

Introduction to Programming and App Inventor

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



TOPICS

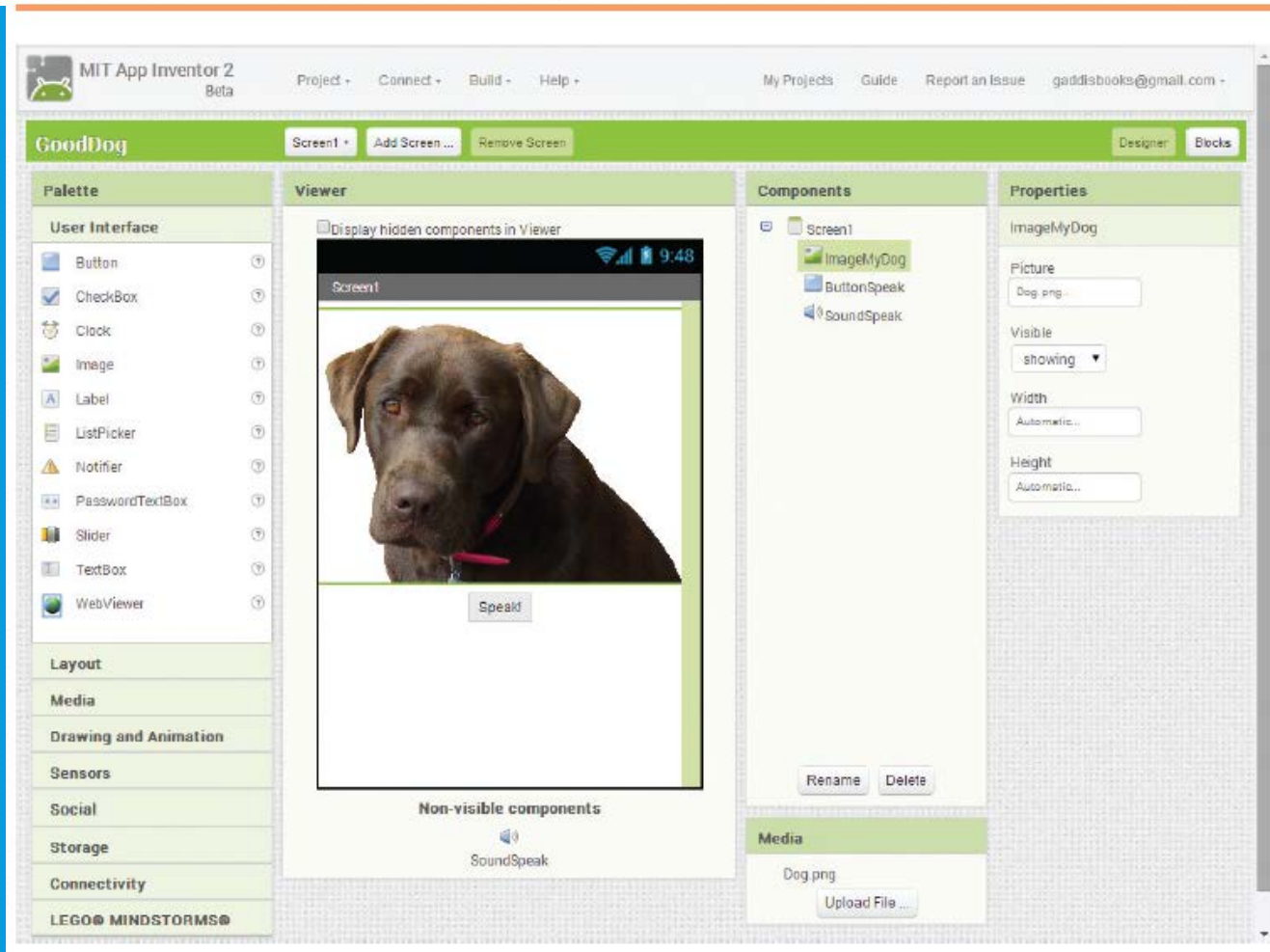
- Introduction
- What is a programming?
- Introducing App Inventor
- Getting hands on with App Inventor

INTRODUCTION

- An algorithm is a set of well-defined, logical steps that must be taken in order to perform a task.
- Each language has its own syntax.
- Syntax is a set of rules that must be strictly followed.
- Beginning programmers frequently make typing mistakes resulting in *syntax errors*.
- In App Inventor, syntax errors never happen, because you do not type programming statements.
- Instead you drag and drop *code blocks*.

