

# App Inventor

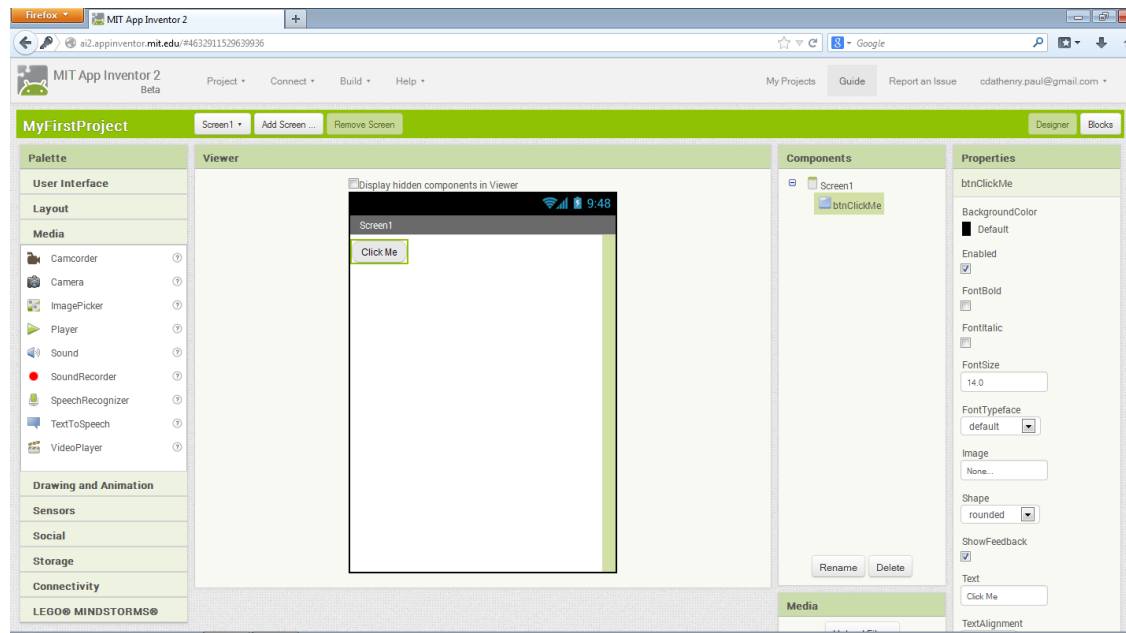


- We are going to improve our first app by adding Text To Speech.
- This app has a button that when pressed the text on the button will change and the phone will speak.



# App Inventor – Step 1

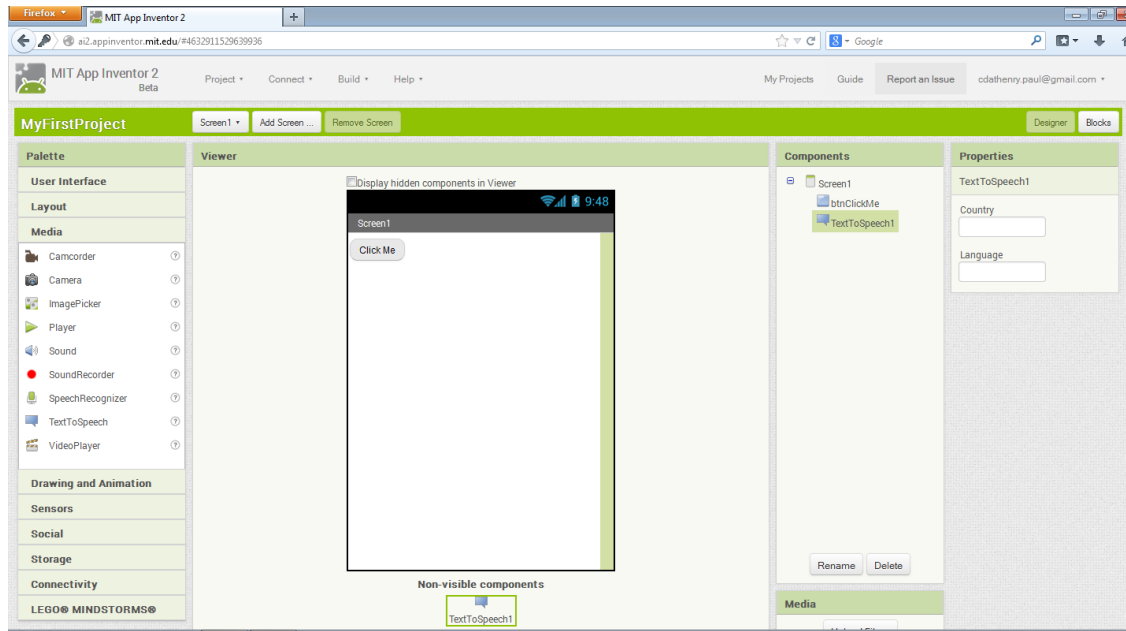
Click the **Media Palette**, select the **"TextToSpeech"** component.





