

MagicTrick Part 2

Before you begin this lesson, make sure you've completed [MagicTrick Part 1](#)!

This lesson is an extension on Part 1 and will show you how to shake the phone to perform the trick.

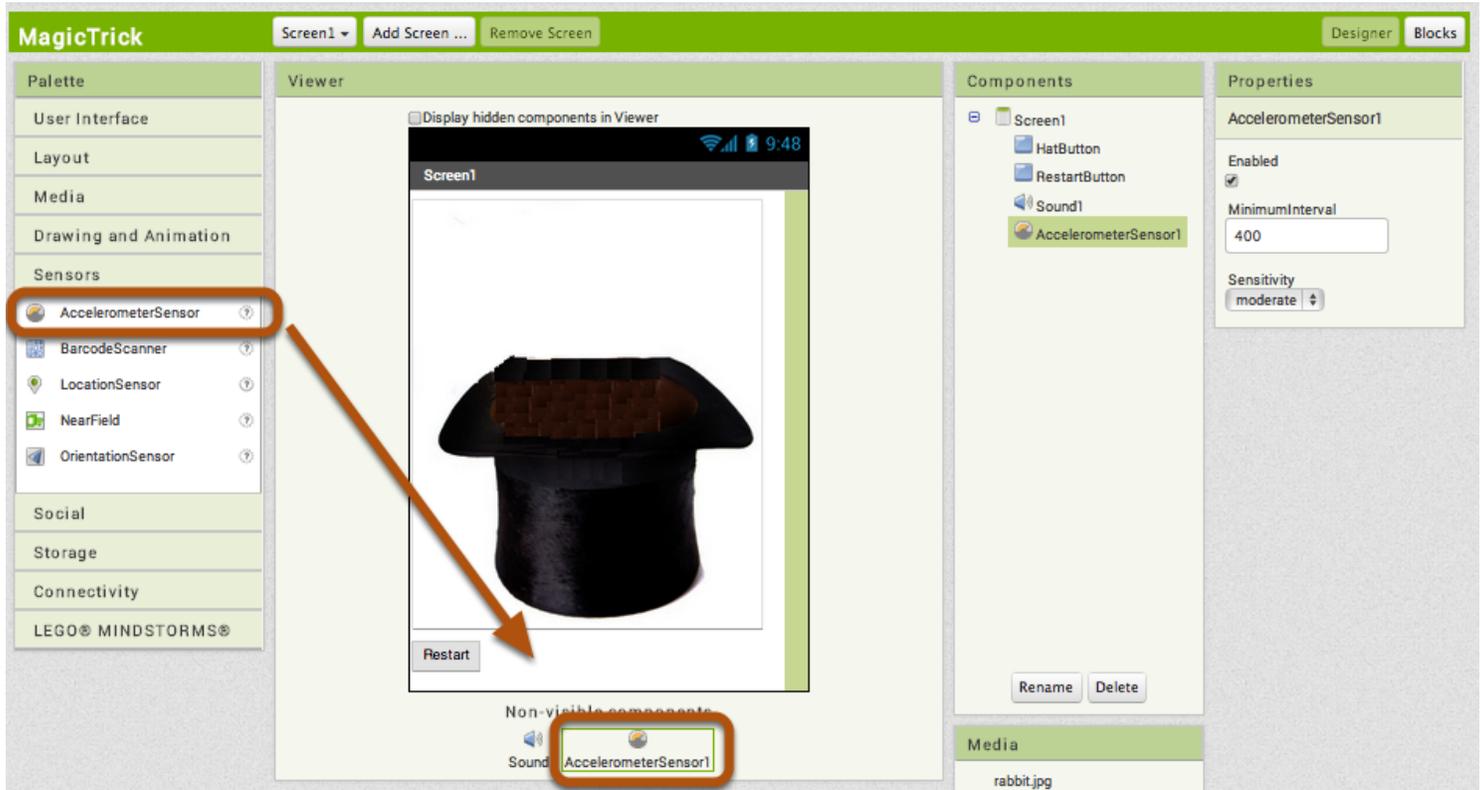
Getting Started

Make sure you are logged on to ai2.appinventor.mit.edu and MagicTrick (from Part 1) is showing in your Designer.