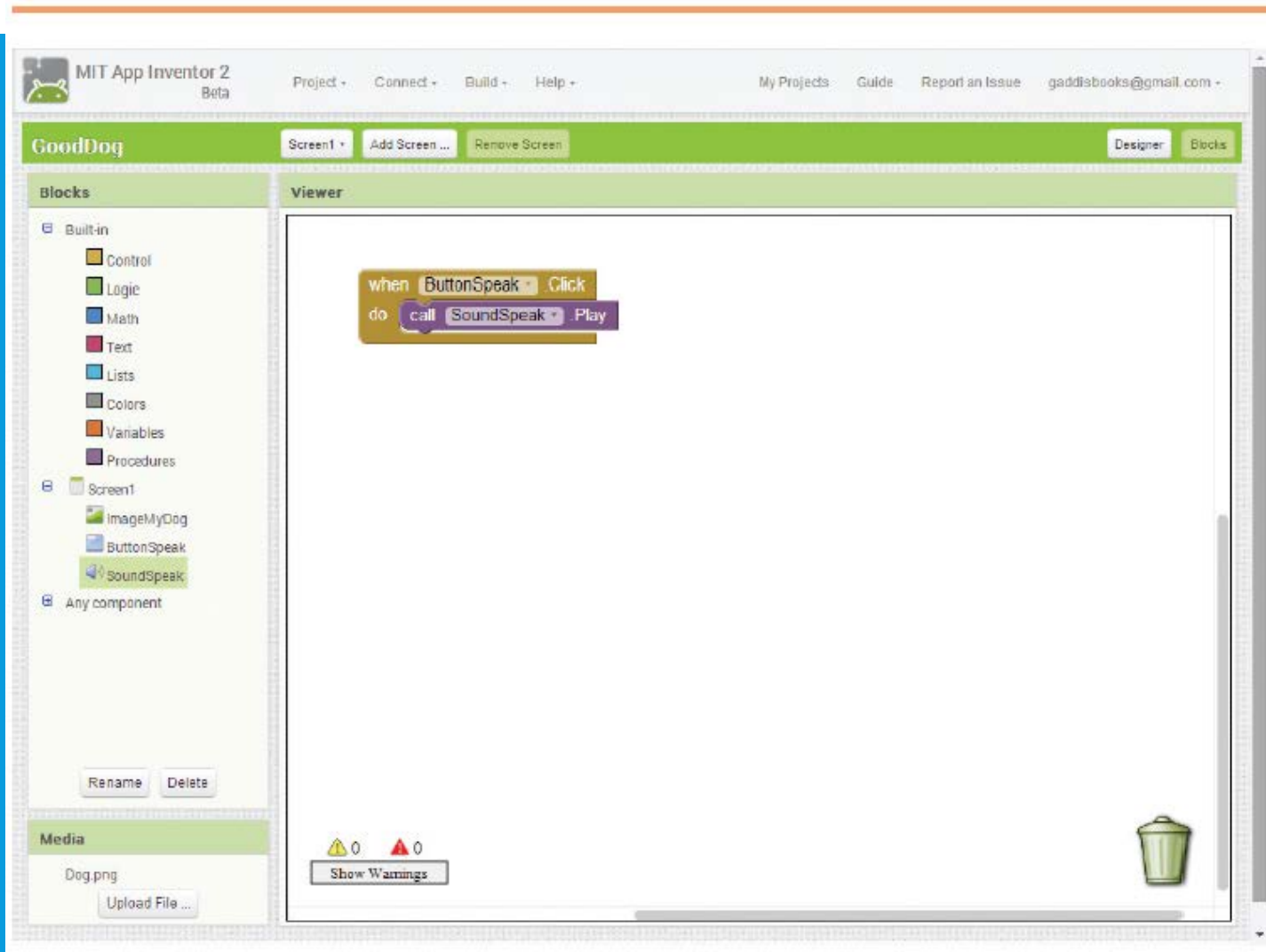
INTRODUCING APP INVENTOR

Figure 1-1 The App Inventor Designer (Source: MIT App Inventor 2, Pearson Education, Inc.)



INTRODUCING APP INVENTOR

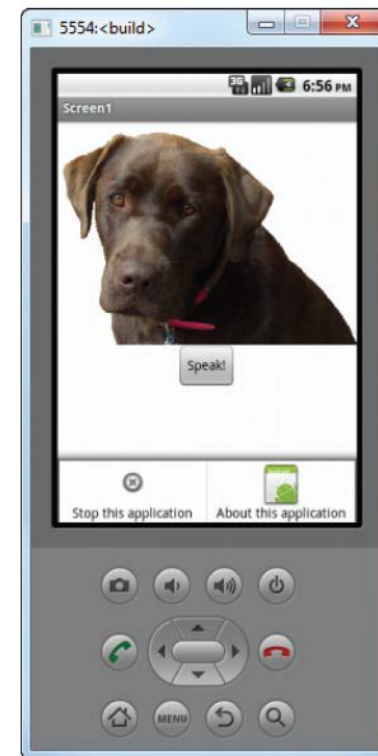
Figure 1-2 The Blocks Editor (Source: MIT App Inventor 2)



INTRODUCING APP INVENTOR

- App Inventor provides an Android emulator that runs on your computer.
- The emulator (Figure 1-3) is a simulated Android phone.

