

App Design for Beginners

Nancye Blair Black
@NancyeBlackEdu - EngagingEducation.net

Kevin Chaja
@el_chakka

What makes an app great?

1. Get into a group of 2-4 people.
2. Discuss!

What is your favorite app? Why?

3. Based on your discussion, decide: What are the top three things that make an app great?
4. Post your answers.

Meet Your Presenters

Nancye Blair Black

- @NancyeBlackEdu
- Speaker/Author/Consultant, EngagingEducation.net
- Edhesive, Director of Innovation and Design
- ISTE, AI Explorations Project Lead

Kevin Chaja

- @el_chakka
- CEO/Founder, From Zero, LLC
- Creator of Moment AR and other apps
- Consultant for Sony & Disney

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Who are you?

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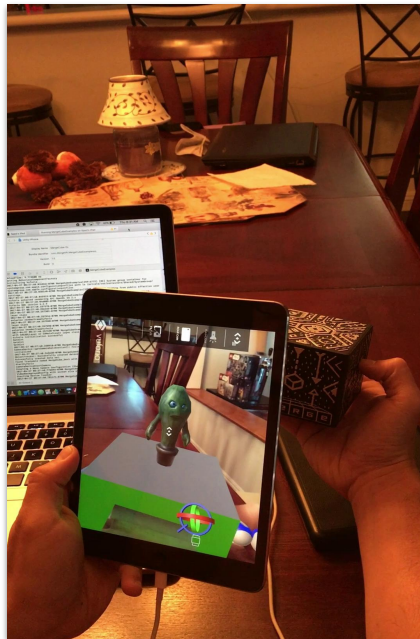
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What is app design all about?

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Identifying and meeting needs



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What is app design education all about?

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**Design
thinking**

meets

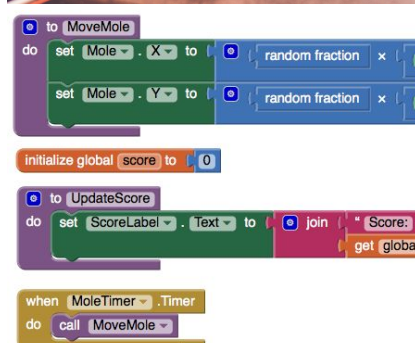
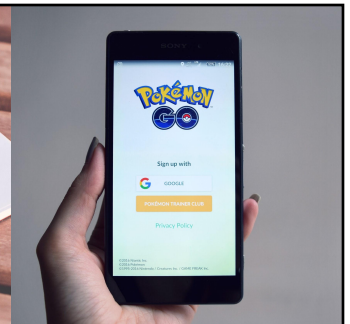
**Graphical user
interface (GUI)**

meets

Writing code

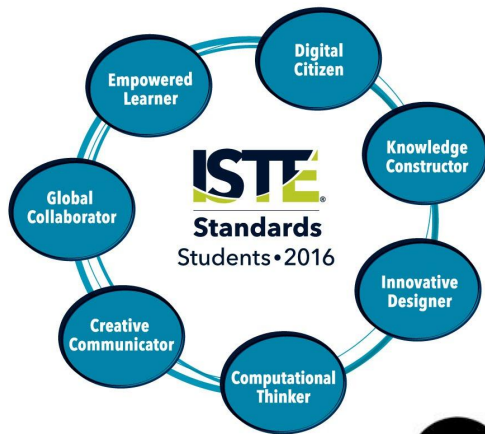
meets

**Digital
citizenship**



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**ISTE Standards
for Students**

**CSTA Computer
Science
Standards**



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**“Students can make
breakthrough applications
if they have the right eyes
for looking at the world.”**

Hal Abelson on the shift from
Computational Thinking to Computational Action,
2019 AAAI Teaching AI in K-12 Symposium

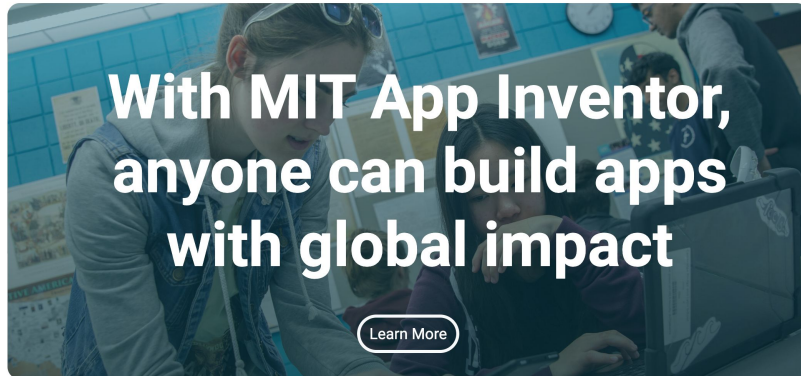
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**How can you
get started
in the
classroom?**

MIT App Inventor - appinventor.mit.edu

[Create Apps!](#)[About](#)[Educators](#)[News](#)[Resources](#)[Blogs](#)[Donate](#)

