

Washington State University  
School of Electrical Engineering and Computer Science  
Spring 2017

CptS 479 Mobile Application Development in iOS

**Homework 4**

Due: February 7, 2017 (11:59pm)

General Instructions: Put the entire app directory into one zip file and submit as an attachment under Content → Homework 4 for this course on the Blackboard Learn system by the above deadline. Note that you may submit multiple times, but only the most recent entry submitted before the above deadline will be graded.

1. For this homework we will implement the ability to add new jokes through a separate view. Specifically, you will add an “Add Joke” button to your first view, which segues to a second view, where you can enter a new joke, which is then added to your jokes array upon return to the first view. The new jokes should then be included in the random selection within chooseJoke(). You can add on to your solution to HW2, or you can work from mine available at <http://www.eecs.wsu.edu/~holder/MAD/hw2/joker2.zip>. Refer to the Storyboard screenshot below for more detail.
  - a. Add a new Cocoa Touch file to the app called “AddJokeViewController” that is a subclass of UIViewController.
  - b. Add a second View Controller to the Storyboard and assign its class to AddJokeViewController.
  - c. In the Add Joke View, add the following elements:
    - Add a Label at top center that will display “Enter New Joke #1”, where the number will be replaced by the current number of jokes plus 1.
    - Add four Labels and adjoining Text Fields for Line 1, Line 2, Line 3, and the Answer for the new joke. The Text Fields should extend from the right of the corresponding label to the right margin of the screen.
    - Below these four lines, add a left-justified “Cancel” button and a right-justified “Save” button.
    - Connect the title label and four text fields as IBOutlet, and connect the “Cancel” button as an IBAction, in your AddJokeViewController file.
    - Be sure to conform your AddJokeViewController to the UITextFieldDelegate, set each of the text field’s delegates to self, and enable the keyboard to be hidden when Return is pressed.
  - d. In the AddJokeViewController file, you will need a variable to receive the number of jokes from the first view (we’ll do this via a segue). Set the title label based on this number in the viewDidLoad() function.

- e. You will also need a Joke variable to hold the new joke, which will be accessed and added to the jokes array within an unwind segue. This new joke variable should be updated every time a `textFieldDidEndEditing()` occurs.
- f. Add a button titled “Add Joke” to the bottom center of the first view controller and create a segue from the button to the `AddJokeViewController`. Be sure to give the segue an identifier.
- g. In the first `ViewController` file, add a prepare-for-segue function that firsts checks for the proper segue identifier, accesses the `AddJokeViewController` and sets its number of jokes variable. Also add an unwind segue function that accesses the `AddJokeViewController`’s new joke variable and adds the new joke to the jokes array.
- h. Back in the Storyboard, ctrl-drag from the Save button to the Exit icon at the top of the Add New Joke View Controller, and choose the unwind segue you just created.
- i. Back in the `AddJokeViewController` file, inside the Cancel button’s action function, add the line “`dismiss(animated: true, completion: nil)`”. This will dismiss the Add Joke View when Cancel is pressed, and will not invoke the unwind segue.
- j. As always, be sure auto layout constraints are set so that all the view elements are appropriately placed in the view, regardless of device orientation.

Storyboard:

