CSC 471/371 Mobile Application Development for iOS

Programming Assignment 4: Mock Remote Control

Due Date & Submission

- Assignment due on Tuesday February 12, 2019, 11:59pm
- Submit your assignment in D2L Dropbox.
- Submit a single zip file that contains the contents of the project folder
    - To zip your project folder: Ctrl-click your project folder and select "Compress …" from the context menu.
- **It is mandatory to use Xcode 10 and Swift 4 for this assignment.**
- Include only your source code files, including
    - *.swift, *.plist, *.xib, *.storyboard
    - image files
    - project files (.xcodeproj)
    - test folders
- You must use a unique prefix for the project name. (I suggest you use your last name and first initial as your prefix.) **Please use the same prefix for all your assignments.**
    - Note you only need to use the prefix for the project name. It is not necessary to use the prefix on other files in your project.
- Do not include unused or unrelated files.
- Before you submit, build and run the project, make sure everything compiles and works. Close your project before zipping the folder.
- Here are the most common reasons assignments are marked down:
    - Project does not build.
    - Project does not build without warnings.
    - One or more items in the Requirements section were not satisfied.
    - A fundamental concept was not understood.
    - Code is sloppy and hard to read (e.g. indentation is not consistent, etc.).
    - Your solution is difficult (or impossible) for someone reading the code to understand due to lack of comments, poor variable/method names, poor solution structure, etc.
- Bonus points.
    - Bonus points may be awarded to projects with *exceptional* qualities in one or more aspects.
    - Bonus points will only be awarded after all the required elements have been satisfied.
    - Bonus points will not be awarded merely for extra amount of work (or code).
    - Extra and sloppy code may cause your assignments to be marked down.
   - Bonus points are awarded at the sole discretion of the instructor.

o   Include a note in the comment in D2L describing the part(s) should be considered for bonus points.

Goals

- Explore Xcode and build simple UI
  - o   Using UI views and controls
- Explore UIKit documentation

Assignments

1. Create a simple mock remote control app with an interface similar to the one shown below.
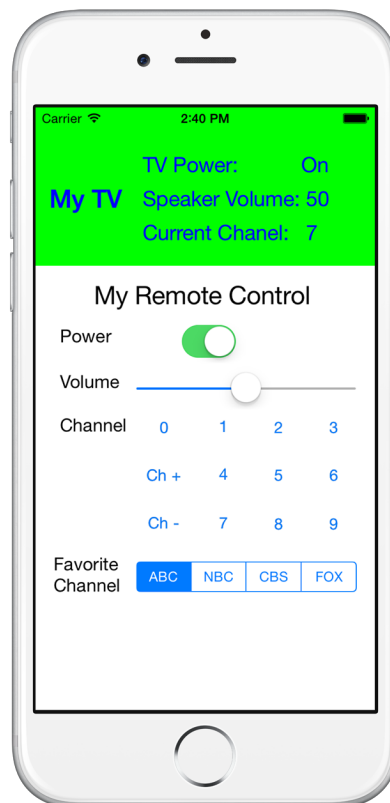
2. The functions of the app mimic the usual functions of a simple TV remote control. Instead of controlling a real TV, and status of the "TV" being controlled by your remote will be displayed at the top portion of the screen. The minimum functions must include the following:
   a.   The power switch will turn "My TV" on and off. When the power is off, all other controls on the remote should be disabled.

b. The volume slider will control the speaker volume. The range of the volume is from 0 to 100 (inclusive).

c. The number keys and the 'Ch +' and 'Ch –" keys will control the current channel. The range of the valid channels is from 1 to 99 (inclusive). Channels are selected using two digits, including single digit channels. For example, channel 7 is selected using '0' and '7' keys. Channels can also be selected using 'Ch +' key (+1 to the current channel) and 'Ch -' key (-1 to the current channel).

d. The favorite channel buttons are part of a segmented control. Each button remembers a specific channel. You can select a favorite channel by press one of the favorite channel buttons.

3. Be creative to spruce up your app.

4. Make sure your program
   a. builds without errors or warnings, and
   b. runs without crashing

Hints

1. Use UIView as a container to divide a screen into separate regions.
2. Use the **enabled** property of the UIView class to enable or disable controls.
3. Make sure when the app starts up, the TV status display and the remote control settings are consistent.

Bonus Points

Use auto layout and test the layout on different screen sizes of iPhones. Make sure all the widgets are visible and reasonably positioned and spaced. Portrait mode only.