Active Users
today:
75.7K

Active Users
this week:
266.1K

Active Users
this month:
670.3K

Registered
Users:
10.0M

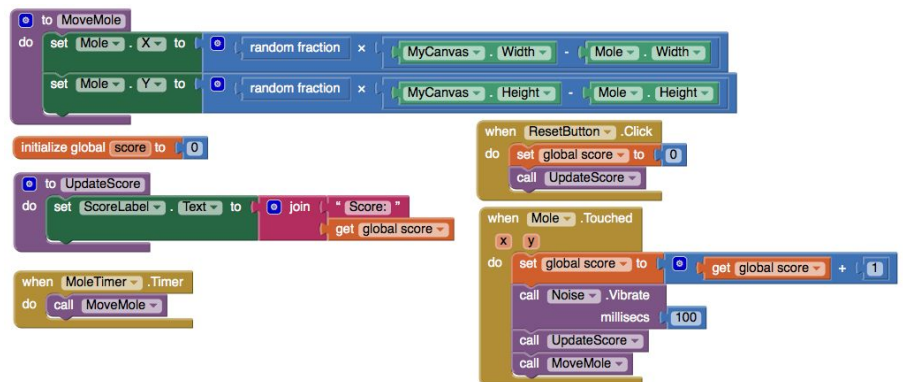
Countries:
195

Apps Built:
43.3M

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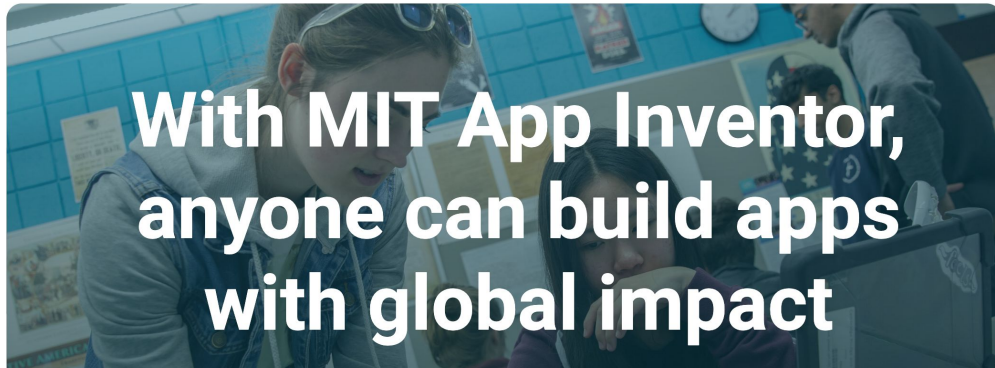
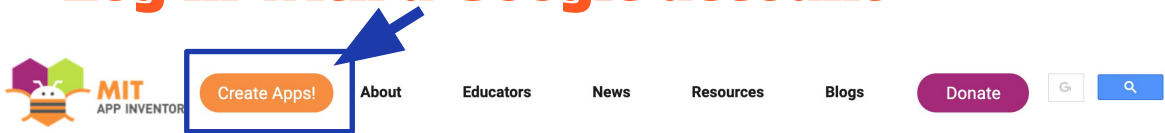
**Why use
block-based
code for
app design?**



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- Go to appinventor.mit.edu
- Log in with a Google account



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Option One - RECOMMENDED
Build apps with an Android device and WiFi Connection (preferred):
[Instructions](#)

If you have a computer, an Android device, and a WiFi connection, this is the

easiest way to test your apps.



Live testing method

appinventor.mit.edu/explore/ai2/setup

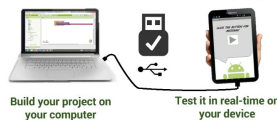
Option Two
Don't have an Android device? Use the Emulator: [Instructions](#)

If you don't have an Android phone or tablet handy, you can still use App Inventor. Have a class of 30 students? Have them work primarily on emulators and share a few devices.



Option Three
No WiFi? Build apps with an Android device and USB Cable: [Instructions](#)

Some firewalls within schools and organizations do not allow the type of WiFi connection required. If WiFi doesn't work for you, try USB.



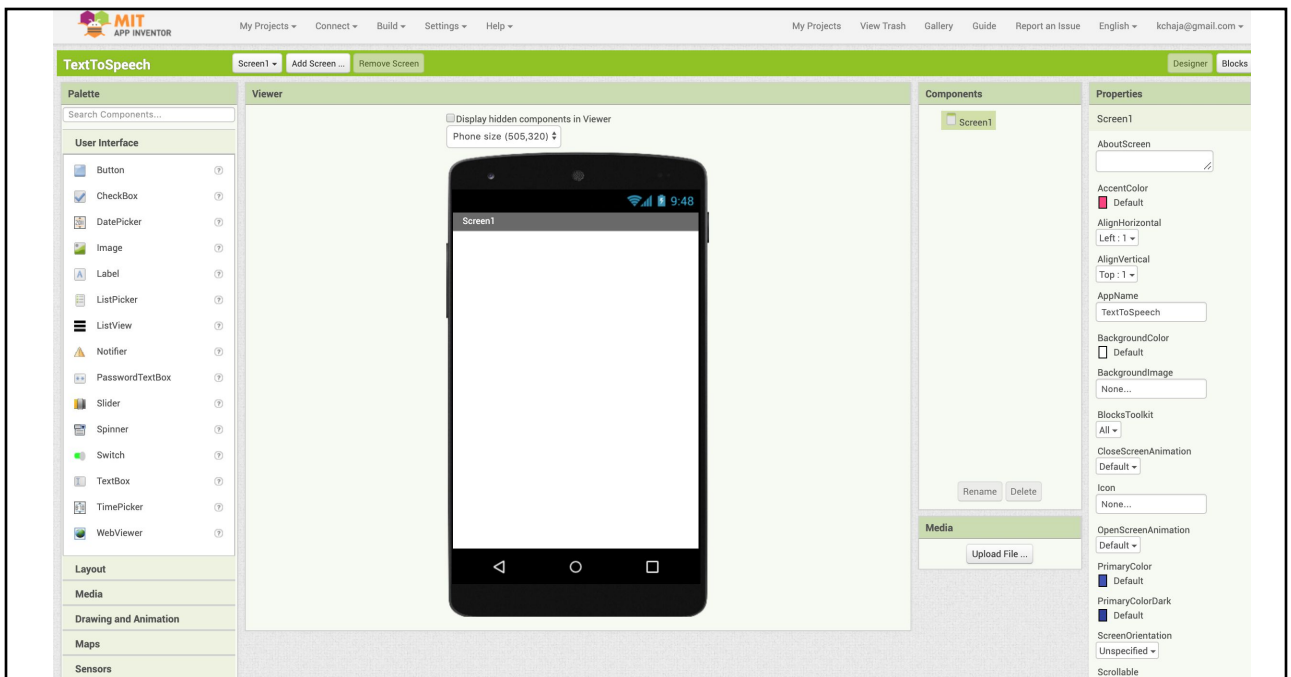
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Let's design!

