# Lake Washington Institute of Technology

# CSD 230 Programming Mobile Devices

# Fall 2018

# Final Exam

## Overview

You are to create an app with two activities; MainActivity, and MoveMakerActivity. The main activity has a button and a spinner located just beneath it. When the user clicks the button, the second activity is started. The second activity has 16 “move” buttons, three control buttons, a source square text view, and a destination square text view. The “move” buttons are arranged in a 4x4 grid and labeled as follows: A4, B4, C4, D4, A3, B3, C3, D3, A2, B2, C2, D2, A1, B1, C1, D1.

When the user clicks one of the “move” buttons, a string representation of the source square (e.g., “D3”) is stored as the text of the source square text view. Once the source square is set, the next “move” button clicked sets the destination square text view. If both the source and destination squares are set, and another “move” button is clicked, it replaces the source square. Continuing with the example, if yet another “move” button is clicked, it will replace the destination square.

The clear button, clears the text fields of the source and destination text views. The cancel button returns control to the main activity indicating to MainActivity that the MoveMakerActivity was cancelled. The “ok” button returns the source and destination squares as a four-character string to MainActivity.

If the user clicks “ok”, a four-character source/destination string is returned to MainActivity, where the string is added to the spinner.

The app must handle a rotation event, resuming execution uninterrupted.

The layout files, activity\_main.xml, and activity\_move\_maker.xml are provided. You can use them as-is. Or if you prefer, you can modify or replace them completely as you see fit. However, to get full credit, you must satisfy the requirements as stated.

## Specifics

MainActivity starts MoveMakerActivity. MainActivity expects a result.

MoveMakerActivity returns one of two results: OK or Cancel. If the result is OK, a four-character move string is returned, representing source square / destination square.

If MoveMakerActivity returns a four-character move string to MainActivity, MainActivity adds the string to the spinner located under its Button widget.

MoveMakerActivity responds to “move” button clicks by alternately setting source square text view and destination square text view.

The app can recover from a rotation event.

**Above and beyond:** place the MoveMakerActivity’s UI in a fragment.

|  |  |
| --- | --- |
|  |  |