

CHAPTER 5

Repetition Blocks, Times, and Dates

starting out with >>> **APP INVENTOR**
FOR ANDROID



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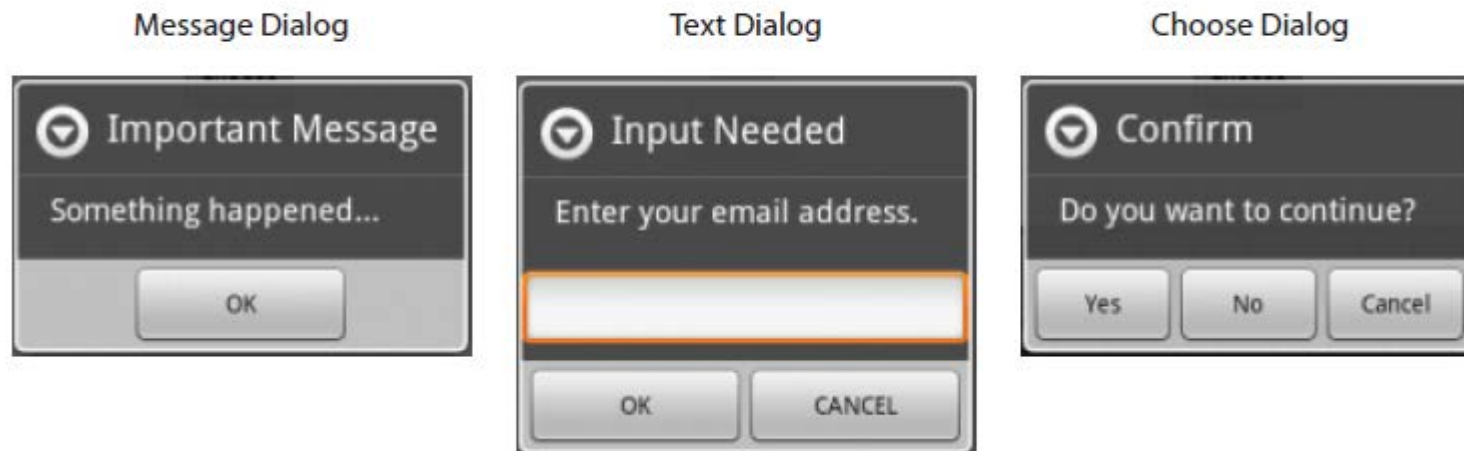
Topics

- The *Notifier* Component
- The *while* Loop
- The *for each* Loop
- The *Clock* Component
- The *DatePicker* Component

The Notifier Component

- The *Notifier* is a nonvisible component that allows an app to display dialog boxes.
- The *Notifier* Component displays the following boxes.

Figure 5-1 Dialog Boxes Displayed by the Notifier Component (Source: MIT App Inventor 2)