The screenshot displays the MIT App Inventor 2 Beta web interface. At the top, the navigation bar includes 'Project', 'Connect', 'Build', and 'Help' menus, along with 'My Projects', 'Guide', 'Report an Issue', and the user email 'appinventoruser1@gmail.com'. The main workspace is titled 'MagicTrick' and shows 'Screen1' selected. The left 'Palette' is organized into categories: User Interface, Layout, Media (containing Camcorder, Camera, ImagePicker, Player, Sound, SoundRecorder, SpeechRecognizer, TextToSpeech, and VideoPlayer), Drawing and Animation, Sensors, Social, Storage, Connectivity, and LEGO MINDSTORMS. The central 'Viewer' shows a mobile app preview with a top hat image and a 'Restart' button. The right 'Components' panel lists 'Screen1', 'HatButton', 'RestartButton', and 'Sound1'. The 'Properties' panel for 'Sound1' shows 'MinimumInterval' set to 500 and 'Source' set to 'TaDasound.mp3...'. A 'Non-visible components' section at the bottom right shows 'Sound1' as a hidden component. The bottom right 'Media' panel lists 'rabbit.jpg', 'hat.jpg', and 'TaDasound.mp3' with an 'Upload File ...' button.

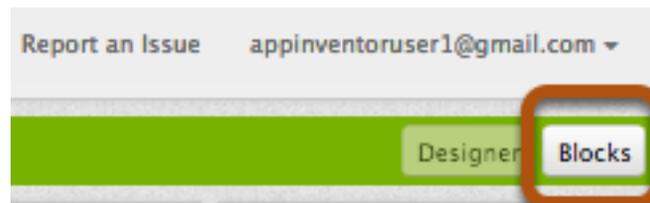
Adding the Accelerometer Sensor Component

Go to Sensors. Click and drag the *Accelerometer Sensor* into the Viewer. Notice that it drops down under "Non-visible components" because it is not something that will show up on the app's user interface.



Switch to the Blocks Editor.

Now switch back to the Blocks Editor so we can program the phone to perform the trick when shaking. Click Blocks to switch.



Program with the Sensor

Click on AccelerometerSensor1 under Screen1. Click and drag the block that says "when AccelerometerSensor1.Shaking". This is an event handler that is called when the phone is shaken.

The screenshot shows the MagicTrick app development interface. On the left is a 'Blocks' palette with categories like Control, Logic, Math, Text, Lists, Colors, Variables, Procedures, Screen1, HatButton, RestartButton, and AccelerometerSensor1. The 'AccelerometerSensor1' block is highlighted. The main 'Viewer' area shows a code editor with several blocks. A 'when AccelerometerSensor1 .Shaking' block is highlighted with a red box. An orange arrow points from this block to a 'set HatButton . Image to "hat.jpg"' block in another event handler. Other blocks include 'when AccelerometerSensor1 .AccelerationChanged', 'when HatButton .Click', 'when RestartButton .Click', and 'when AccelerometerSensor1 .Shaking'.

Duplicating the Blocks

When the phone is shaking, we want the image to change and the sound to play. We can use the "duplicate" feature to copy the blocks. Right click on the "set HatButton.Image to" block and select duplicate. Move this block into the "Shaking" event handler. Repeat for the "call Sound1.Play" block.

The screenshot shows a close-up of the code editor. A context menu is open over a 'set HatButton . Image to "hat.jpg"' block. The menu options are: Duplicate, Add Comment, Collapse Block, Disable Block, Delete Block, Help, and Do It. Below the menu, the 'when AccelerometerSensor1 .Shaking' event handler is visible, containing a 'set HatButton . Image to "rabbit.jpg"' block.

Try it out!

Try shaking the phone! Does the image change? Does the sound play?

Great job!

You just finished MagicTrick Part 2! Great job!