CSC 372/472 Mobile Application Development for Android

Programming Assignment 5
A Mock Remote Control App II

Due Date

- Assignment due on Wednesday October 25, 2017, 11:59pm
- Submit your assignment in D2L
- Submit a single zip file that contains the contents of the project folder. Only ZIP format will be accepted.
- 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 an app with multiple activities
- Using explicit intents within an app
- Exploring Android documentation of various classes used in this assignment

Requirements

1. Create an enhanced version of the mock Remote Control app with three screens. The first screen is similar to the app in Programming Assignment #4. The second screen is a mock Remote Control for a DVR. The third screen configures the favorite channels in the TV Remote Control.

2. The first screen should be similar to the one shown in Figure 1. It functions identically to the one described in Programming Assignment #4, except for the two buttons at the bottom. The "Switch to DVR" button will transition the app to the DVR Remote Control screen described below (Figure 2) and the "Configure" button will transition the app to the screen for configuring the favorite channels, also described below (Figure 3).

3. The screen for DVR Remote Control should be similar to the one shown in Figure 2. The DVR remote control mimics the usual functions of a simple DVR remote control. Instead of controlling a real DVR, and status of the "DVR" 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 DVR" on and off. When the power is off, all other controls on the remote should be disabled.
   b. The DVR can be in one of the following states, exclusively (i.e., never in two or more states simultaneously):
      - Stopped
      - Playing
      - Paused
      - Fast forwarding

Figure 1

- Fast rewinding
- Recording

Each of the above state is entered when the corresponding button is pressed. When the power is turned on, the DVR will be in the *Stopped* state.

c. The "Play" button will start or resume normal playing. Pausing, fast forwarding or rewinding is only possible when the DVR is in the *Playing* state.

d. The "Record" button will start recording. Recording can only start when the DVR is in the *Stopped* state. Playing, pausing, fast forwarding or rewinding is *not* possible when the DVR is in the *Recording* state.

e. The "Stop" button will stop any operation.

f. When a button is pressed while the DVR is in a state where the requested operation is not possible, an appropriate warning message will be displayed using a Toast.

g. The "Switch to TV" button at the bottom will transition the app back to the TV Remote Control screen.

Figure 2

4. The third screen should be similar to the one shown in Figure 3. It is for the configuration of the favorite channels in the TV remote control.

a. The radio buttons near the top allows you to select which of the three favorite channel buttons is to be configured. The favorite channel buttons are identified as the Left, Middle, or Right button.

b. The text field allows you to enter a short label to be displayed on the favorite channel button. The label must be between 2-4 letters in length. If the label is too long or to short, an appropriate message should be displayed using a Toast.

c. The channel number should be in the range of 1-999.
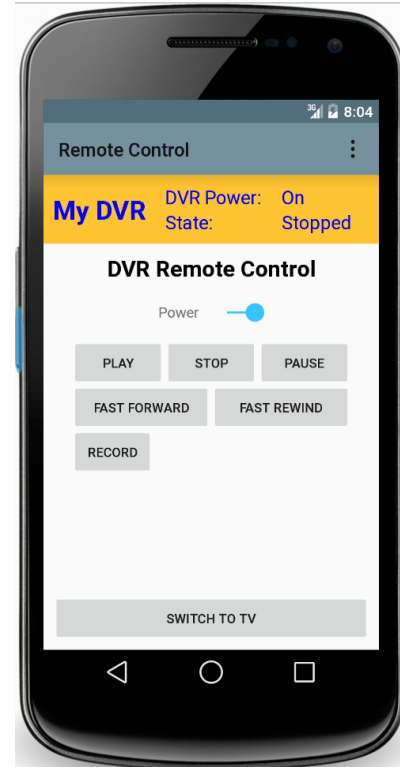
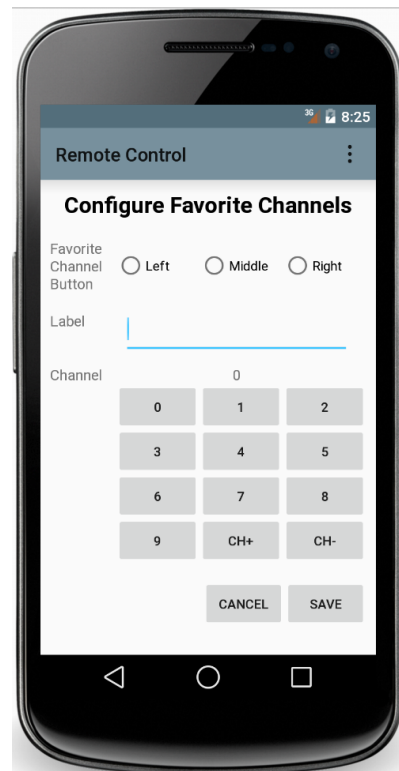d. The Save button saves the current configuration,

Figure 3

while the Cancel button will ignore all the values in this screen, and the configuration of the favorite buttons will remain unchanged. If the new configuration is saved, the favorite channels in the TV remote should reflect the new configuration, i.e., the label and channel number will be adjusted according to the configuration. Either the Save or Cancel button will transition the app back to the TV Remote Control screen.

5. Be creative.

Bouns Points

- Use the Constraint Layout to design the layout of all three screens. Note: must satisfy all other requirements of this assignment to be considered for the bonus points.