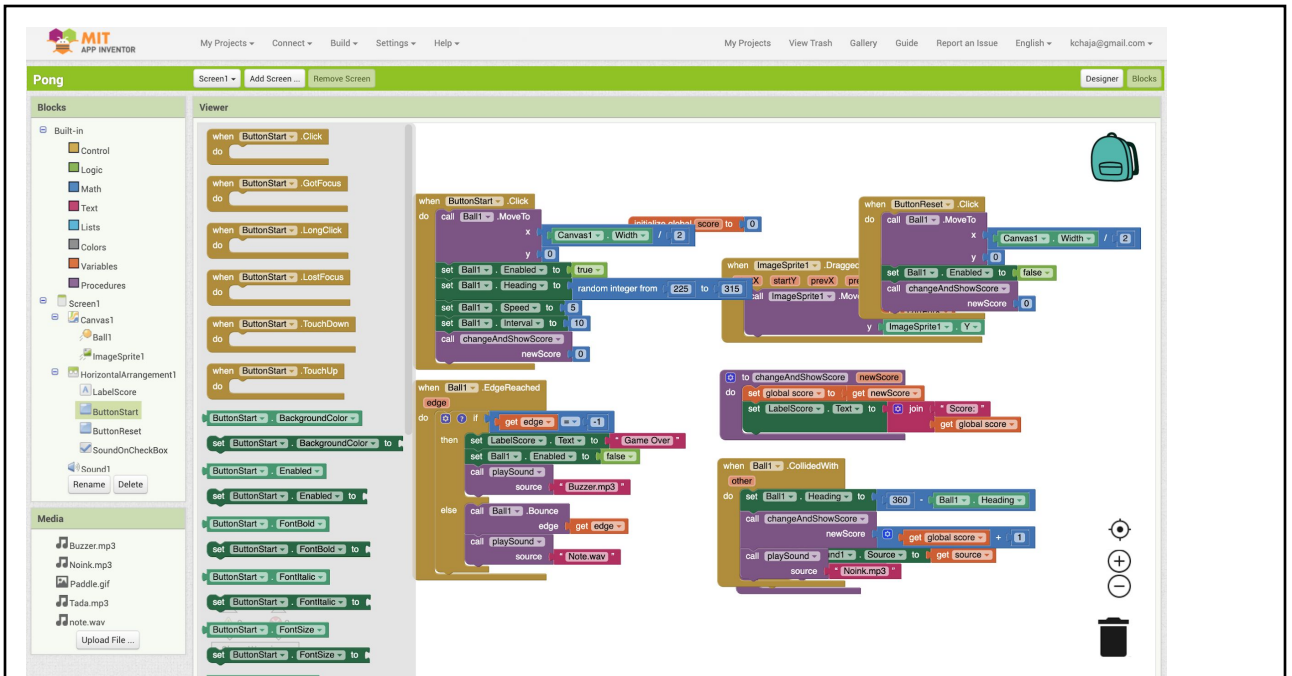
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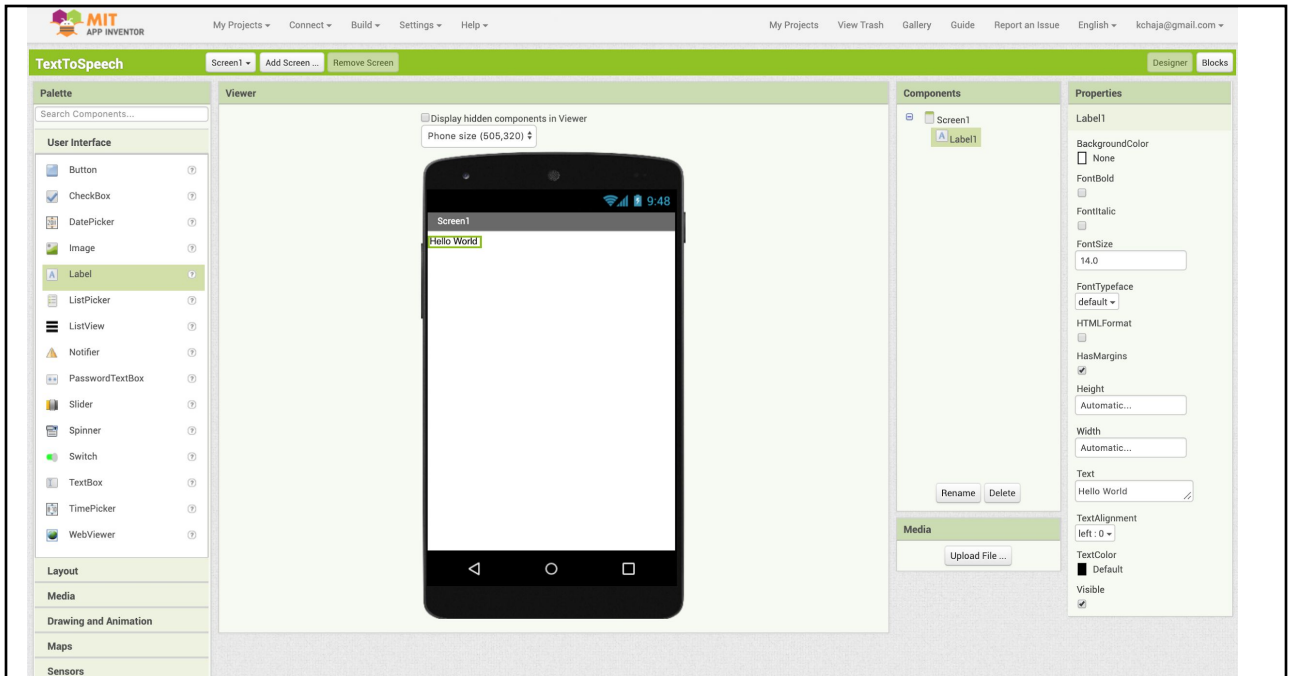
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Hello, World!

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Option One - RECOMMENDED

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WiFi Connection (preferred):
[Instructions](#)

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Option Two

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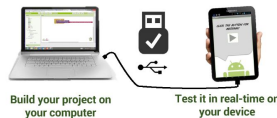
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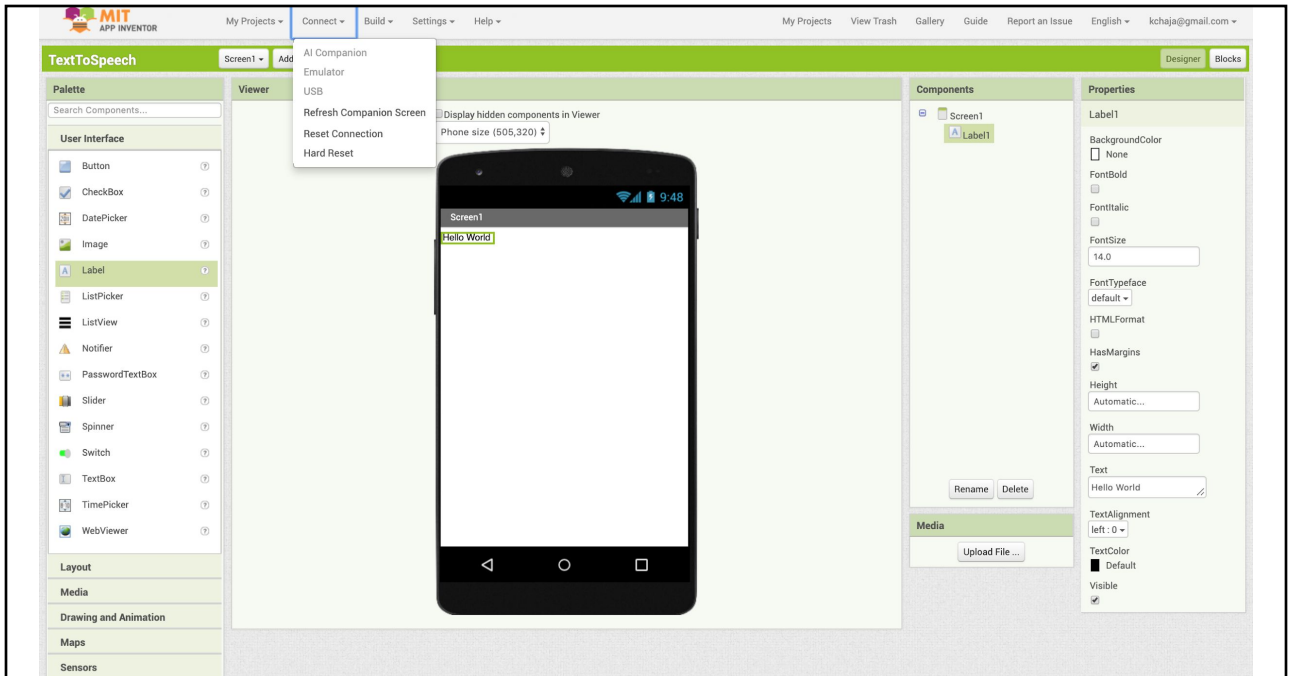


