Translate It

- Why MIT App Inventor?
  - Open Source
  - Computational thinking, powerful, REAL coding in Android
  - Android: 80% of smartphone users
  - Google Store
- Resources:
  - MIT App Inventor: http://appinventor.mit.edu/explore
  - Coding: http://hourofcode.org
  - Us: http://digitalmuse.org
  - GOOGLE!!!!

Let's get started!

- Basic Necessities
  - Gmail Account
  - Login: http://ai2.appinventor.mit.edu/
  - Same WiFi for Both Devices
  - Computer
  - Device with "MIT App Inventor Companion App" from Google Play Store!
- Navigating MIT App Inventor
  - Design: User Interface
    - ✦ Elements, Properties, etc.
  - Blocks / Code: Behavior
- Start New Project
  - Give it a Name using CamelBackCase
  - "TranslateIt"

Translate It: Translation app

First prototype

1. Once activated

2. It recognizes the words you speak

3. Translates them

4. To the language you selected

5. And speaks back the translated text
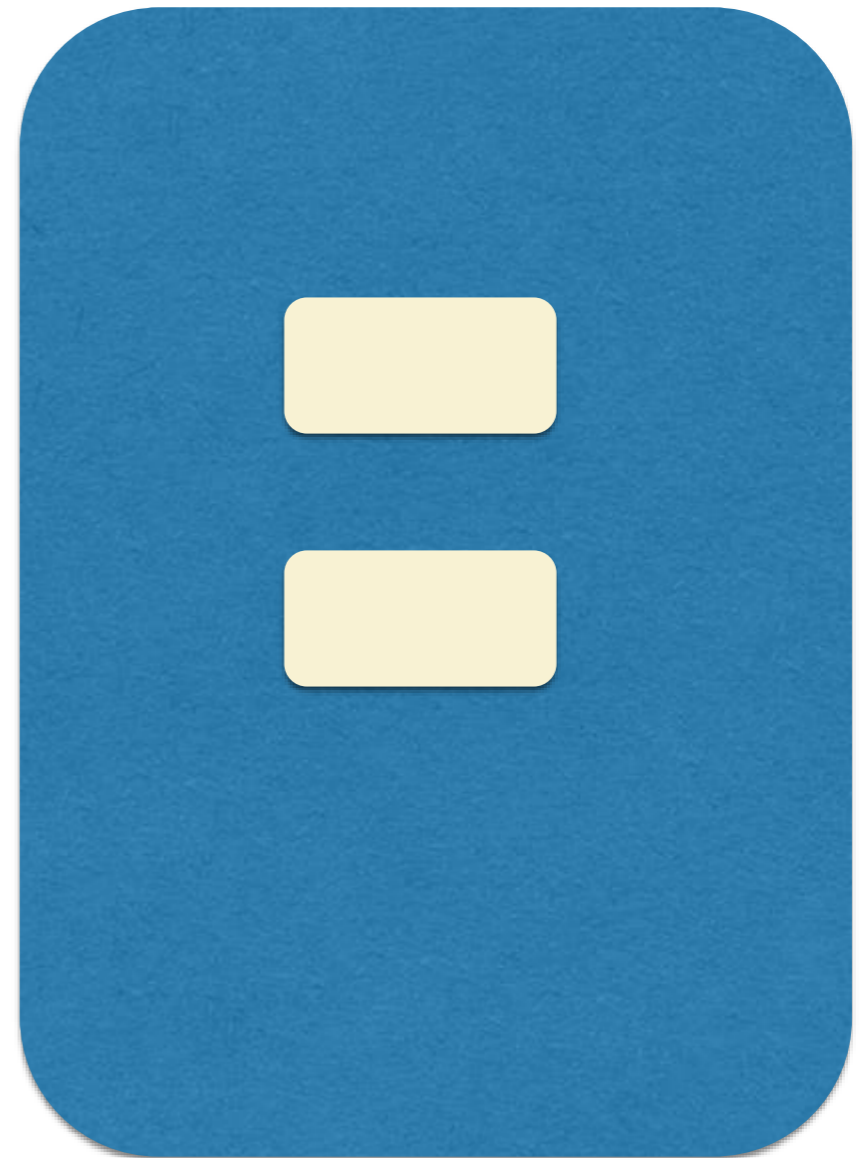
Design Editor

- Buttons, Images, Labels

- Non visible Components

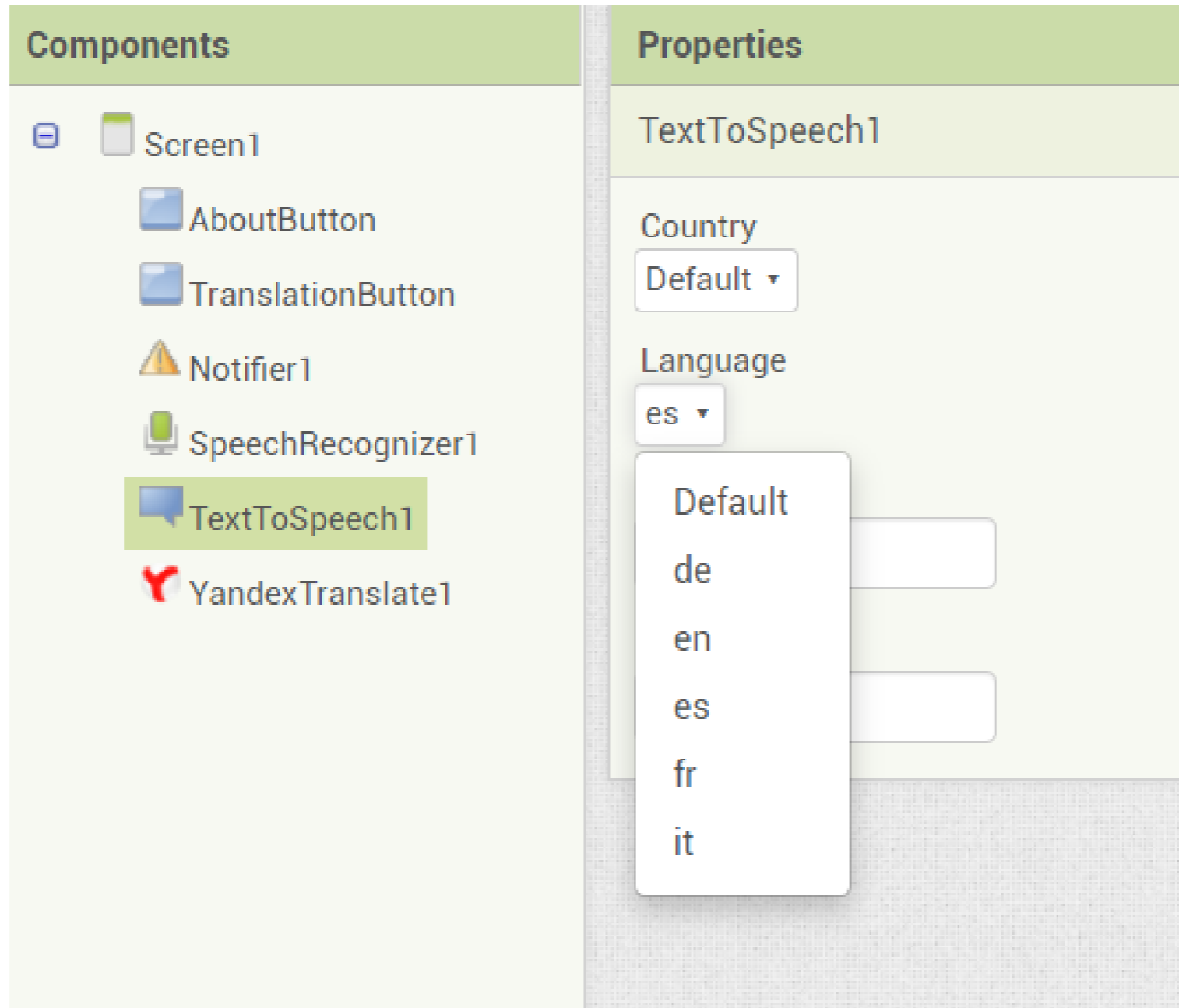- Properties of Components

- Image of Screen

1. Setup User Interface

- **User Interface: Button**
  - Rename Button to "AboutButton"
  - Properties - Text: "About"
- **User Interface: Button**
  - Rename to "TranslateButton"
  - Properties - Text: Translation
- **User Interface: Notifier**
  - Nonvisible Component
  - Displays Alerts

