

CS 329E - Fall 2017 - Homework 3

Due date: 9/26/17 by 11:59pm, late work is not accepted

Points: 20 points

Submit: A zip file of your entire project folder.

Name your zip file: **<last-name><first-name><dash>hw3.zip**

Example: for Joe Smith SmithJoe-hw3.zip

Description: This will be an exercise in creating an iOS application which includes:

- Navigation controller
- Table view controller
- Standard view controller
- Segue
- Autolayout constraints

General:

- Create a new Single-View iOS project named **<last-name><first-name><dash>hw3**.
- Set appropriate constraints so that the UI looks good/correct when run on an iPhone 7 or iPhone 7 plus in portrait orientation.

Details:

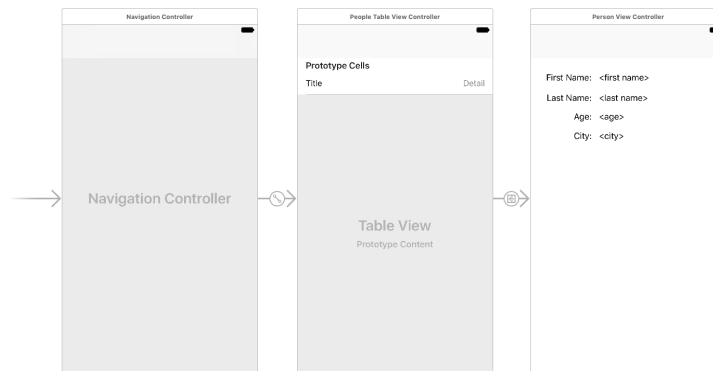
1. Delete the ViewController.swift file. Make sure to select 'Move to Trash' so the file will be deleted and not just removed from the project.
2. Add to the project a table view controller derived class named **PeopleTableViewController**.
3. Add to the project a view controller derived class named **PersonViewController**.
4. Storyboard:
 - A. Set the storyboard device size to be iPhone 7.
 - B. Delete the view controller that was included during project creation.
 - C. Add a table view controller. Make this the initial view controller.
 - D. Embed the table view controller in a Navigation controller.
 - E. Add a view controller to the right of the table view controller.
 - F. Associate the PeopleTableViewController class with the table view controller in the storyboard.
 - G. Associate the PersonViewController class with the view controller in the storyboard.
 - H. Set the table view cell style to Right Detail.
 - I. Create a "Show" segue from the people table view prototype cell to the person view controller.
 - J. Set the table view cell reuse identifier.
5. Person view controller:
 - A. Create the person view controller UI per the screen shot below. Essentially, 8 labels.
 - B. Make sure to define appropriate constraints for all the UI elements.
 1. Note that prompts 'First Name:', 'Last Name:', 'Age:' and 'City:' are fixed size and distance from nearest neighbor. While the '<...>' fields are a fixed distance from the associated prompt label and should stretch to the right edge.
 - C. Define a property named **person**, of type Person. When a specific table view cell is selected this will be set to the appropriate Person object via the prepareForSegue method.
 - D. Make sure to match the screen shot below when a person is selected from the list.
6. Data Model:

- A. Add to the project a Swift file for a class named **Person**:
Include the following public properties in the class:
 - name: firstName, type: optional String
 - name: lastName, type: optional String
 - name: age, type: optional Int
 - name: city, type: optional StringInclude an **init** method with arguments for all the attributes, and initialize them with the values passed in.
- 7. People table view controller:
 - A. Create a private property named **people**. It will be an array of Person objects.
 - B. Define a private function named **createDataModel** that creates 10 Person objects and adds them to the people array. See the data model data below for the values to set in each of the Person objects. Call this method in the people table view controller viewDidLoad function.
 - C. Modify the provided UITableViewDataSource methods to:
 - 1. Indicate 1 section.
 - 2. Indicate data-model-array count number of rows.
 - 3. Populate each cell with the first and last name of a person from the data model.
- 8. When a user touches one of the names in the people table view controller the app should segue to the person view controller screen to display the detail data about the selected person.
 - A. You will need to implement the **prepareForSegue** function and pass the correct Person object to the Person view controller to populate the UI elements.
- 9. Make the Navigation Bar title for the people table view controller be "Person List".
- 10. Make the Navigation Bar title for the person view controller be "Person".

