

# CSC 471 Mobile Application Development for iOS

## Programming Assignment 4: Mock Remote Control

### Due Date & Submission

- Assignment due on Tuesday February 8, 2022, 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 13, Storyboard, and Swift 5.5 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.

- 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
  - 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.