Live testing method

[appinventor.mit.edu/
explore/ai2/setup](http://appinventor.mit.edu/explore/ai2/setup)

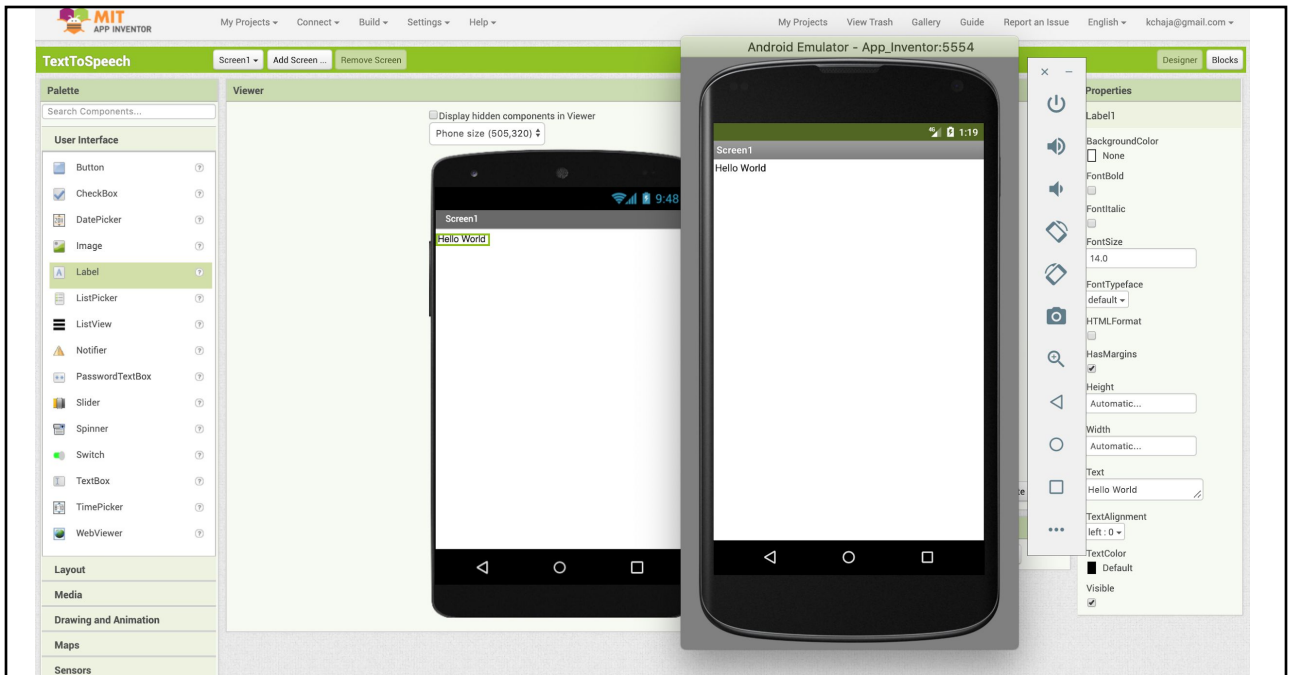
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User Experience (UX)

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User Experience (UX)

Purpose

Audience

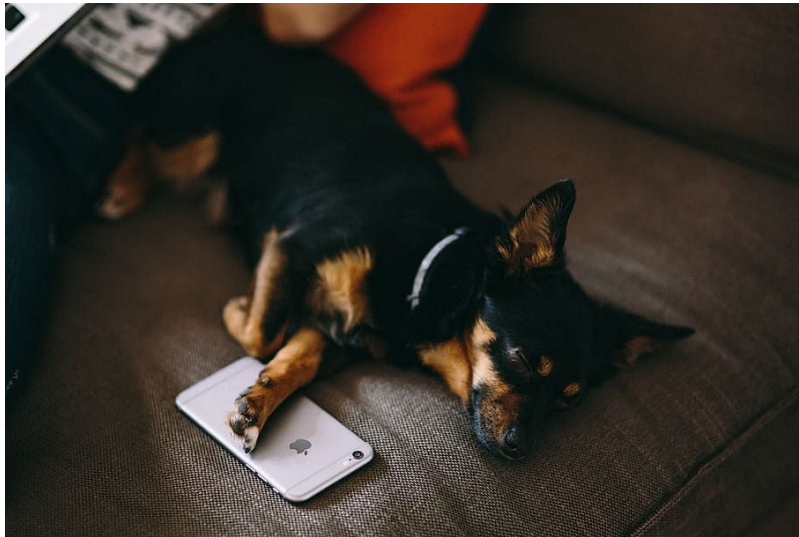
Features and
Functionalities

User Interface (UI)