# App Inventor – Step 2

Drag and drop the "TextToSpeech" component onto the App Inventor Screen.





# App Inventor – Step 3

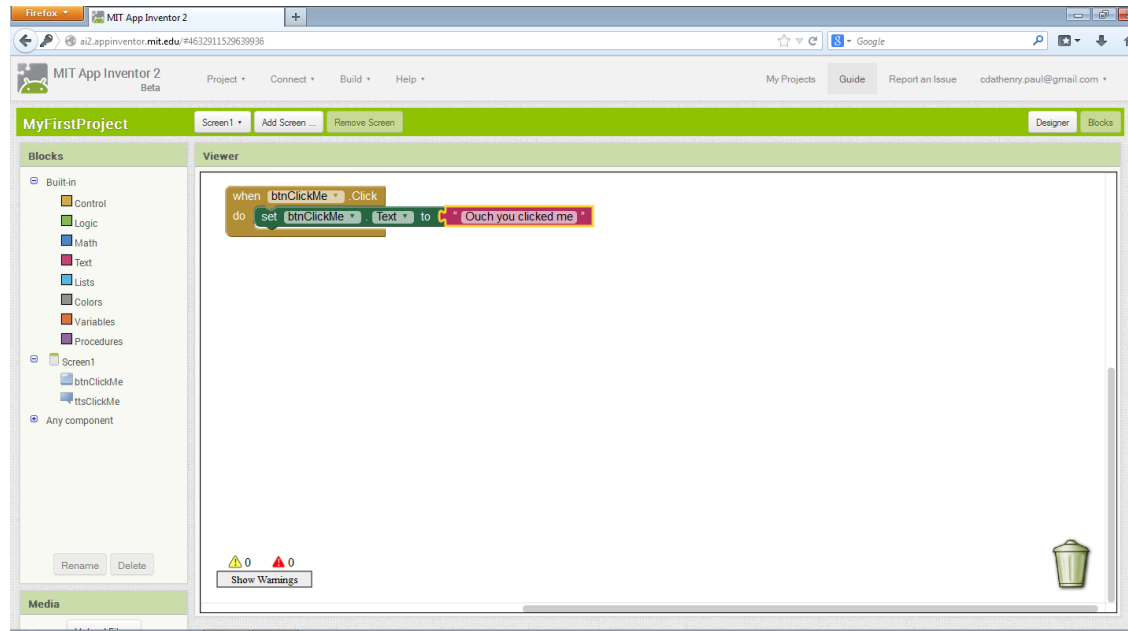
The "TextToSpeech" component does not appear on the screen. It is a hidden component. Rename to **ttsClickMe**.

The screenshot displays the MIT App Inventor 2 web interface. The main workspace is divided into four panes: Palette, Viewer, Components, and Properties. The Palette on the left lists various components, including 'TextToSpeech'. The Viewer in the center shows a mobile app preview with a 'Click Me' button. A checkbox labeled 'Display hidden components in Viewer' is checked. The Components pane on the right shows a tree view with 'Screen1' containing 'btnClickMe' and 'TextToSpeech1'. The Properties pane on the far right shows the properties for 'TextToSpeech1', including 'Country' and 'Language' input fields. A blue arrow points from the 'TextToSpeech1' component in the Components pane to the 'Non-visible components' section at the bottom of the interface, which also contains a 'TextToSpeech1' component.



