

Tip Calculator App

In this tutorial, you will create an app that calculates a 15%, 20%, or 25% tip on a meal purchased at a restaurant. When the app runs, the user enters the total amount of the bill into the **TextBoxBill** component and then clicks one of the buttons to calculate the tip. There are three buttons; **Button15Percent** calculates a 15 percent tip, **Button20Percent** calculates a 20 percent tip, and **Button25Percent** calculates a 25 percent tip. The amount of the tip is displayed in the **TextBoxTipDisplay** component. As shown in Figures 3-28 and 3-29

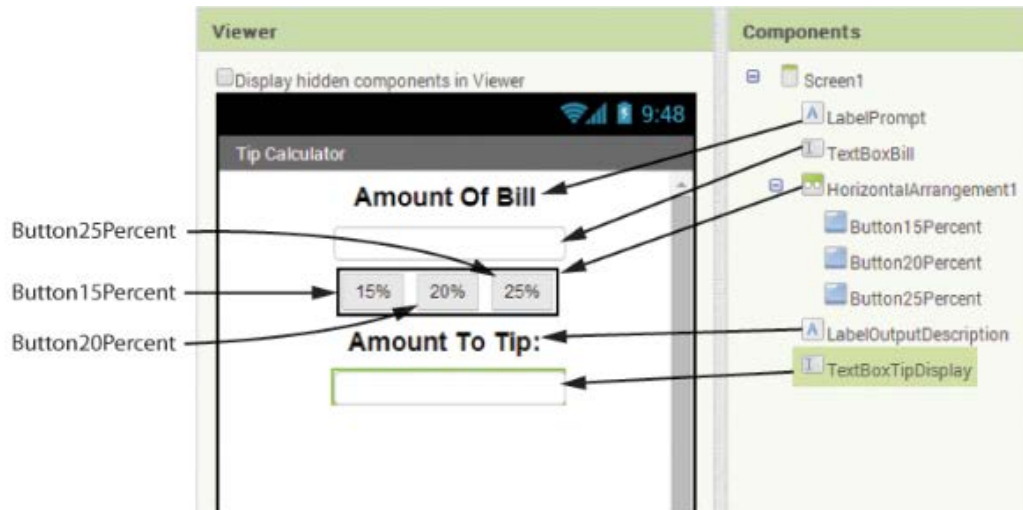


Figure 3-28 The App's User Interface

(Source: MIT App Inventor 2)



Figure 3-29 The App Running in the Emulator

Step 1: Start a new project named TipCalculator.

Step 2: Set up the app's screen with the components shown in Figure 3-28. Set up the relevant property settings for each component as shown in the table below.

Component	Relevant Property Settings
TBL Screen1	AlignHorizontal = Center Title = Tip Calculator
LabelPrompt	FontBold = checked FontSize = 20 Text = Amount of Bill Width = Automatic Height = Automatic
TextBoxBill	Enabled = checked NumbersOnly = checked Hint = Enter the bill amount Width = Automatic Height = Automatic
HorizontalArrangement1	Keep all default property settings
Button15Percent	Text = 15% Width = Automatic Height = Automatic
Button20Percent	Text = 20% Width = Automatic Height = Automatic
Button25Percent	Text = 25% Width = Automatic Height = Automatic
LabelOutputDescription	FontBold = checked FontSize = 20 Text = Amount To Tip: Width = Automatic Height = Automatic
TextBoxTipDisplay	Enabled = unchecked TextAlignment = Center Width = Automatic Height = Automatic

Step 3: Now you will program the Click event handlers for the buttons, starting with the Button15Percent component. The event handler for the Button15Percent component will display the amount of the bill multiplied by 0.15 in the TextBoxDisplay component. The result will be rounded to two decimal places.

Open the Blocks Editor and assemble the blocks shown in Figure 3-30. When you have assembled the blocks, the Click event handler for the Button15Percent component should appear as shown in Figure 3-31.