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Warm Fuzzies



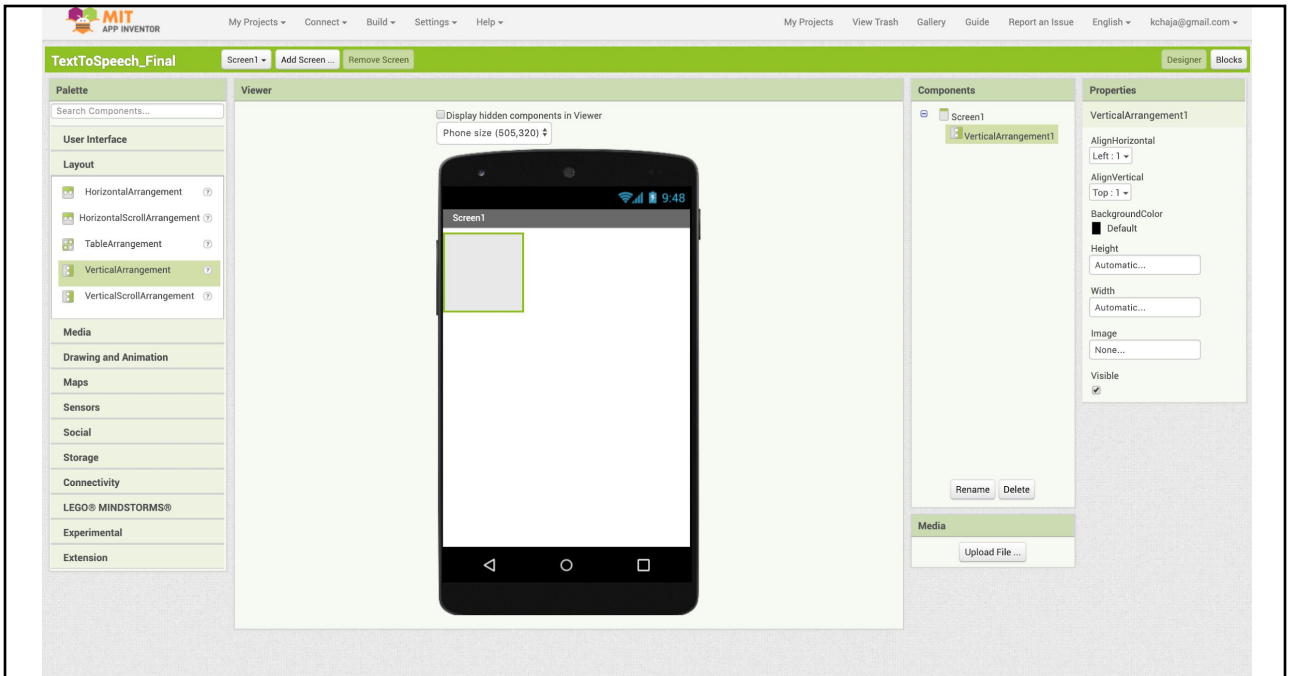
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Iterate: Text2Speech App