# App Inventor – Step 4

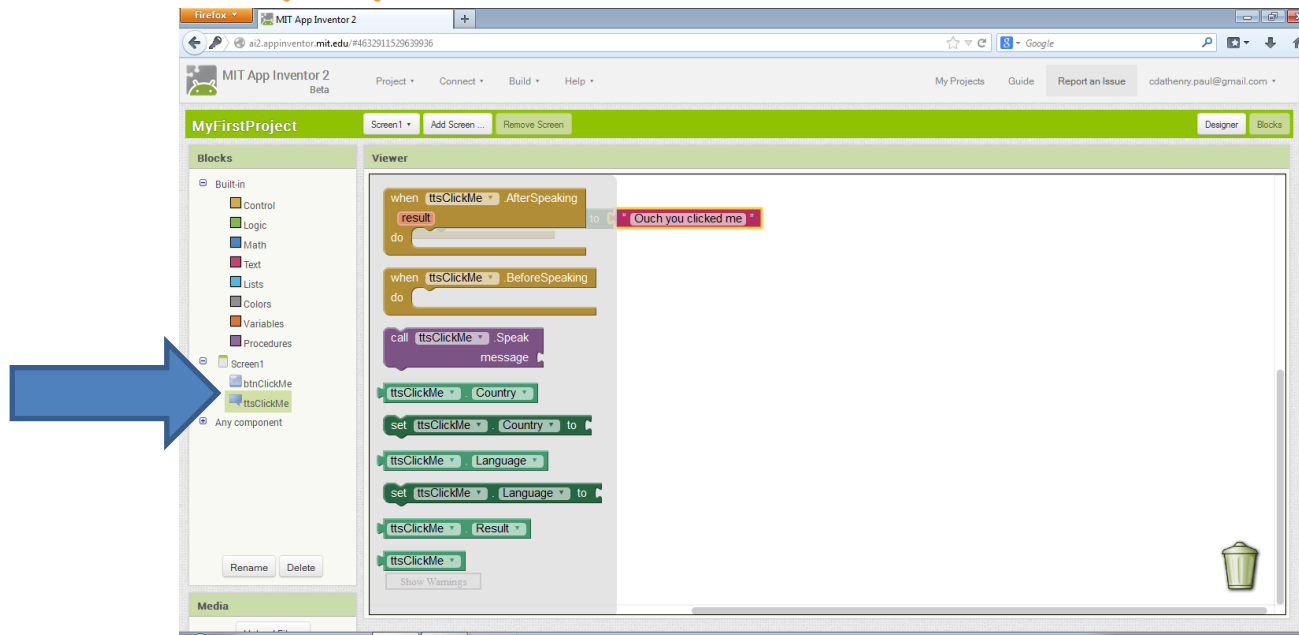
Click the **Blocks** button to open the script editor.





# App Inventor – Step 5

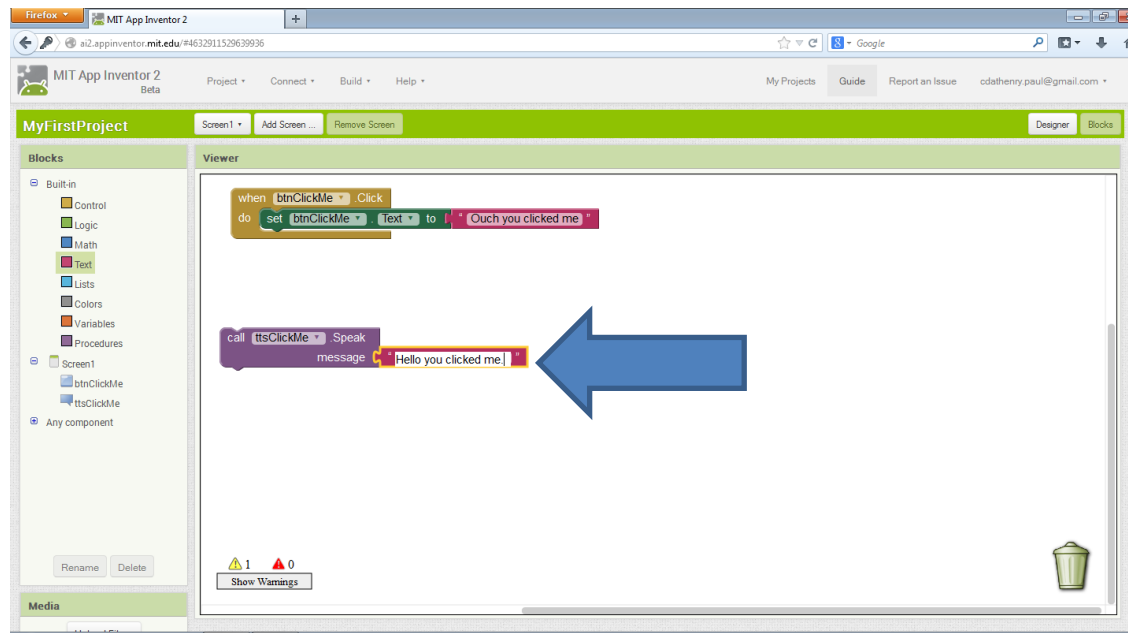
Click the TextToSpeech Block. Select the "call ttsClickMe.Speak message" script from the pop out.