The Notifier Component

Message dialog

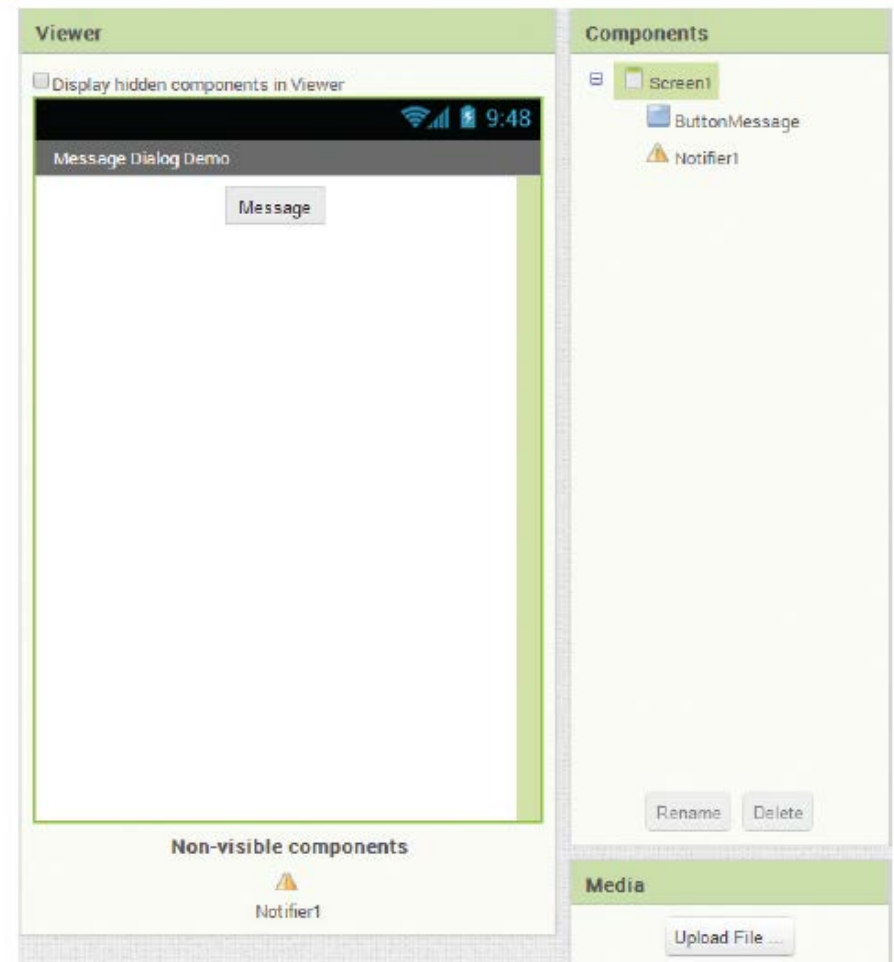
- A window that displays a title and a message.
- Waits for the user to click a button.

The Notifier Component

The Message Dialog

- Display a message dialog by calling the *Notifier* component's *ShowMessageDialog* method.
- The Project has a button named *ButtonMessage* and a *Notifier* named *Notifier1*.
- User clicks the button and a message dialog appears.

Figure 5-2 The MessageDialogDemo Project in the Designer (Source: MIT App Inventor 2)



The `Notifier` Component

The Message Dialog

In Figure 5-3 the the method takes three arguments:

- *message* — The text of the message to display. In this example, *Something happened...*
- *title* — The title to display. In this example, *Important Message*.
- *buttonText* — The text to display on the dialog box's button. In this example, *OK*.

The Notifier Component

Figure 5-3 The ButtonMessage Component's Click Event Handler
(Source: MIT App Inventor 2)



The Click event handler calls the *Notifier1.ShowMessageDialog* method.

The Notifier Component

The Text Dialog

- A text dialog displays a message and provides a box (like a *TextBox*) for the user to type input.

The Notifier Component

Figure 5-4 The Message Dialog Box (Source: MIT App Inventor 2)