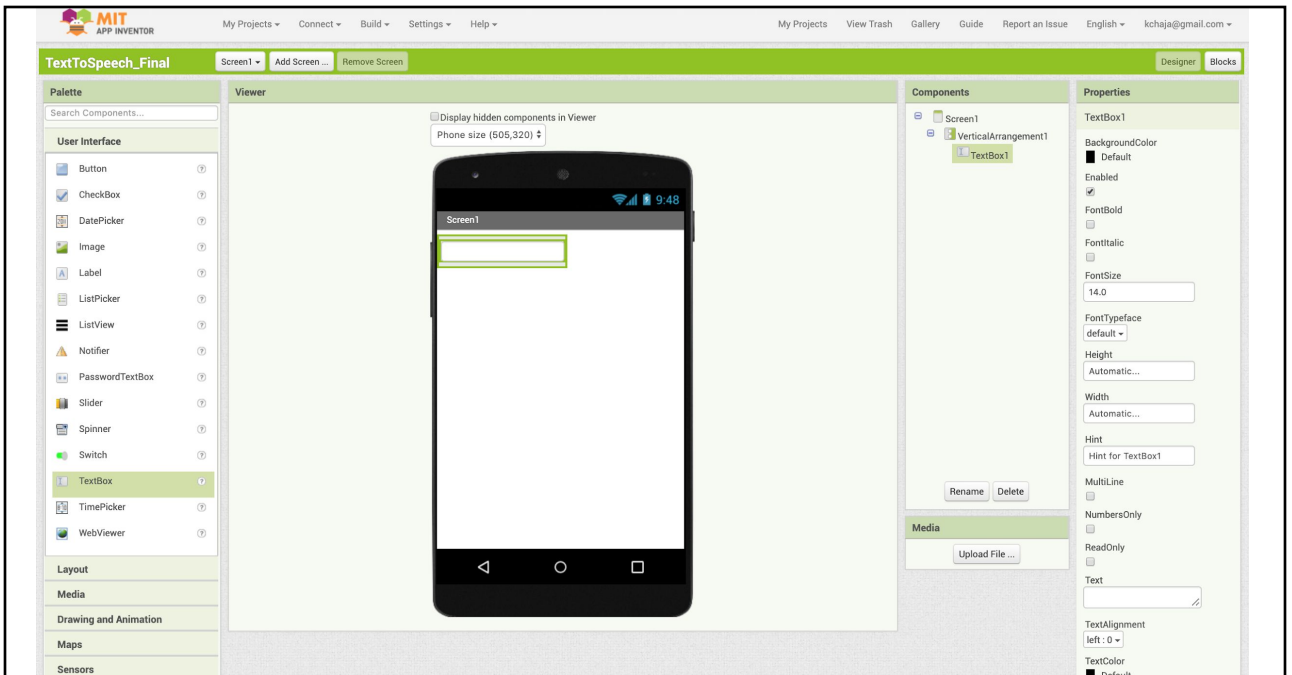
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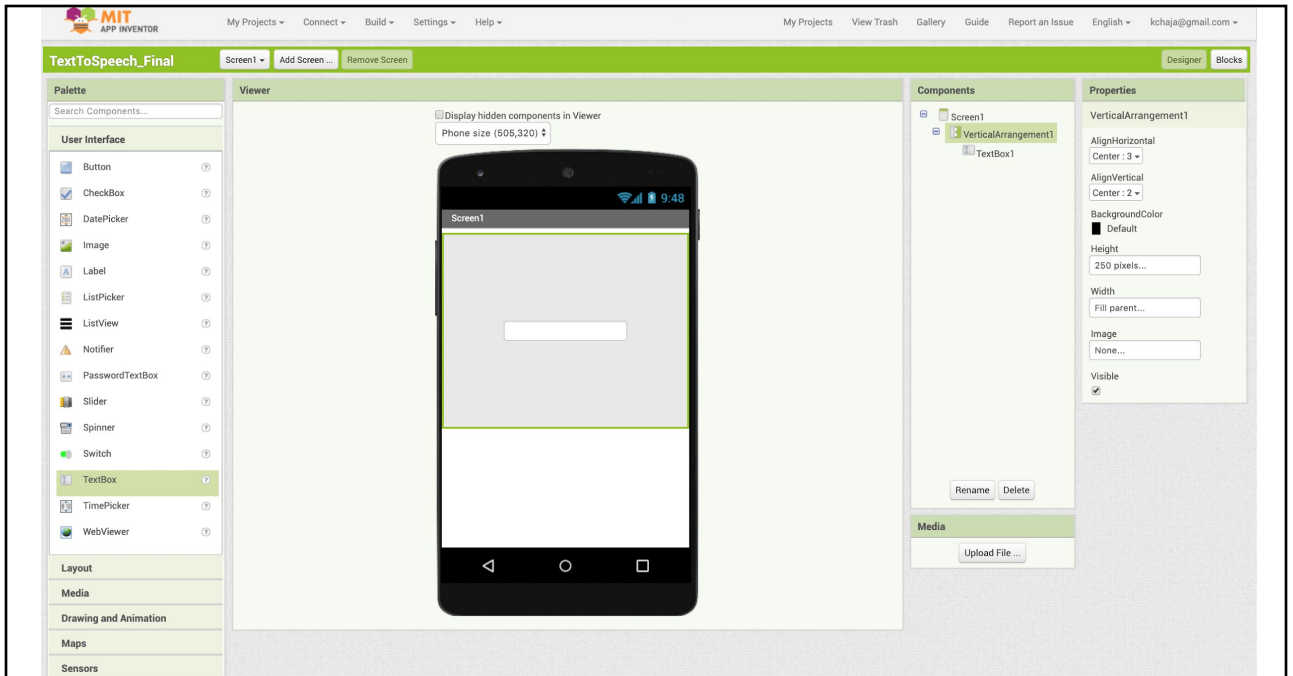
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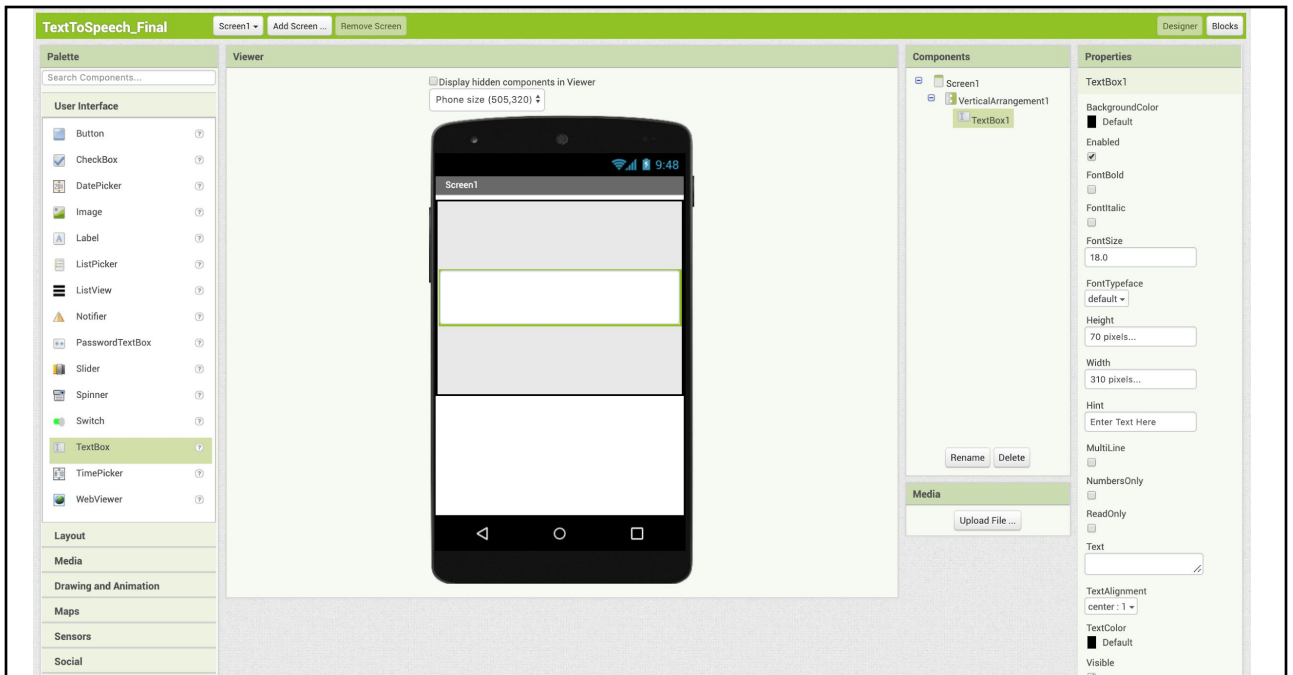