# App Inventor – Step 6

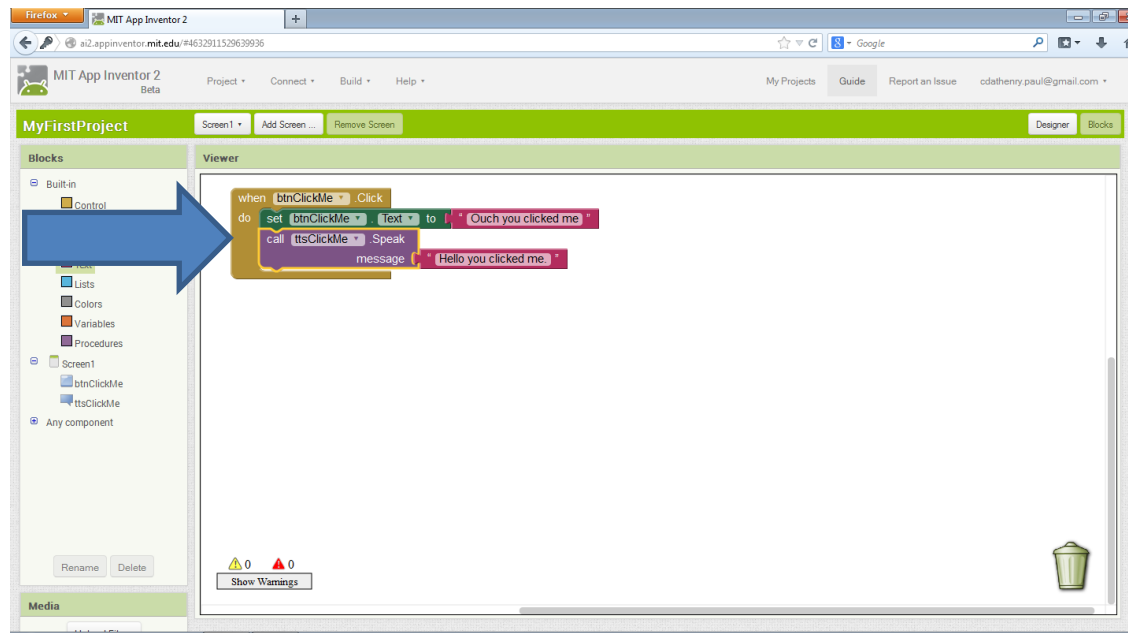
In the **Built In Blocks** select the **Text Block**. Type in the text you want to hear.





# App Inventor – Step 7

Drag and drop the "call ttsClickMe.Speak message" into the "when btnClickMe.Click do" block.