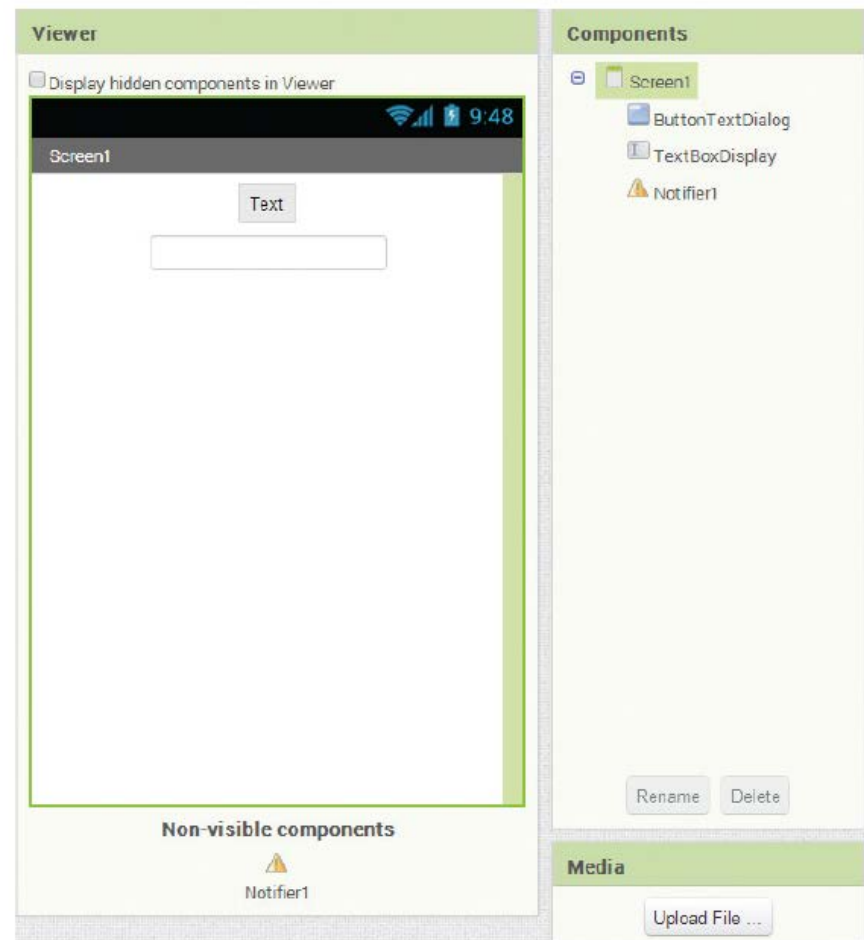


The Notifier Component

The Text Dialog Contains

- A button named *ButtonTextDialog*.
- A *TextBox* named *TextBoxDisplay*.
- A *Notifier* named *Notifier1*.
- When the app runs, the user clicks the button and the text dialog shown in the image on the left in Figure 5-6 appears.

Figure 5-5 The TextDialogDemo Project in the Designer (Source: MIT App Inventor 2)



The Notifier Component

The Text Dialog

When the app runs, the user clicks the button and the text dialog shown in the image on the left in Figure 5-6 appears.

Figure 5-5 The TextDialogDemo Project in the Designer (Source: MIT App Inventor 2)

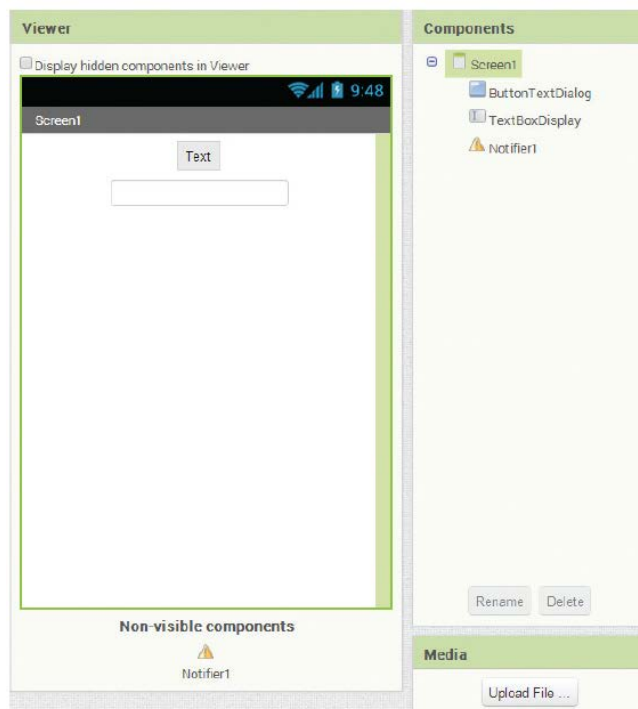
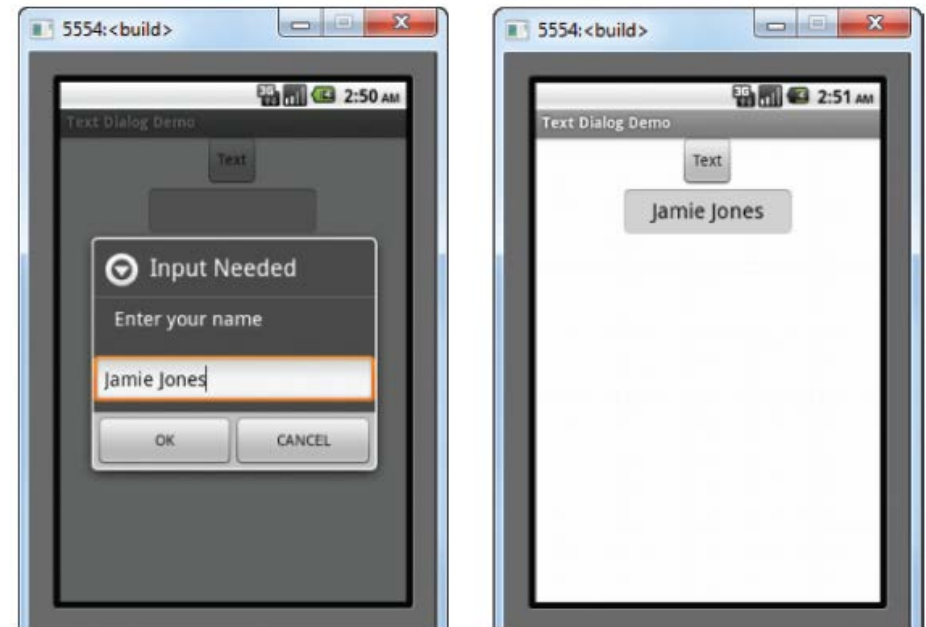


