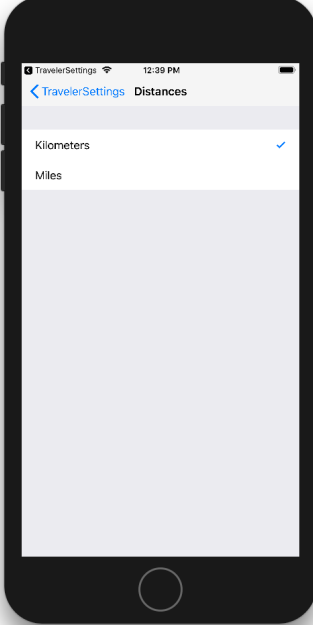
## Screenshots: App



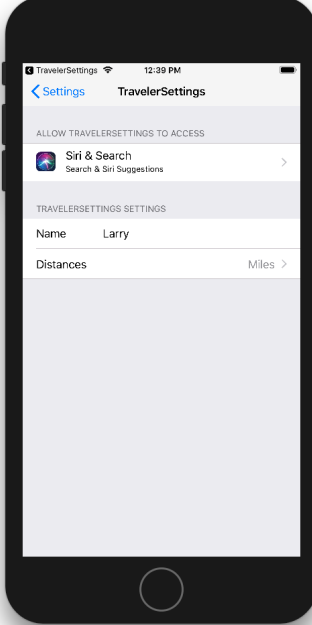
Screenshots: Device Settings



iPhone 6 Plus - 11.2



iPhone 6 Plus - 11.2



iPhone 6 Plus - 11.2