

# CSC 372/472 Mobile Application Development for Android

## Programming Assignment 2 A Simple Calculator

### Due Date

- Assignment due on Wednesday September 27, 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.

### Goals

- Explore Android Studio and Android SDK
- Create a simple app with a single activity
- Create a simple UI using linear layouts, text views, and buttons
- Use XML to define the UI
- Handle events from the UI

## Requirements

1. Create a simple calculator app similar to the one shown at the right
  - Use the *Button* widget for the digits, '+', and '=' keys.
  - Use the *Text View* widget to display the result.
  - You only need to handle integer additions in this assignment.
  - The current value should be displayed after a digit button is pressed.
  - After the '+' button is pressed, the app will wait for the user to input the next number to be added.
  - The result, i.e., the sum, should be displayed after the '=' button is pressed.
  - Your app should properly handle input sequences such as:
    - $1\ 2 + 4\ 5 =$  (the result should be 57)
    - $1\ 2 + 4\ 5 = + 6\ 7 =$  (the result should be 124)
    - $1\ 2 + 4\ 5 + 6\ 7 =$  (the result should also be 124, after the second + the intermediate result 57 should be displayed)
  - A digit button immediately following '=' indicates the start of the first number of a new addition (the previous result is discarded). In other words, the following sequence  
 $1\ 0 + 2\ 0 = 1\ 1 + 5 =$  should give the result 16.
  - No need to handle integers greater than the maximum value of int. No need to handle overflows.
2. Make sure your program
  - a. builds without errors or warnings, and
  - b. runs without crashing.