Figure 5-6 The Text Dialog Displayed (Source: MIT App Inventor 2)

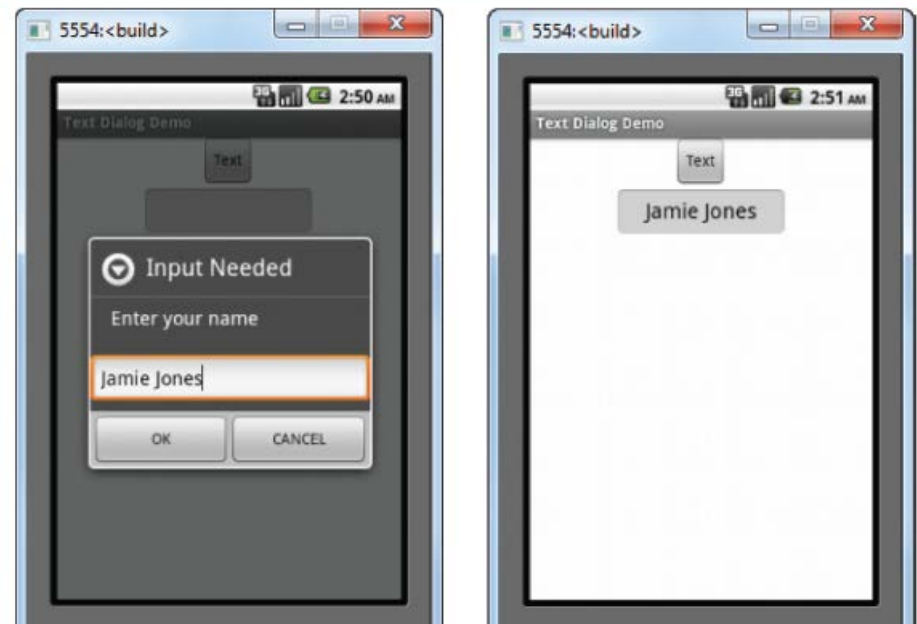


The Notifier Component

The Text Dialog

- The Dialog prompts the user to enter his or her name.
- The user clicks the *OK* button.
- The user's input is displayed in the *TextBoxDisplay* component.

Figure 5-6 The Text Dialog Displayed (Source: MIT App Inventor 2)



The `Notifier` Component

The Text Dialog

Figure 5-7 shows the app's workspace in the Blocks Editor. Notice that the method takes three arguments:

- *message* — The text of the message to display.
- *title* — The title to display.
- *cancelable* — A true or false value.

