Lab: Simple Calculator

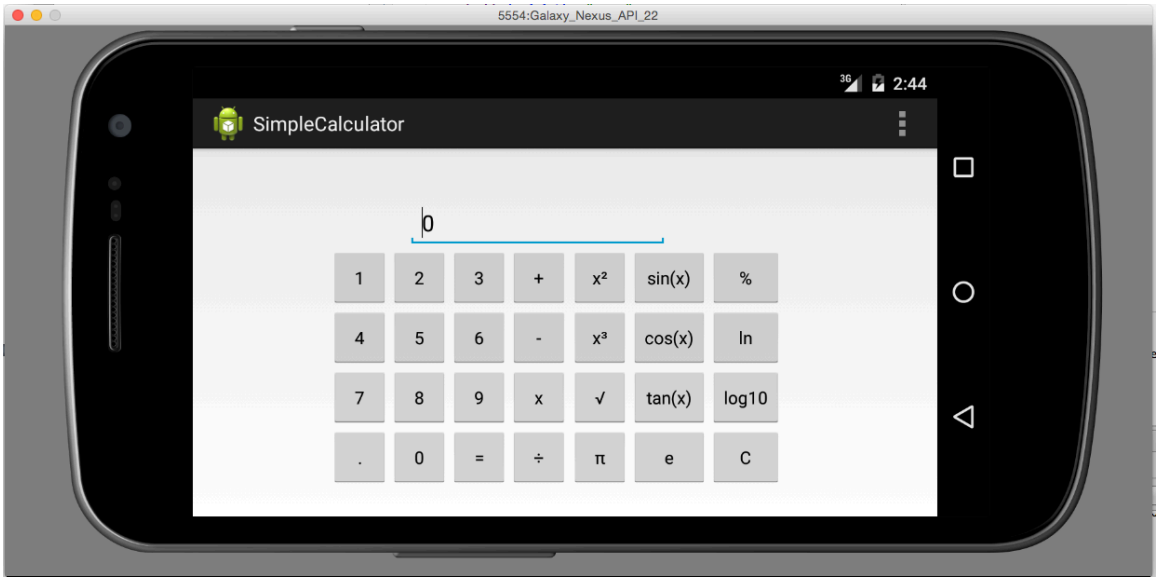
Objectives:

Create an application from scratch with an interesting user interface using what you learned in the User Interface Classes Lesson. For example, here's a screenshot of an app that I created.

This application's user interface consists of several areas: there is one area that represents the current input value for the calculation to be performed. The main body of the interface consists of elements that correspond to numerical values and arithmetic operations. The final area consists of a button that clears the entire current calculation.

When the user selects the arithmetic operation to be performed, the input field should become blank. This can be seen in the SimpleCalculator.mp4 screencast that illustrates the applications basic functionality.

Additionally, this application has a separate view when in the landscape orientation as illustrated here:



As you can clearly see, when in the landscape orientation, the application has a different UI with increased mathematical functionality.

Use your creativity to design your user interface. Your application must implement all the functions shown above, but can vary in the visual layout as long as the user interface 1) only displays the numerical values you enter for your calculation or the numerical result of your calculation – it should not display the mathematical operations you select to perform (i.e. it should not display the '+', '-', '*', etc. symbols, 2), in portrait mode the calculator should only have the 4 basic arithmetic operations, 3) in landscape orientation the calculator should additionally have at least the 3 basic trigonometric (sin, cos, tan) functions in terms of radians, the logarithm (base 10) and square root. Once you have the basic requirements completed, feel free to try

and implement any additional functions you can think of, such as mode function to switch between degrees and radians.

Take a look at the SimpleCalculator.mp4 screencast for a run-through of the application's features.

Submission

To submit your work you will need to export your SimpleCalculator project as a compressed zip file. Then you will submit this zip file to the Coursera system. Grading for this assignment will be done using Peer Assessment. That is, students will review each other's code and give feedback.