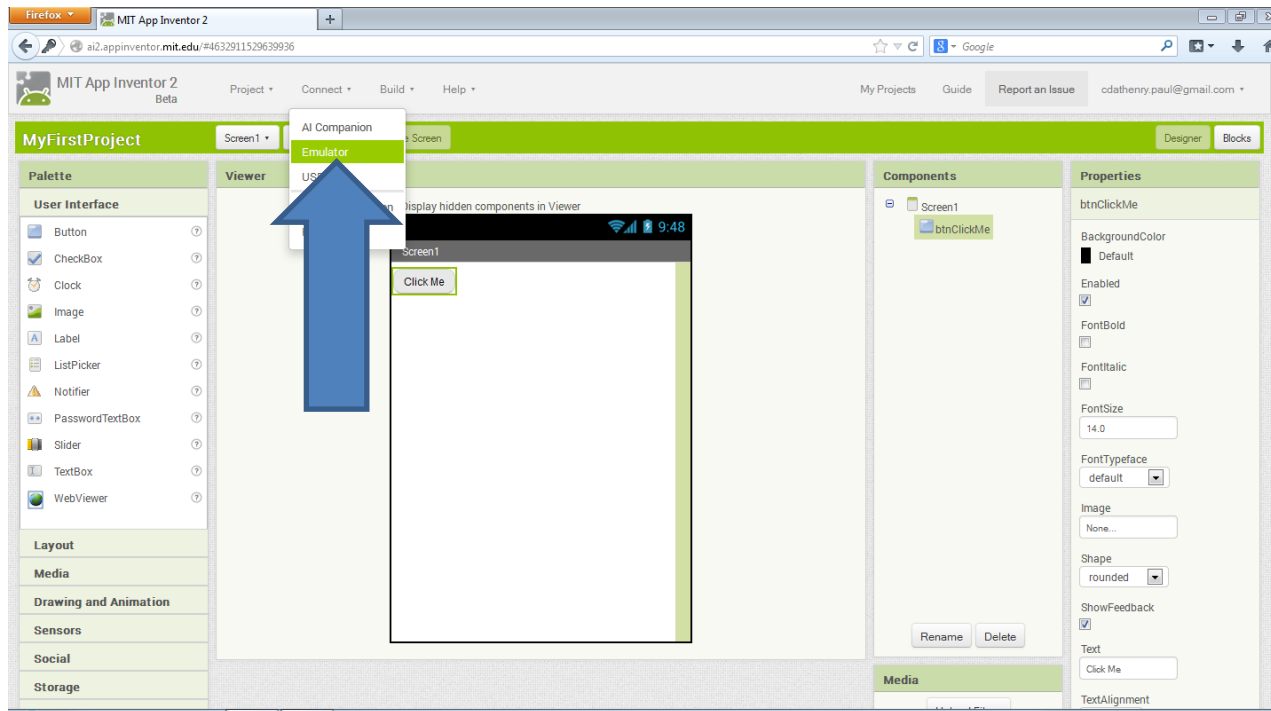






# App Inventor – Step 8

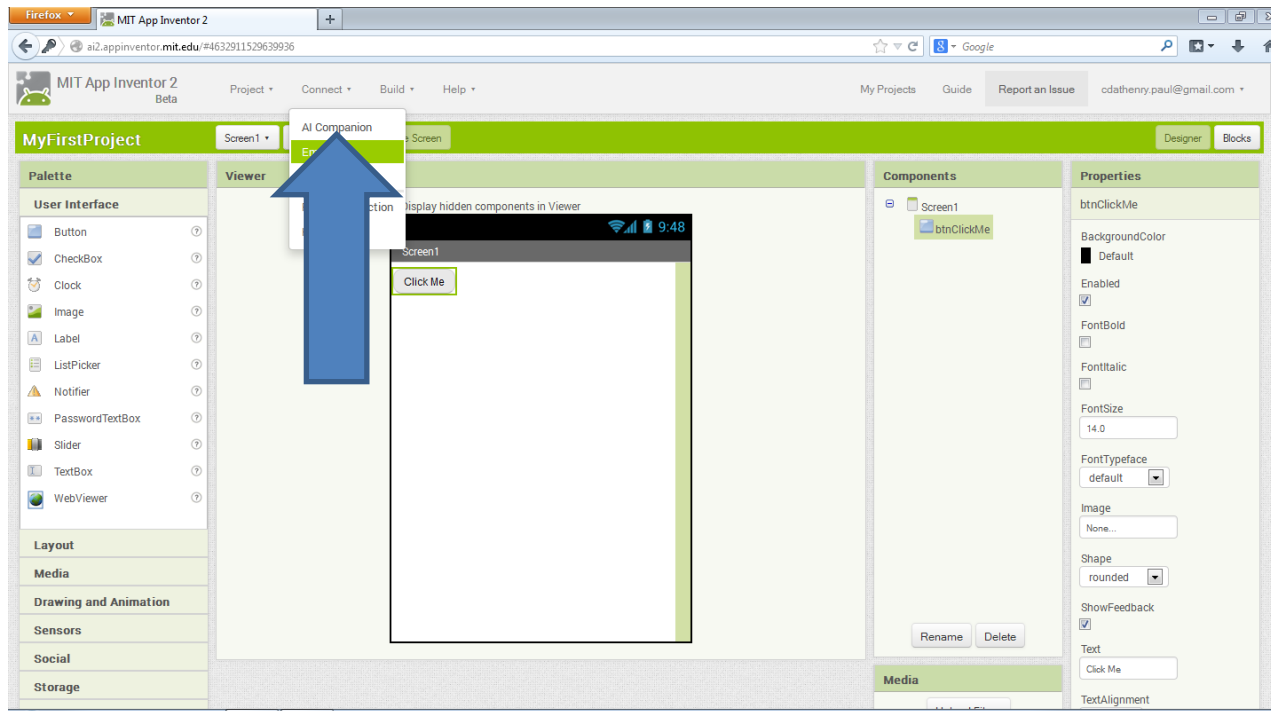
Click Connect, Emulator to launch the Emulator.





# App Inventor – Step 9

Or click **Connect, AI Companion** to launch the app on an Android mobile device.