The Notifier Component

The Text Dialog

As you can see in Figure 5-7, the event handler assigns the value for the response parameter to *TextBoxDisplay*'s *Text* property.

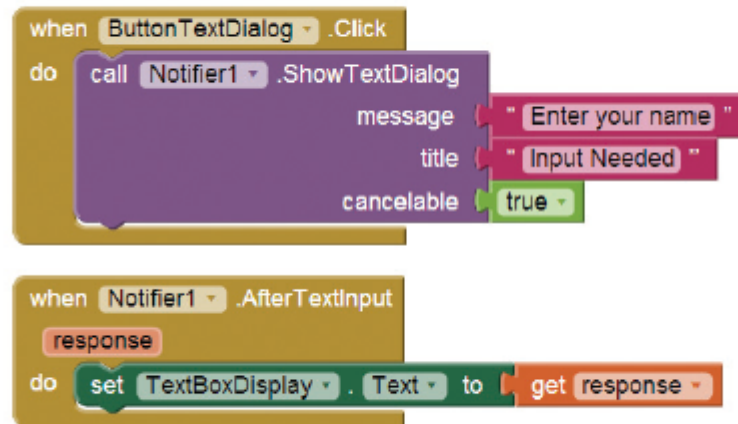
[Figure 5-7]

The Notifier Component

The Text Dialog

Shows the app's workspace in the Blocks Editor.

Figure 5-7 The App's Workspace in the Blocks Editor (Source: MIT App Inventor 2)



The Notifier Component

The Text Dialog

- The *ButtonTextDialog.Click* event handler calls the *Notifier1.ShowTextDialog* method.
- The method takes three arguments.
 - *message* – The text of the message to display.
 - *title* – The title to display.
 - *cancelable* – A *true* or *false* value.
 - If *true*, the dialog will have a *Cancel* button
 - If *false*, the dialog will only have an *OK* button.

The Notifier Component

The Text Dialog

- After the user clicks *OK* or *Cancel*, the box closes and an *AfterTextInput* event occurs.
- The event handler has a parameter named *response*.
- *response* holds the input typed by the user in to the text dialog.
- The event handler assigns the value of the *response* parameter to *TextBoxDisplay's Text* property.
- If the user click *Cancel*, the value of the *response* parameter in the *AfterTextInput* event handler will be the text *Cancel*.

The *Notifier* Component

Choose dialog

- A window that displays a *title* and a *message*.
- Lets the user click one of two buttons.
- Optionally displays a *Cancel* button.
- Displays a message and waits for the user to click a button.
- Displays a message dialog by calling the *Notifier* component's *ShowMessageDialog* method.