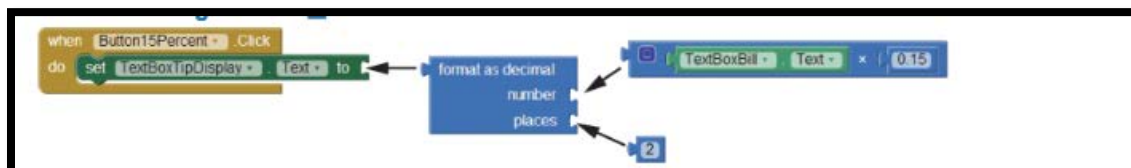


Figure 3-30 The Blocks Needed for the Button15Percent Component's Click Event Handler

(Source: MIT App Inventor 2)

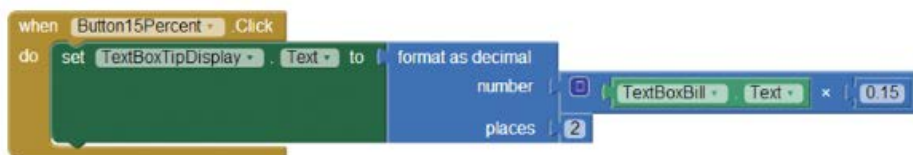
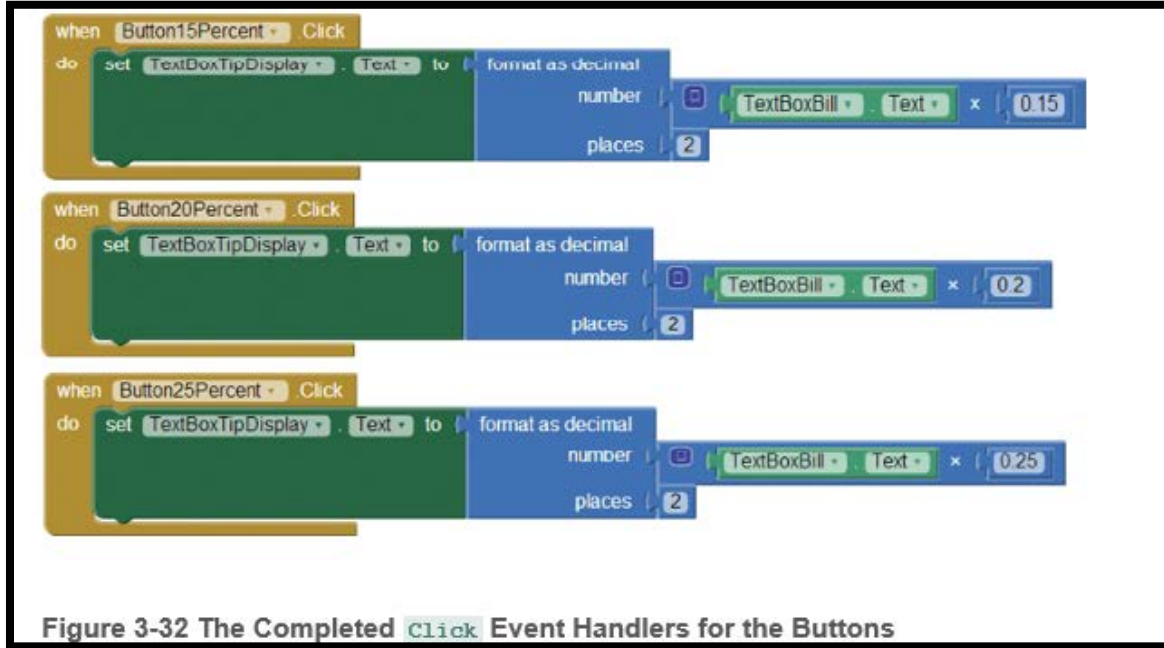


Figure 3-31 The Completed Click Event Handler for the Button15Percent Component

Step 4: Complete the Click event handlers for the Button20Percent and Button25Percent components. Figure 3-32 shows all of the completed Click event handlers.



Step 5: Test the app in the emulator, or with a device. Enter 100 for the amount of the bill and click each button to see the amount of the tip. As shown in Figure 3-33, the app should display 15.00 as 15%, 20.00 as 20%, and 25.00 as 25%. Experiment with other values to confirm that the app is correct.