# App Inventor

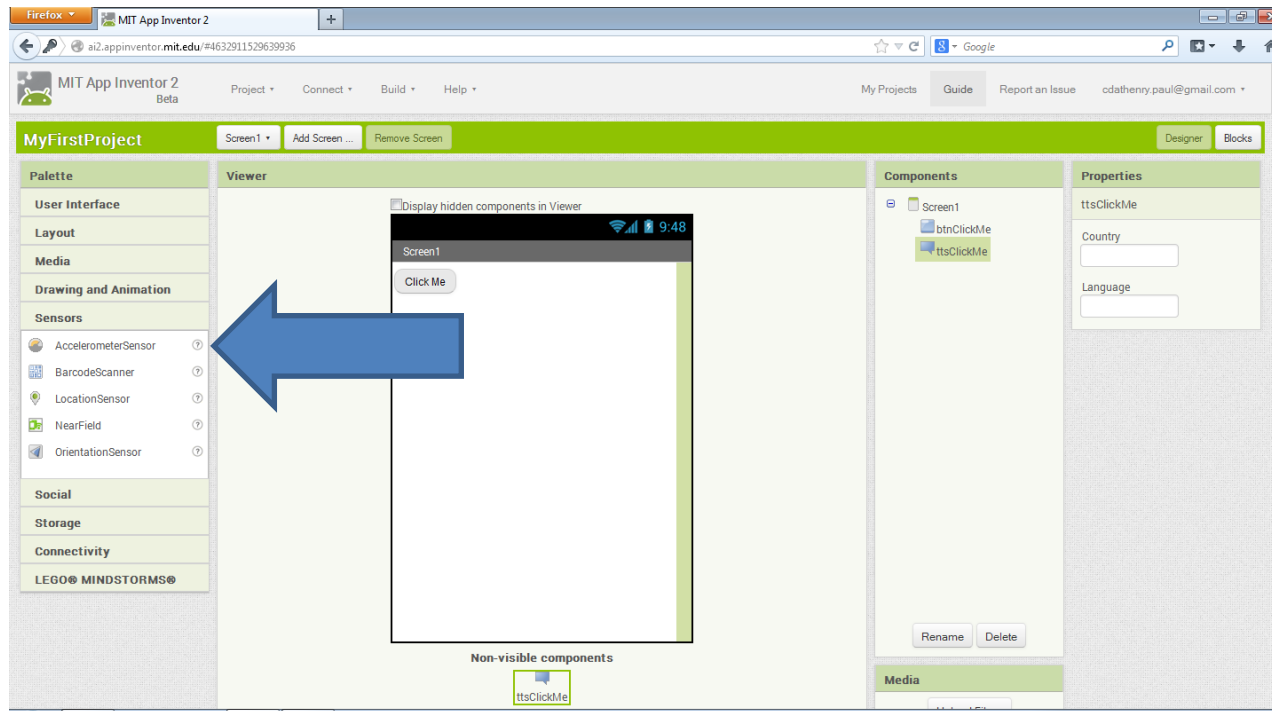


- We are going to improve our first app more by adding an accelerometer.
- When the phone is shaken the the phone will speak.



