

# CS 329E: Bulko

## Programming Assignment 3

### Simple Segue

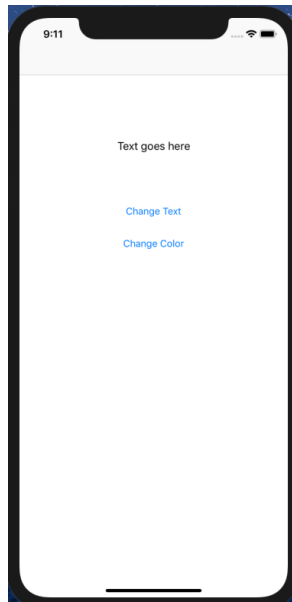
## 1 Problem Definition

In this assignment, you are going to create several View Controllers which are connected by segues. Also, you need to use Protocols and Delegates to pass values back and forth.

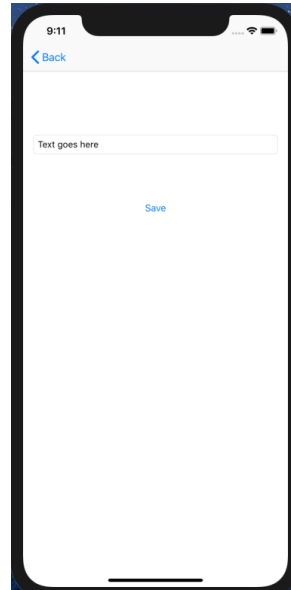
There will be 3 View Controllers: the Main VC, the TextChange VC and the ColorChange VC, as shown in Fig. 1(a), 1(b) and 1(c). In the Main VC, there is a label displaying a string, and two buttons with titles indicating 'Change Text' and 'Change Color'. When the user clicks on one of the buttons, they will segue to either the TextChange VC or the ColorChange VC, enabling the user to edit the text that appears in the label or change its background color. In the TextChange VC, the current string is presented in the text field. You can change it in the text field and click the Save button, but the screen does not return to the main VC until 'back' is clicked. In the ColorChange VC, you can change the background color of the label by clicking either the 'blue' or the 'red' button. Again, the screen will not return to the main VC until 'back' is clicked. After editing, the label in the Main VC will be updated accordingly, as shown in Fig. 1(d).

## 2 Detailed Instructions

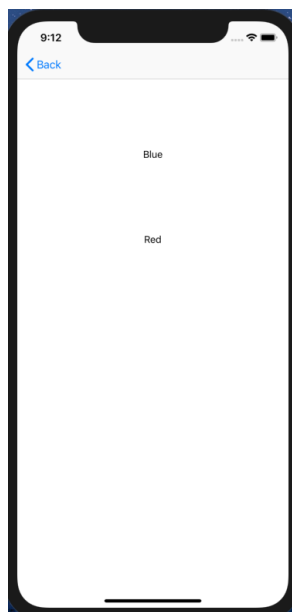
- Create a Single View application project named <lastName><firstName>-HW3.
- The Main VC (Fig. 1(a)):
  - In the storyboard, select the Main View Controller and embed it in a navigation controller by "Editor - Embed in - Navigation Controller".
  - Create a label with initial text "Text goes here".
  - Create two buttons with titles `Change Text` and `Change Color`. When the first button is clicked, it will segue into the TextChange VC. When the second button is clicked, it will segue into the ColorChange VC.
  - In the `prepare(for segue:)`, pass along any data you might need to the target VC.
- The TextChange VC (Fig. 1(b)):
  - Create a text field containing the text string passed in from the Main VC, and a button named `Save`.
  - If the `Save` button is clicked, use the protocol/delegate method to update the label in the Main VC using the string currently in the text field (possibly edited).
- The ColorChange VC (Fig. 1(c)):
  - Create two buttons named `Blue` and `Red`.



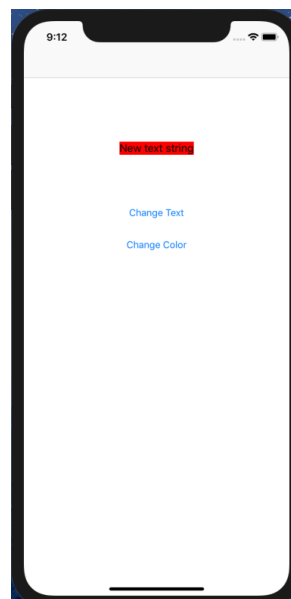
(a) Main VC



(b) TextChangeVC



(c) ColorChangeVC



(d) Main VC after editing

Figure 1: Application demos

- If a button is clicked, use the protocol/delegate method to update the background color of the label in the Main VC based on which button was clicked.

### 3 Grading criteria

1. You have UI components as defined. (20%)
2. The `prepare(for segue:)` in the Main VC is correctly implemented, so the text field of the TextChange VC is filled with the text from the label on the Main VC. (20%)
3. Protocols and delegates are used correctly to pass values back and forth. (30%)
4. The text and color of the label are updated after editing. (30%)
5. **If the app does not build and run, ZERO points will be given.**
6. The Coding Standard is followed. One point deducted for each violation.

### 4 General criteria

1. I will be looking for good documentation, descriptive variable names, clean logical structure, and adherence to all coding conventions expected of an experienced programmer, as well as those outlined in the Coding Standard document. There will be penalties for failure to meet these standards.
2. Your code must compile and run before submission.
3. Xcode will automatically generate standard headers to your .swift files. Add two lines to each Swift file so that the header includes the following:

```
// Project: LastnameFirstname-HW3  
// EID: xxxxxx  
// Course: CS29E
```