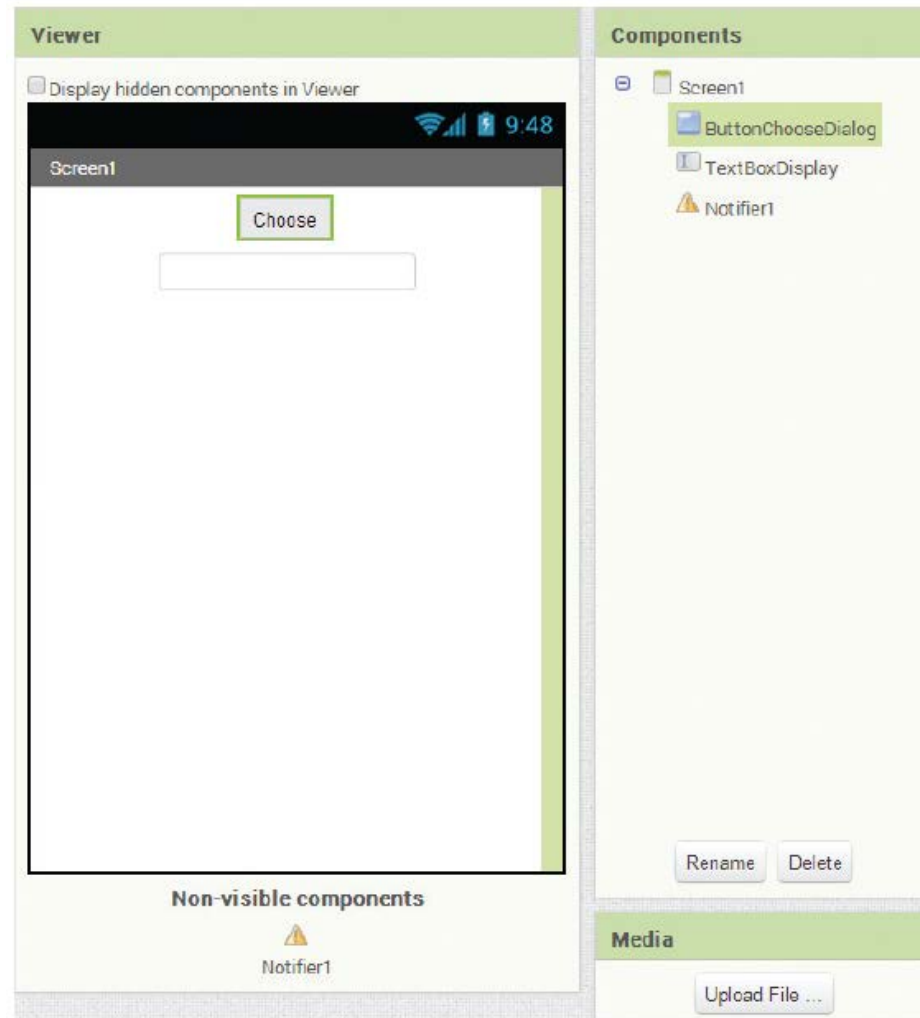
The Notifier Component

The Choose Dialog

- The method takes three arguments:
 - *message* – The text of the message to display.
 - *title* – The title to display.
 - *button1Text* – The text to display on the dialog box's button.

The Notifier Component

Figure 5-8 The ChooseDialogDemo Project in the Designer (Source: MIT App Inventor 2)



