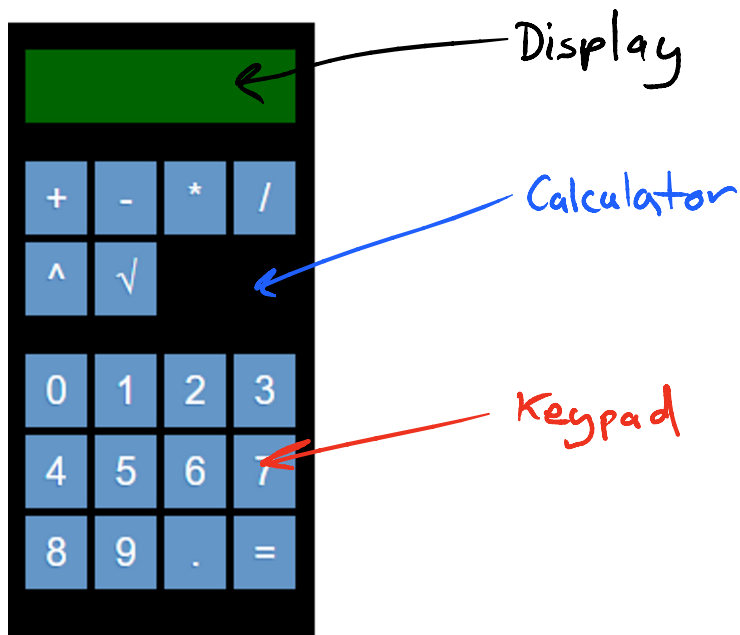# Calculator Angular - Walkthrough - By Elliot Tanner

Thursday, 19 January 2017   7:55 PM

This document is intended to take you over the component level design, as well as the steps to execute unit tests and run the application.

Design

For the overall design of this Angular 2 project, I chose to use **TypeScript**, with nested **Angular 2** components and one service to contain the actual calculation logic.

Component	Purpose
CalculatorComponent	This is the main parent component, it is bound to the Display and Keypad via output and input bindings
KeypadComponent	Emits keypad Events, as buttons are clicked.
DisplayComponent	Accepts input binding to a displayTest property to represent the calculator display

CalculatorService

CalculatorService is intended as a singleton class, it provides two methods to components, one method to pass keypad entry to the calculation process, and another method to fetch the string value for display to the user.

The source-code is arranged in a nested component structure. Ng-cli was used to generate the components and the service. npm was used for package management.

Running the unit tests

Using ng-cli

Execute :
ng test

This should launch Karma, and display the test results from **calculator.service.spec** (Has the calculator service test at this point).
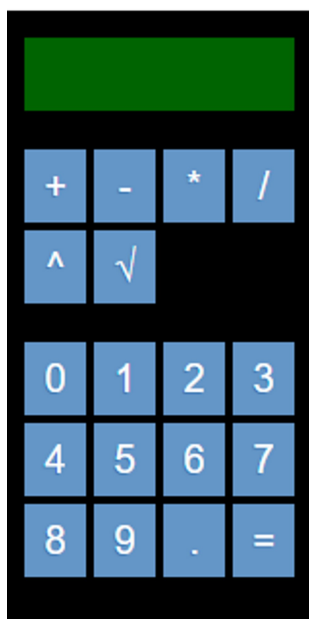
Running the application

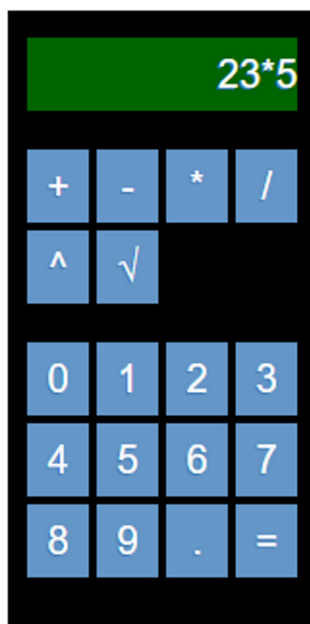Example functional run :

Using ng-cli

Execute :
ng serve

Angular Exercise

Enter the equation to be calculated :

Click the = key to show the result :