Figure 1-3 The Android Emulator (Source: MIT App Inventor 2, Pearson Education, Inc.)



INTRODUCING APP INVENTOR

- App Inventor Runs in the Cloud.
- App Inventor is part of MIT's Center for Mobile Learning.
- Advantages of the cloud-based approach
- You can access App Inventor from any computer connected to the Internet.
- Your files are maintained and backed up by the host.
- You can be sure you are always running the most recent version of App Inventor.

INTRODUCING APP INVENTOR

- Each time you work with App Inventor you will perform the following steps:
 - Open a browser and go to the App Inventor website.
 - Either create a new project or open an existing project.
 - Open The Blocks Editor.
 - Connect either the Android emulator or an actual Android device.

INTRODUCING APP INVENTOR

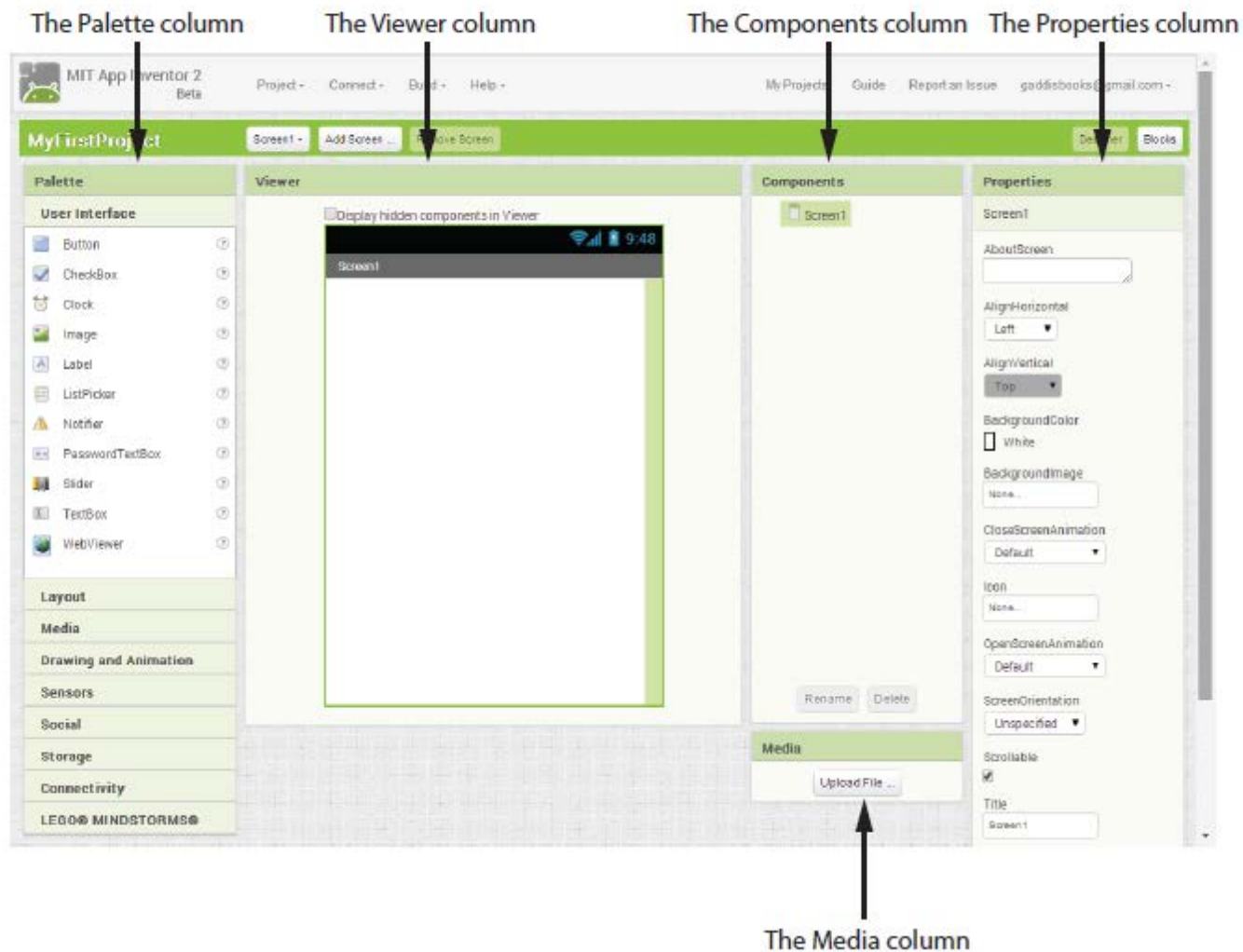
The Designer

The Designer is organized into the following columns:

- The Pallet column.
- The Viewer column.
- The Components column.
- The Media column.
- The Properties column.

