

Lesson 2 (2 – 3 days)

Lesson Overview

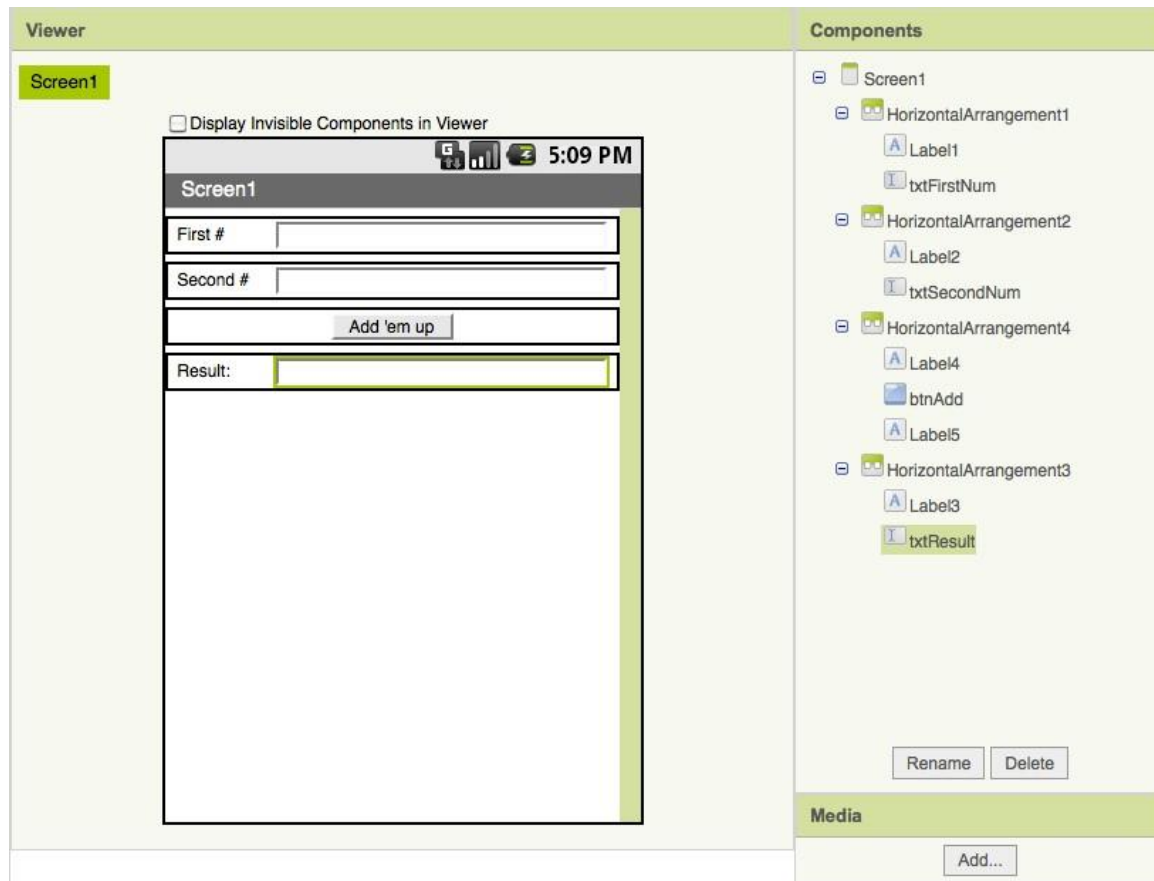
Students will be introduced to the more AppInventor components as well as build a calculator application.

Objectives

- Students will understand more basic features of AppInventor
- Students will build a calculator application

Activity

Introduce students to **Textbox** and **Label** components, and ask them to use these along with HorizontalArrangements and Buttons to produce the interface for a two-number adder that looks as follows.