# App Inventor – Step 10

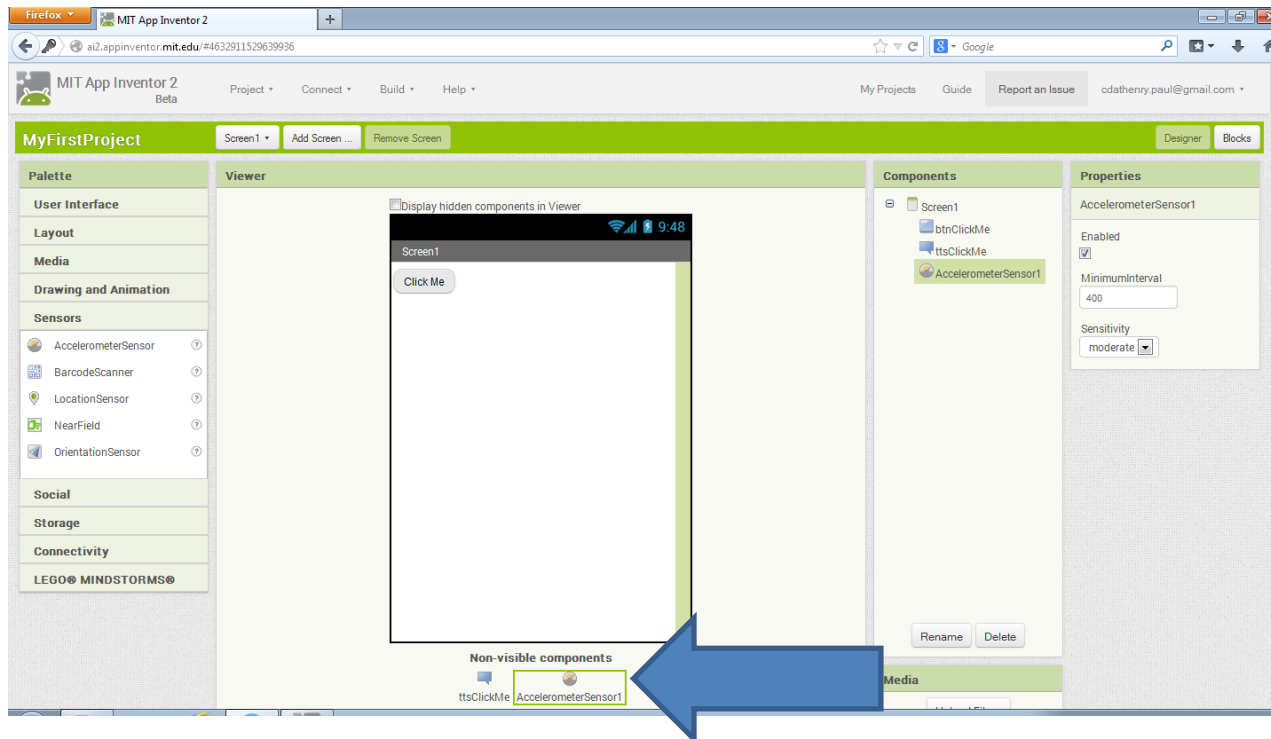
Click the Sensors Palette, select the "AccelerometerSensor" component.





# App Inventor – Step 11

Drag and drop the "AcceleratorSensor" component onto the App Inventor Screen.





# App Inventor – Step 12

Rename the "AccelerometerSensor" to "accClickMe".

The screenshot displays the MIT App Inventor 2 web interface. The browser window title is "MIT App Inventor 2" and the URL is "ai2.appinventor.mit.edu/#4632911529639936". The interface includes a menu bar with "Project", "Connect", "Build", and "Help". Below the menu is a project name "MyFirstProject" and a "Screen1" dropdown. The main workspace is divided into four panels: "Palette" (containing various sensors and components), "Viewer" (showing a mobile app preview with a "Click Me" button), "Components" (listing "Screen1", "btnClickMe", "ttsClickMe", and "AccelerometerSensor1"), and "Properties" (showing settings for "AccelerometerSensor1"). A "Rename Component" dialog box is open in the center, with "Old name: AccelerometerSensor1" and "New name: accClickMe". A large blue arrow points from the dialog to the "AccelerometerSensor1" component in the Components panel. At the bottom, a "Non-visible components" section shows "ttsClickMe" and "AccelerometerSensor1".



# App Inventor – Step 13

Click the accClickMe Block. Select the "when accClickMe.Shaking do" script from the pop out.

The screenshot shows the MIT App Inventor 2 web interface. On the left, the 'Blocks' palette is open, and the 'accClickMe' block is highlighted. A blue arrow points from the left towards the 'accClickMe' block. In the center, the 'Viewer' pane shows the 'when accClickMe.Shaking do' script. The script contains several blocks: 'call ItsClickMe.Speak', 'message', 'when accClickMe.Shaking do', 'accClickMe.Available', 'accClickMe.Enabled', 'set accClickMe.Enabled to', 'accClickMe.MinimumInterval', 'set accClickMe.MinimumInterval to', 'accClickMe.Sensitivity', 'set accClickMe.Sensitivity to', 'accClickMe.XAccel', and 'accClickMe.YAccel'. On the right, the 'Designer' pane shows a text label 'ch you clicked me' and a 'clicked me' button. The browser address bar shows 'ai2.appinventor.mit.edu/#4632911529639936'.



# App Inventor – Step 14

In the "when accClickMe.Shaking do" script duplicate the "call ttsClickMe.Speak message" script.

The screenshot shows the MIT App Inventor 2 web interface. The browser address bar shows 'ai2.appinventor.mit.edu/#4652911529639936'. The page title is 'MIT App Inventor 2 Beta'. The main workspace is titled 'MyFirstProject' and shows a 'Screen1' view. On the left, the 'Blocks' palette is visible, with 'accClickMe' selected. The 'Viewer' area shows two script blocks. The first block is 'when btnClickMe Click do' with 'set btnClickMe text to Ouch you clicked me', 'call ttsClickMe Speak message Hello you clicked me.', and 'message Stop shaking me.'. The second block is 'when accClickMe Shaking do' with 'call ttsClickMe Speak message Stop shaking me.'. A large blue arrow points to the 'call ttsClickMe Speak message Stop shaking me.' block in the second script, indicating it should be duplicated.