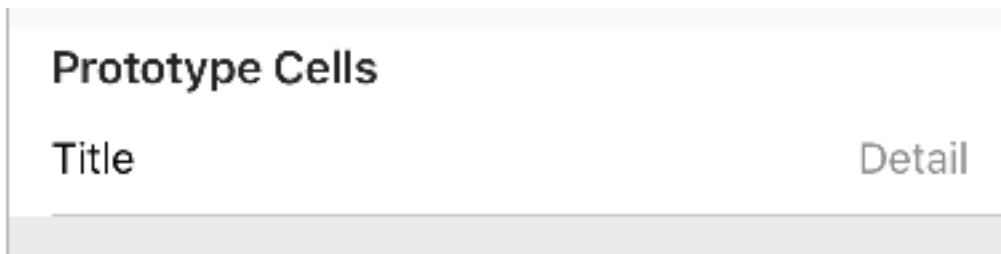
Grading criteria:

- 1. The application builds and runs. (1 points)
- 2. The data model is as defined. (3 points)
- 3. The user interface is as defined. (6 points)
- 4. The user interface displays correctly on both iPhone 7 and iPhone 7 plus. (4 points)
- 5. The application behaves as described. (6 points)
- 6. The coding standard is followed. (1 point deducted for each kind of violation)

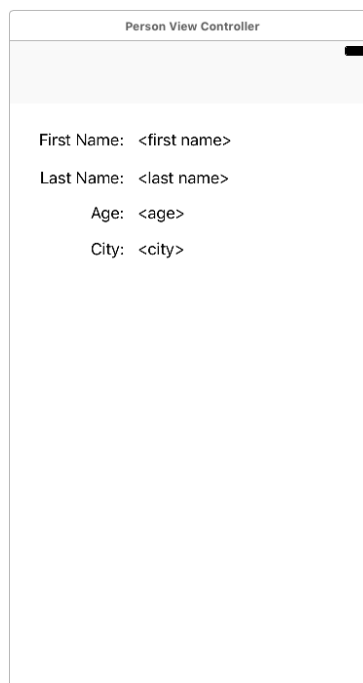
This is what the storyboard should look like after all the changes are done.



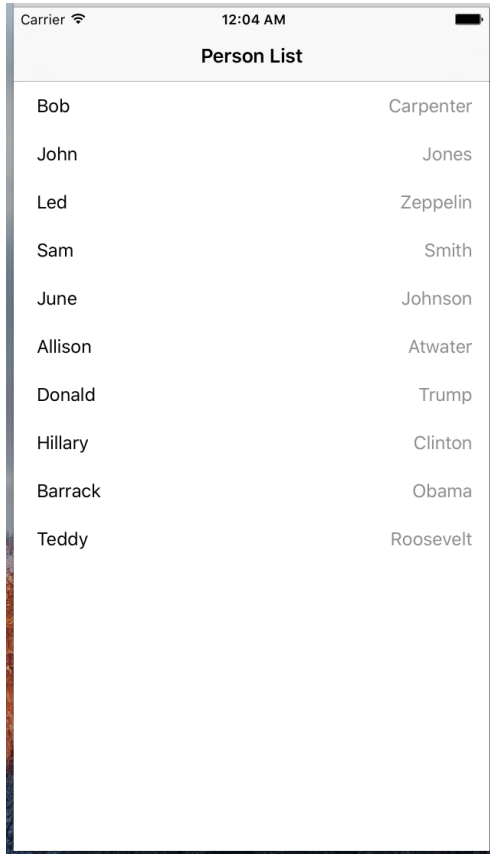
Prototype table view cell - Right Detail style:



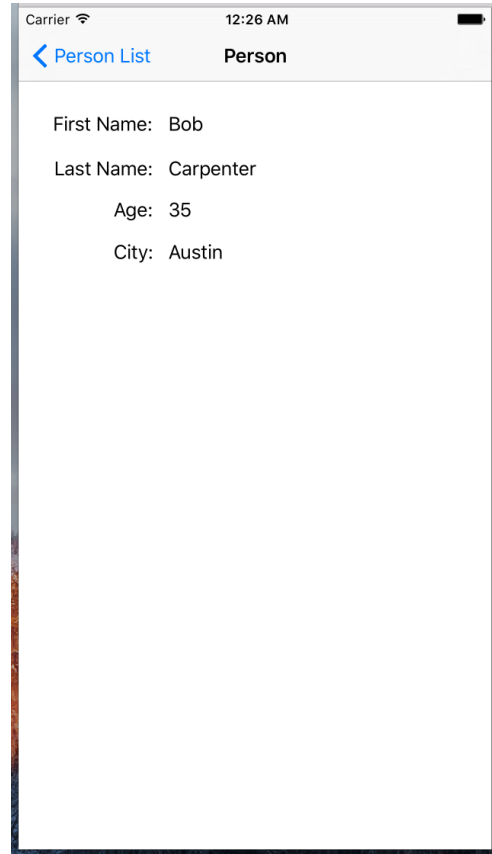
Person view controller screen layout:



Populated people table view controller example:



Populated person view controller example:



Data model data:

First Name	Last Name	Age	City
Bob	Carpenter	35	Austin
John	Jones	8	Boston
Led	Zeppelin	73	Paris
Sam	Smith	34	Sydney
June	Johnson	12	Vienna
Allison	Atwater	21	Venice
Donald	Trump	56	Munich
Hillary	Clinton	69	Brussels
Barrack	Obama	53	Tokyo
Teddy	Roosevelt	70	Shanghai