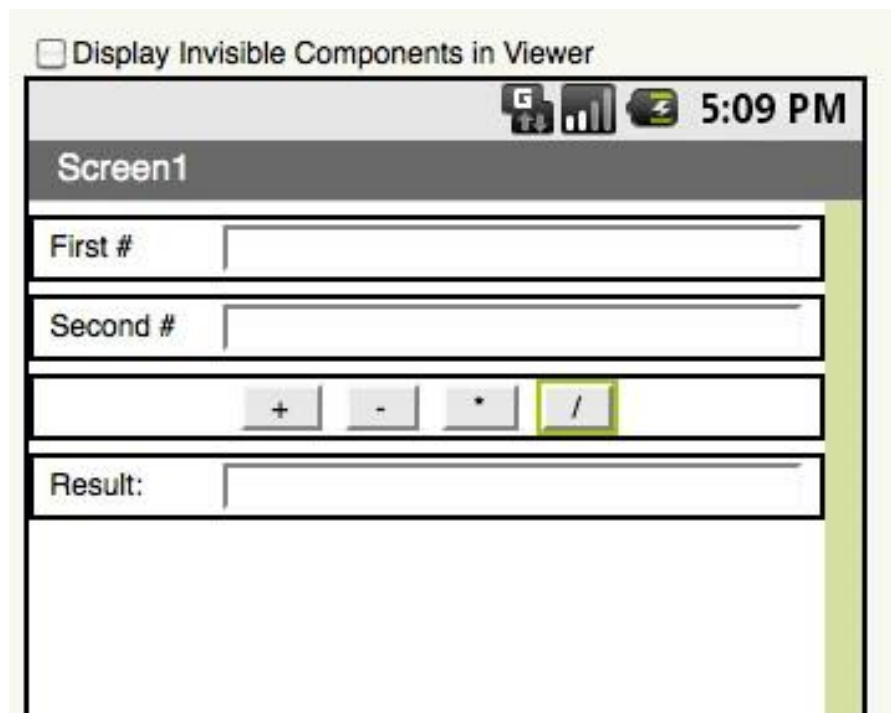


The goal of this adder is to add the two numbers typed in by the user and to indicate their sum in the result text box when the 'add' button is pressed.

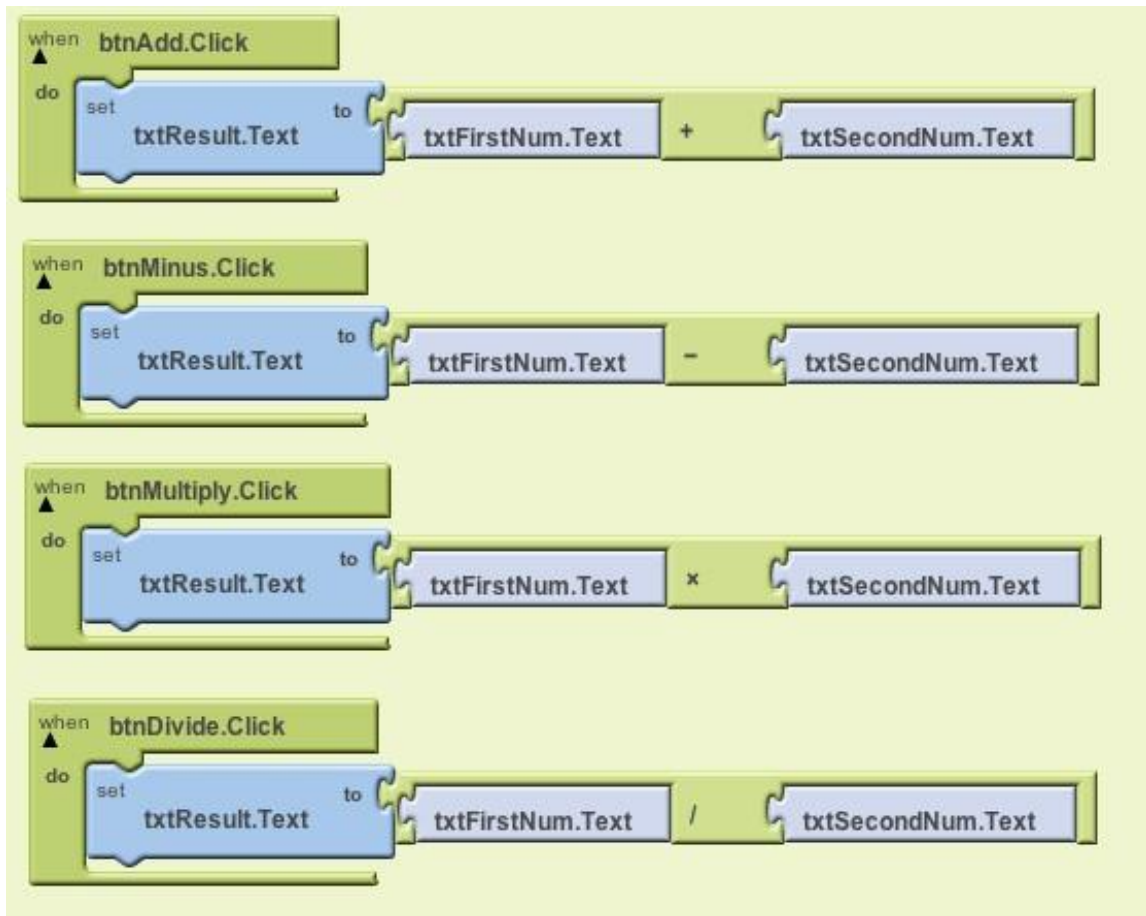
As the students implement this functionality in the Blocks Editor, they will learn about **properties** of components, and will learn to get and set their value.