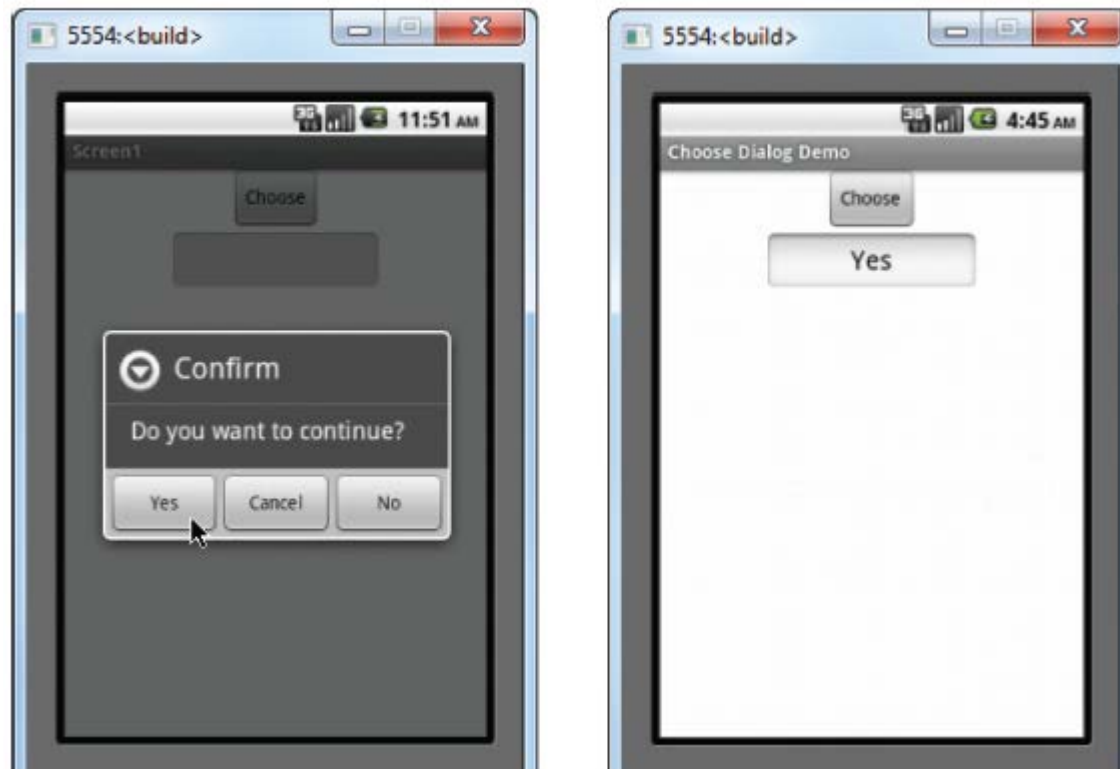
The Notifier Component

The Choose Dialog

- The user can make a choice by clicking one of two buttons and optionally it may contain a *Cancel* button.
- The *AfterChoosing* event occurs once the user has clicked the button.
- You can create an event handler for the *AfterChoosing* event to determine which button was clicked.

The Notifier Component

Figure 5-9 The Choose Dialog Displayed (Source: MIT App Inventor 2)



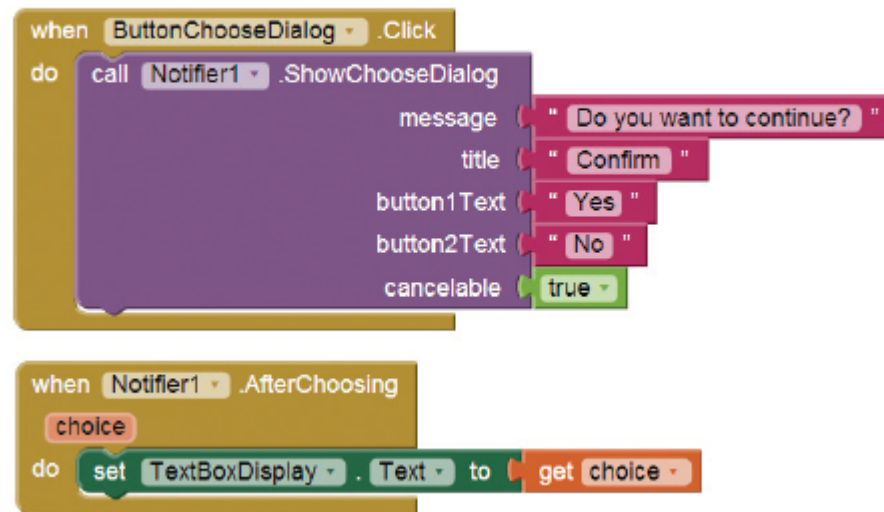
The Notifier Component

The Choose Dialog

- The ChooseDialogDemo Project project has
 - A button named *ButtonChooseDialog*.
 - A TextBox named *TextBoxDisplay*.
 - A Notifier named *Notifier1*.
- When the app runs, the user clicks the button and the choose dialog shown in the image on the left in Figure 5-9 appears.
- The dialog waits for the user to click the *Yes*, *No* or *Cancel* button.
- The user's choice is displayed in the *TextBoxDisplay* component.

The Notifier Component

Figure 5-10 The App's Workspace in the Blocks Editor (Source: MIT App Inventor 2)



The Notifier Component

The Choose Dialog

• The *ButtonChooseDialog.Click* event handler calls the *Notifier1.ShowChooseDialog* method and that method takes five arguments.

- *message* – The text of the message displayed.
- *title* – The title to display.
- *button1Text* – The text to display on the first button.
- *button2Text* – The text to display on the second button.
- *cancelable* – A true or false value.

The Notifier Component

The Choose Dialog

- An *AfterChoosing* event occurs once the user clicks any of the buttons on the dialog box.
- Figure 5-10 shows the event handler for the *AfterChoosing* event.
- The event handler has a parameter named *choice*.
- *Choice* holds the text of the button that the user clicked.
- The even handler assigns the value of the choice parameter to *TextBoxDisplay*'s Text property.