# App Inventor – Step 15

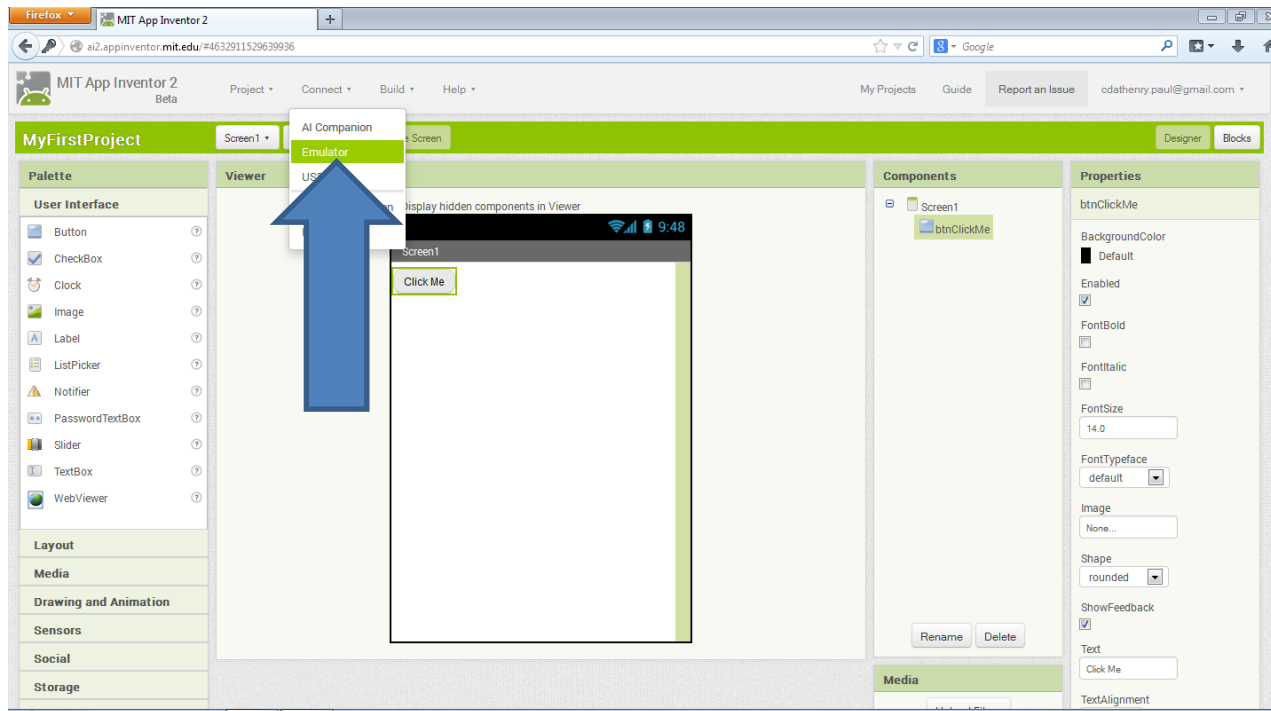
Type the text you want to hear when the phone is shaken.

The screenshot displays the MIT App Inventor 2 web interface. The browser address bar shows the URL 'ai2.appinventor.mit.edu/#4632911529639936'. The page title is 'MIT App Inventor 2 Beta'. The main workspace is titled 'MyFirstProject' and contains two event-driven code blocks. The first block is triggered by a 'Click' event on the 'btnClickMe' component and contains three actions: 'set btnClickMe text to "Ouch you clicked me"', 'call ttsClickMe Speak', and 'message "Hello you clicked me."'. The second block is triggered by a 'Shaking' event on the 'accClickMe' component and contains two actions: 'call ttsClickMe Speak' and 'message "Stop shaking me."'. A large blue arrow points to the 'message' block in the second code block. The left sidebar shows a 'Blocks' palette with categories like Control, Logic, Math, Text, Lists, Colors, Variables, and Procedures. The bottom of the interface includes a 'Media' section and a 'Show Warnings' button.



# App Inventor – Step 16

Click Connect, Emulator to launch the Emulator.





# App Inventor – Step 17

Or click **Connect, AI Companion** to launch the app on an Android mobile device.