- **Media: SpeechRecognizer**
  - Nonvisible Component
  - Component for using Voice Recognition to convert from speech to text
- **Media: TextToSpeech**
  - Nonvisible Component
  - Component speaks a given text aloud.
- **Media: YandexTranslate**
  - Nonvisible Component
  - component to translate words and sentences between different languages

2. Specify Language

- TextToSpeech component
    - Properties: Language (Select)
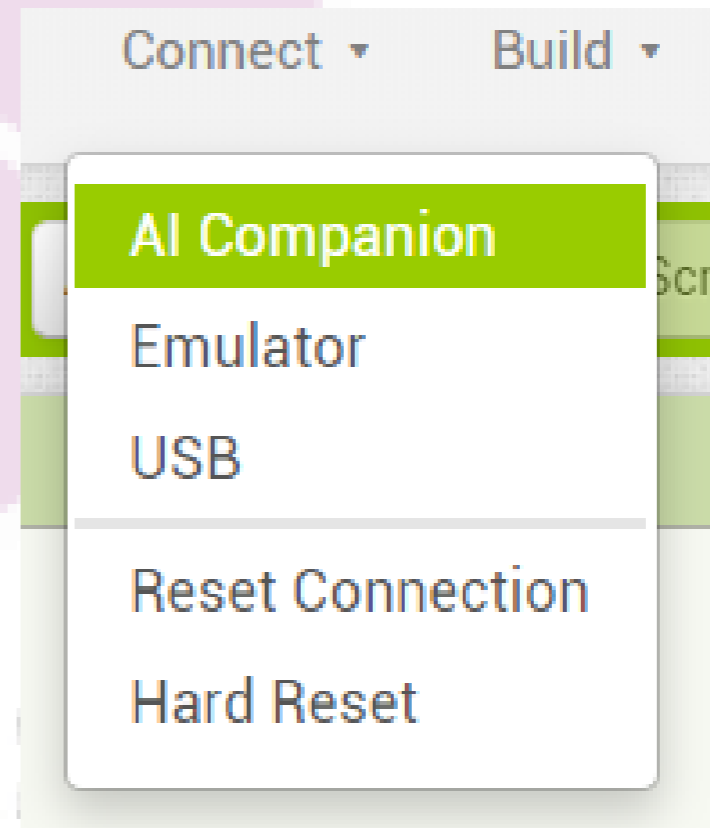
Setup Companion

Build your project on your computer

Test it in real-time on your device

- Download and install the MIT AI2 Companion App on your phone from Google Playstore!

- Try it out already:

  - Connect: AI Companion

  - Use Companion to Scan QR Code

  - Should bring you to your App!!!

Connect ▾   Build ▾

AI Companion

Emulator

USB

Reset Connection

Hard Reset

Blocks Editor

- Blocks Editor

  - Give all your components a behavior!

  - Built-in blocks are available regardless of which components are in your project.

  - In addition to these language blocks, each component in your project has its own set of blocks specific to its own events, methods, and properties. This is an overview of all of the Built-In Blocks available in the Blocks Editor.

  - Hover over elements to see what you can do with them

- Screen1: Everything you've made! :)

3. Enable Speech Recognizer

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- TranslationButton: When TranslationButton.Click Do (Control block)

- SpeechRecognizer: call SpeechRecognizer.get text (Purple)

4. Use Yandex Translate

4. Use Yandex Translate

- SpeechRecognizer: When SpeechRecognizer.AfterGettingText (yellow)

- YandexTranslate: when YandexTranslate.RequestTranslation (purple)

  - languageToTranslateTo: Text (pink) : es (Spanish)

  - textToTranslate: Variable (orange): get result

5. Use TextToSpeech

5. Use TextToSpeech

- YandexTranslate: when YandexTranslate1.GotTranslation

- TextToSpeech: call TextToSpeech1.SpeakMessage (purple)

  - Variable: get translation (orange)

6. Add About Button (optional)

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- About Button: when AboutButton.click do (yellow)

    - Notifier: call Notifier.ShowMessageDialog (purple)

        ✦ Message: Text Join (2 sentences): "nul" & "nul":

            ★ This app translates your speech input in English

            ★ into Spanish

        ✦ Title: Text - "nul": About TranslateIt App

        ✦ ButtonText: Text - "nul": OK

You did it! Now test! :)

Keep Going!

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www.dlii.org