INTRODUCING APP INVENTOR

Figure 1-16 The Designer (Source: MIT App Inventor 2)



INTRODUCING APP INVENTOR

The Palette Column

- The Pallet provides a list of components.
- *A component* is an item that performs a specific purpose within an app.

INTRODUCING APP INVENTOR

• The different sections of the palette are:

- ***User interface*** – The fundamental component for building an app's screen.
- ***Layout*** – Provides components for organizing other components on the app's screen.
- ***Media*** –
 - Provides components for taking photos.
 - Recording and playing videos.
 - Recording and playing sounds.
 - Picking Images.

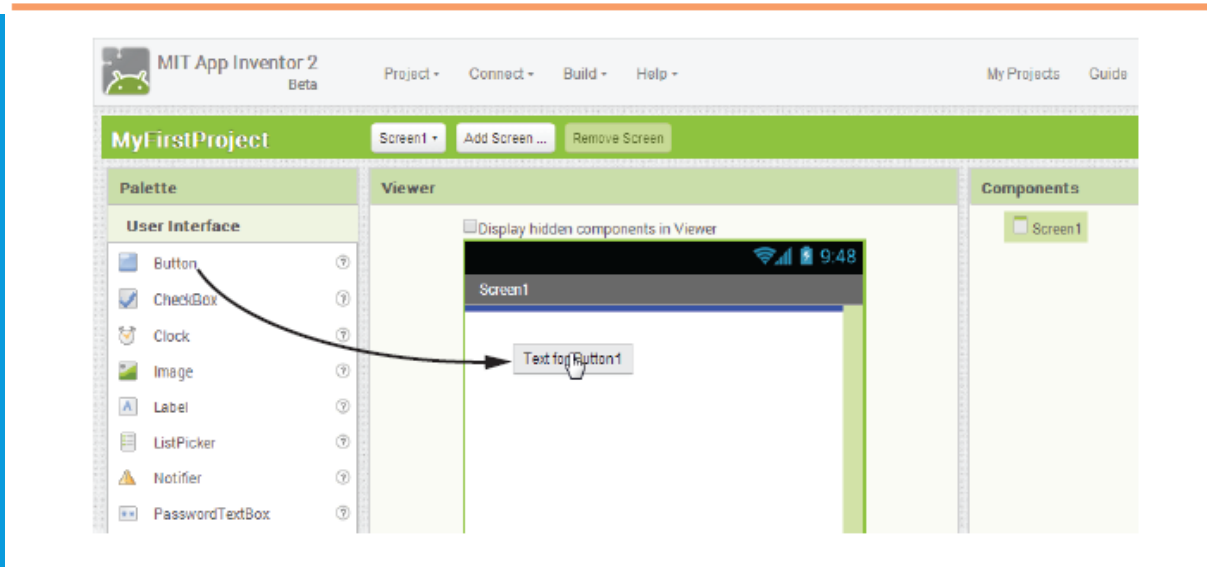
INTRODUCING APP INVENTOR

• The different sections of the palette are:

- ***Drawing and Animation*** – Provides components for creating simple drawings and animations.
- ***Sensors*** – Allows your app to access the device's accelerometer.
- ***Social*** – Works with the phone's contact list.
- ***Storage*** – These components store data locally on a device or remotely on the Web server.
- ***Connectivity*** – Provides components for launching external applications.

INTRODUCING APP INVENTOR

Figure 1-17 Creating a Component by Dragging it from the Palette to the Viewer (Source: MIT App Inventor 2)



- The Viewer Column
 - You design an apps *user interface* by dragging components from the Pallet onto the simulated screen in the Viewer.
 - Components you place on the simulated screen in the Viewer might appear slightly different on the emulator screen.

INTRODUCING APP INVENTOR

The Components Column

Shows a hierarchical tree listing all of the components that you have placed in your app.

The Media Column

Allows you to manage the media files (images, videos, and audio files).

INTRODUCING APP INVENTOR

- The Properties Column
- A Components appearance and other characteristics are determined here. Here are some examples:
 - ***Label component*** – To display text on your devices screen.
 - ***Image component*** – To display an image under the device's screen.
 - ***Sound component*** – If you want the app to play a sound.