CS 329E: Bulko
Programming Assignment 6
Pizza Application 2.0

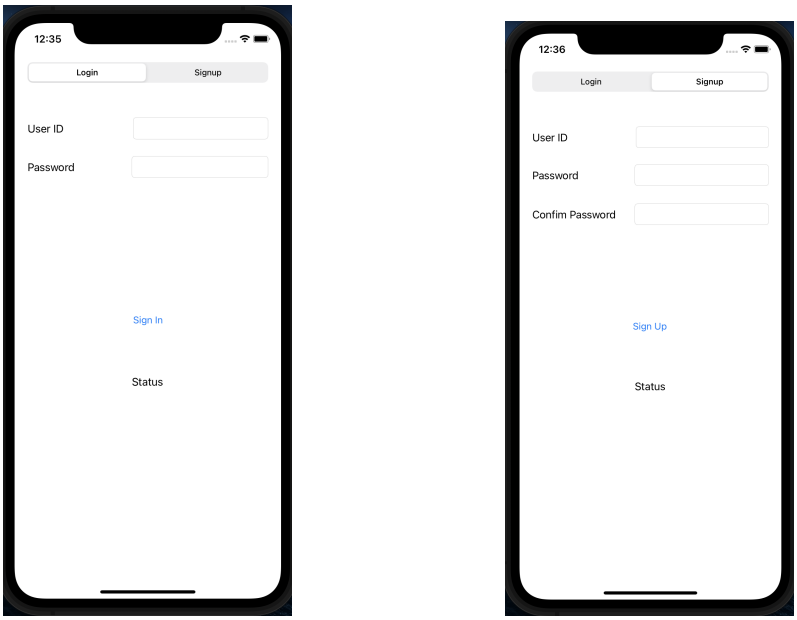
1 Problem Definition

In this assignment, you will add functionality to the pizza application you created in HW5.

- You must add a Login VC based on Firebase, as shown in Fig. 1(a) and 1(b). In the Login VC, you will be able to sign up or sign in by selecting the segmented control.
- You must add the ability to delete a pizza from the list, as shown in Fig. 2(a).
- In HW5, the list of pizzas you created was volatile: when you terminate the application, all of the contents were lost. In this assignment, you will extend the app you created by having it store data for all of the pizzas you created using Core Data, so the orders will persist across launches of the app. Note that you must store login data (IDs and passwords) in Firebase, but you will store pizza data for each user in Core Data.

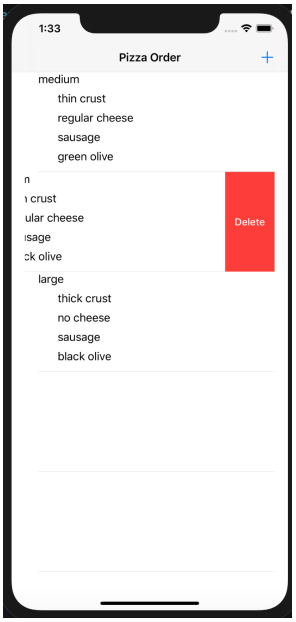
2 Detailed Instructions

- If you remembered to enable Core Data in HW5, you may simply copy HW5 and use it as a base to start HW6. If, however, you forgot to enable Core Data and you don't want to start over from scratch, you should follow this process to add Core Data to HW5:
  - Make a duplicate of your HW5 project. Rename the topmost folder HW6. (Don't worry about renaming all of the references in the files and subdirectories from HW5 to HW6.)
  - Create a new project named "temp" (or something like that) with Core Data enabled, and then copy all the lines from the `AppDelegate.swift` file of "temp" into the `AppDelegate.swift` file of HW6. Then the project "temp" is not needed anymore and can be deleted.
  - In your HW6 project, choose $File \rightarrow New \rightarrow File \rightarrow CoreData \rightarrow DataModel$, and name the new Data Model file `"HW6.xcdatamodeld"`.
  - In case you want more information about adding Core Data to a project, here's a useful link: Adding Core Data to an Existing Project in Xcode 10 and Swift 4. Although it's an old article, the content is still relevant.
- Again, if you are building Core Data based on your HW5 project, you don't need to change the project name, but make sure your final zip file is named <lastName><firstName>-HW6.zip.
- In the Main View Controller, implement a function that fetches all of the pizza data from Core Data, and loads it into your data structure.



(a) Sign in (b) Sign up

Figure 1: Login View Controller



(a) Delete

Figure 2: Main View Controller

- When the Back button on the Nav Bar is clicked, the newly created pizza should be stored into Core Data for that user.
- Here's a useful link to help you implement the swipe to delete a row from a table: How to Swipe to Delete UITableView Cells.
- Firebase support:
  - Create a Login VC. Add a segmented control, so that the user can choose to sign in or sign up.
  - Add the UI elements as shown in Fig. 1(b) to the Login VC.
  - When selecting the "Sign In" of the segmented control, the "Confirm Password" elements should be hidden.
  - When signing up, you need to store the created userid and password to Firebase. When signing in, you need to fetch saved userids and passwords from Firebase.
  - The status label is used to indicate if the user's attempt to sign in was unsuccessful.

3 Grading criteria

1. The screen for the signin/signup path is correctly implemented. (15%)
2. Firebase support works as expected. (35%)
3. The delete function works as expected. (15%)
4. Core Data works as expected: pizza data is stored by user across shutdown/relaunch of the app. (35%)
5. **Note that 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-HW6
   // EID: xxxxxx
   // Course: CS329E