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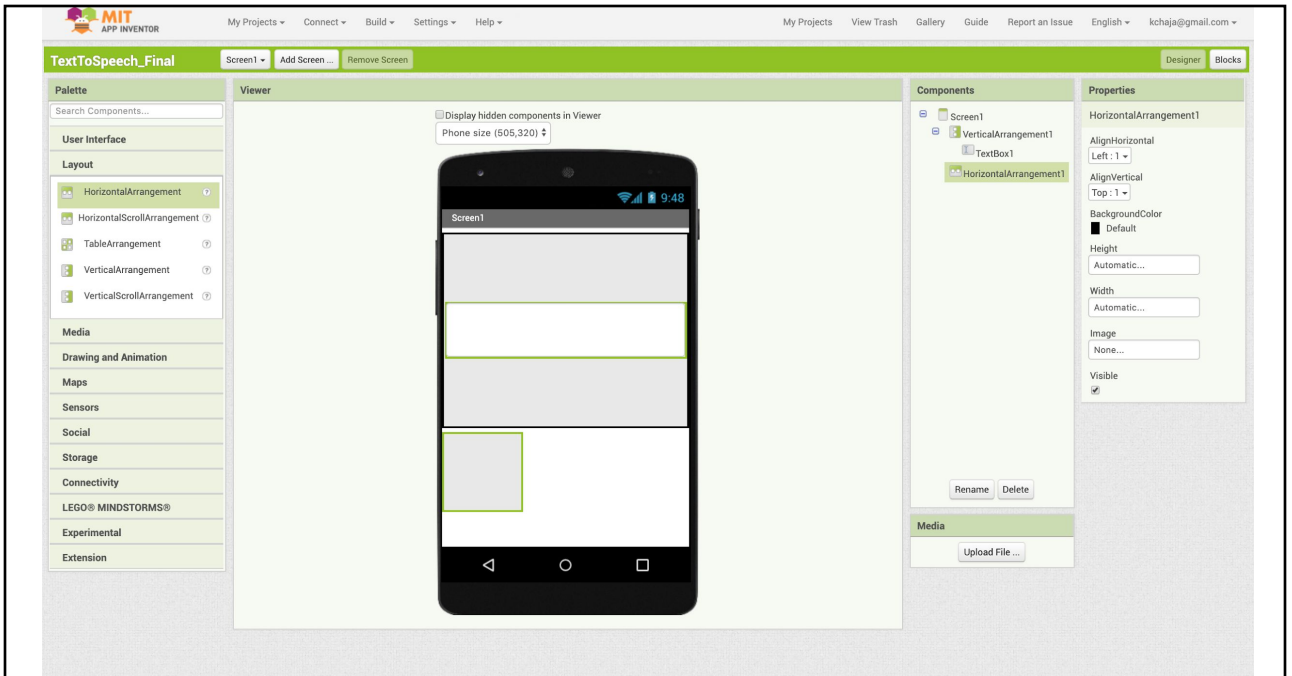
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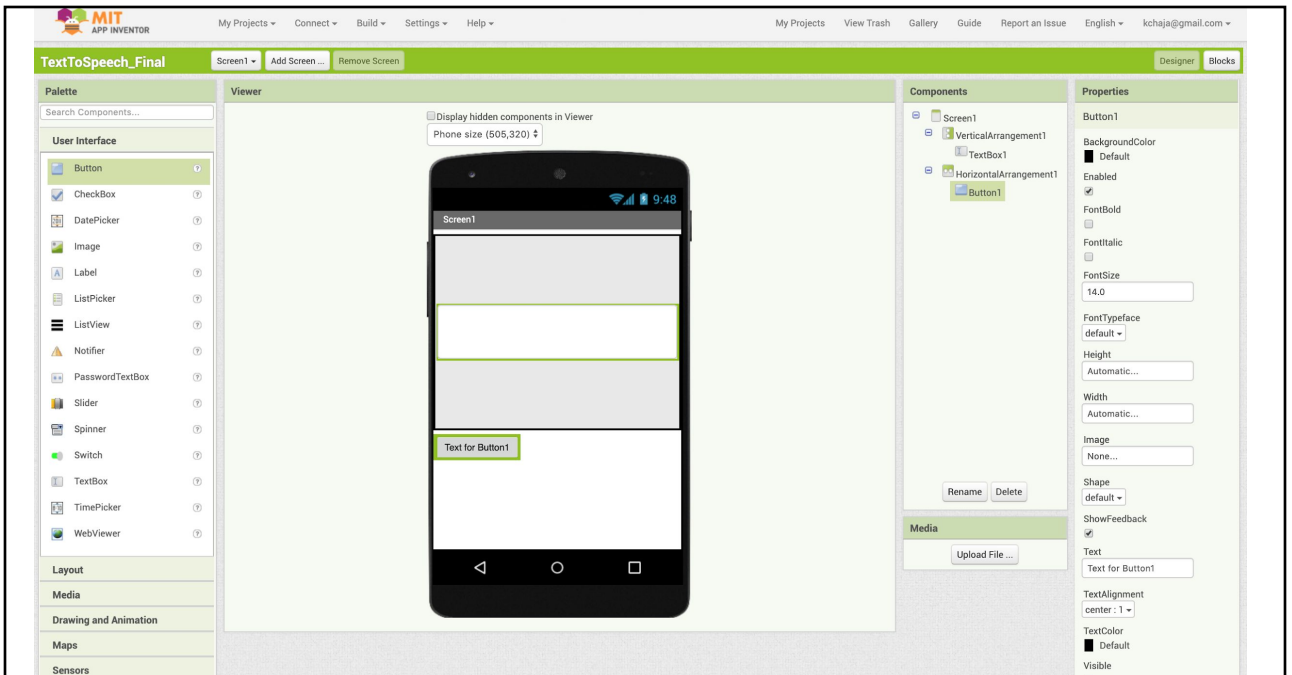
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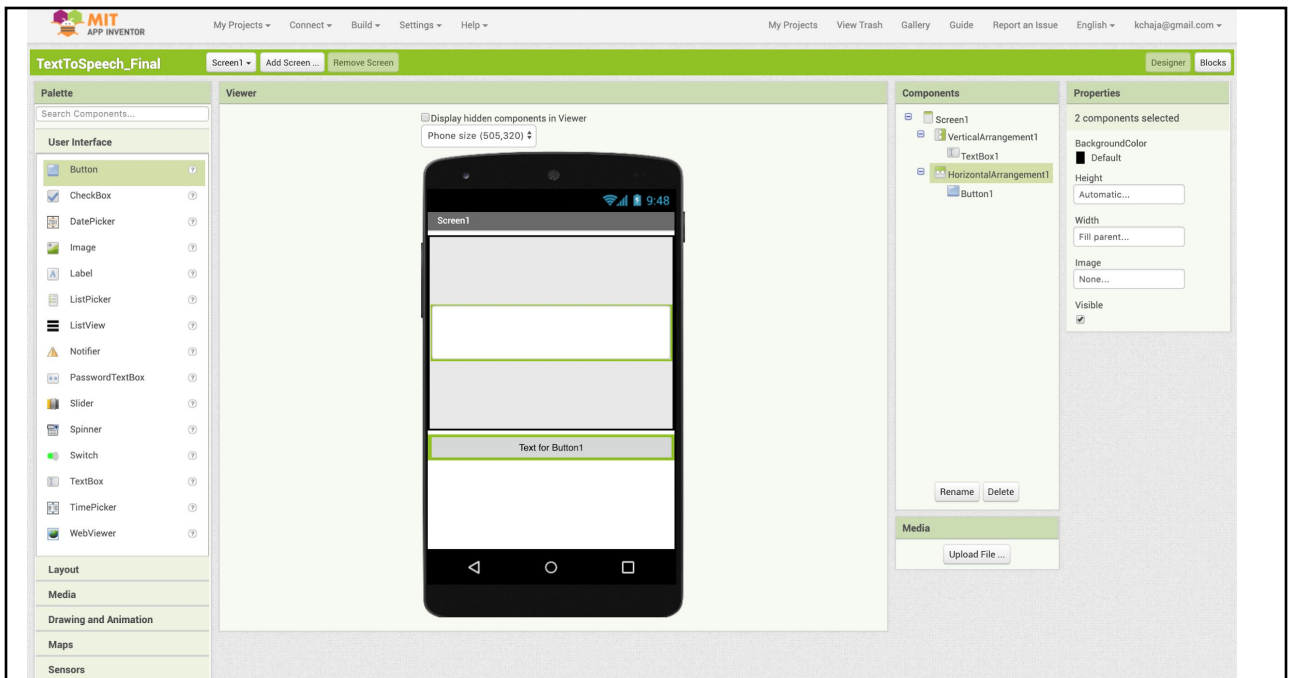