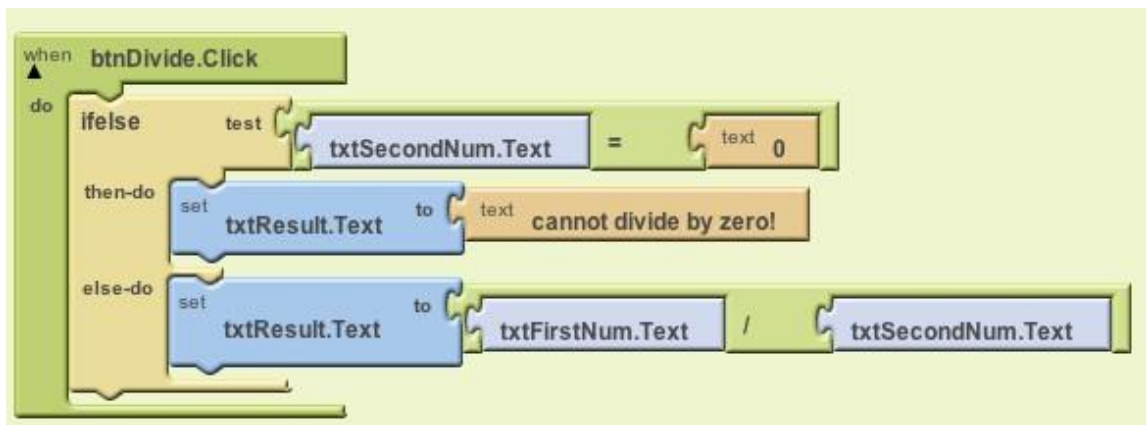
Students should work individually to modify this adder and turn it into a calculator that can do all four operations on two numbers. The students should use screen arrangements to make this look nice, see below for a screenshot:



After the students have implemented the interface, ask them to follow the model of the adder they previously constructed to implement the subtraction, multiplication, and division operations.



Next, teach students about basic control structures, specifically **if-else statements**. Ask students to use if statements to prevent division by zero. Here is one way of doing this:



Extra Credit: Ask students that finish early to style their calculator by changing background color / images of the screen, buttons, textboxes, or other components.

Once all students are caught up, teach how to **package** Appinventor apps to the phone so that the app can run on the phone without requiring the phone to remain connected to the computer. Ask students to package their calculators and their MediaPlayer apps and to download these to their Android devices.

