

CSC 372/472 Mobile Application Development for Android

Programming Assignment 4 A Mock Remote Control App

Due Date

- Assignment due on Wednesday October 11, 2017, 11:59pm
- Submit your assignment in D2L
- Submit a single zip file that contains the contents of the project folder
- 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.**
- 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).
 - Bonus points are awarded at the sole discretion of the instructor.

Goals

- Building UI with a variety of controls, and layouts
- Exploring Android documentation of various classes used in this assignment

Requirements

1. Create a simple mock *Remote Control* app with an interface similar to the one shown on the right (Figure 1).
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 999 (inclusive). All channels are selected using 3 digits, including single and double digit channels. For example, channel 7 is selected using ‘0’, ‘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. Each favorite channel button remembers a specific channel. You can select a favorite channel by press one of the favorite channel buttons. In this assignment, the favorite channels are preprogramed and fix. You may choose any 3 channels as the favorite channels.
3. Always remember to write high quality, easy to read code.



Figure 1

4. Be creative.

UI Design Requirements

- Note that the text view objects in the top portion of the screen are aligned vertically.
- All buttons on this screen are of the same dimension.
- The power switch is centered above the volume control slider.
- Do not use the Constraint Layout for this assignment. You may use the Constraint Layout for the next assignment.

Hints

1. For disabling the controls in the UI, look into the `setEnabled` and `setClickable` methods of the `View` class.
2. The `Space` class is a dummy widget. It is useful sometime when you design the UI layout.
3. Make sure when the app starts up, the TV status display and the remote control settings are consistent.