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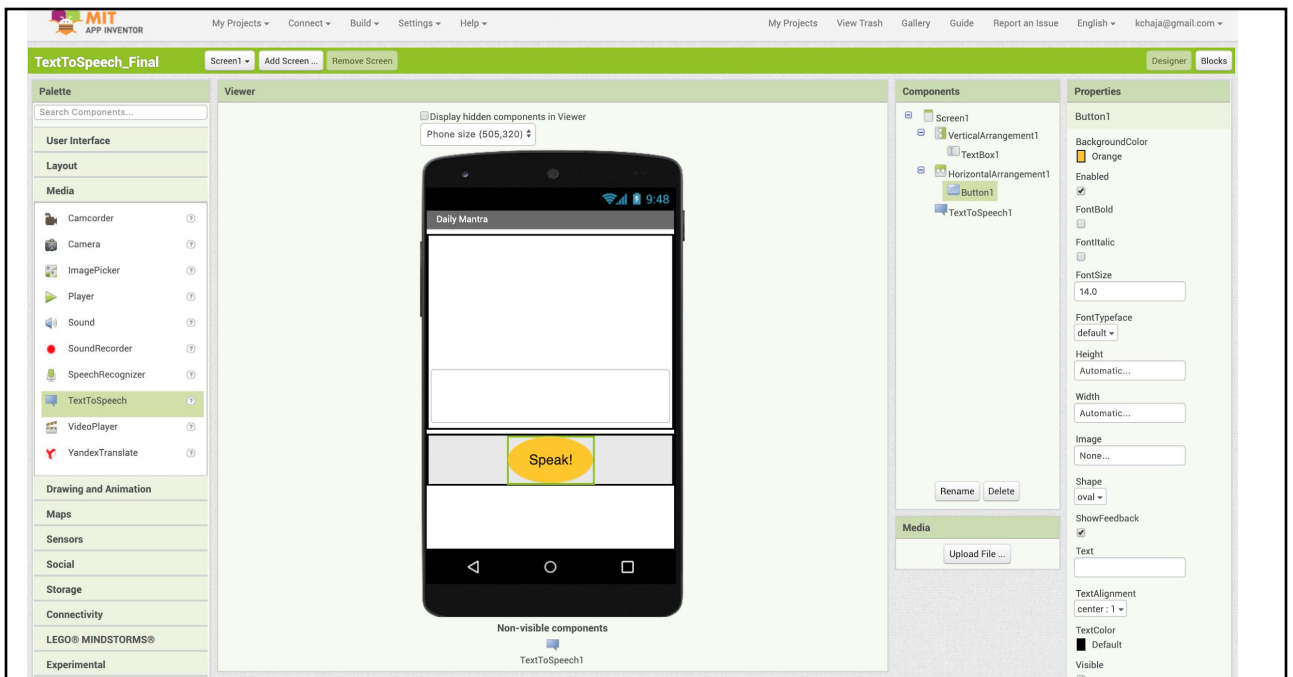
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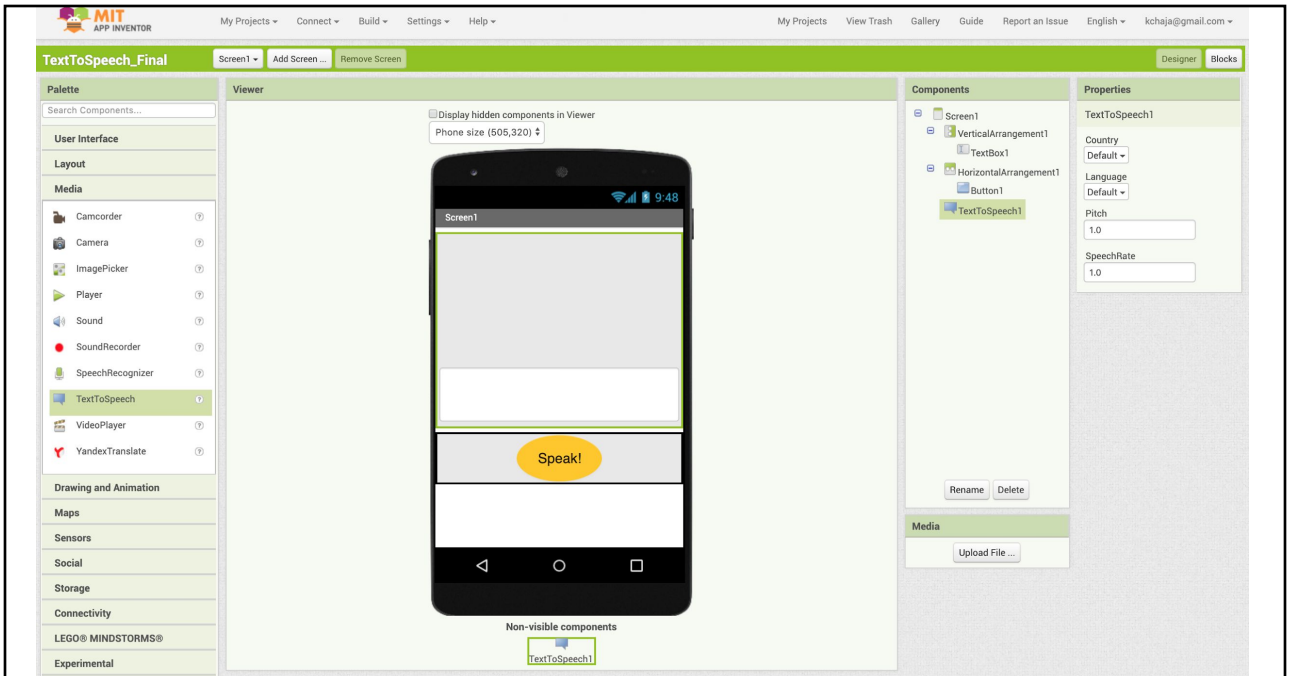
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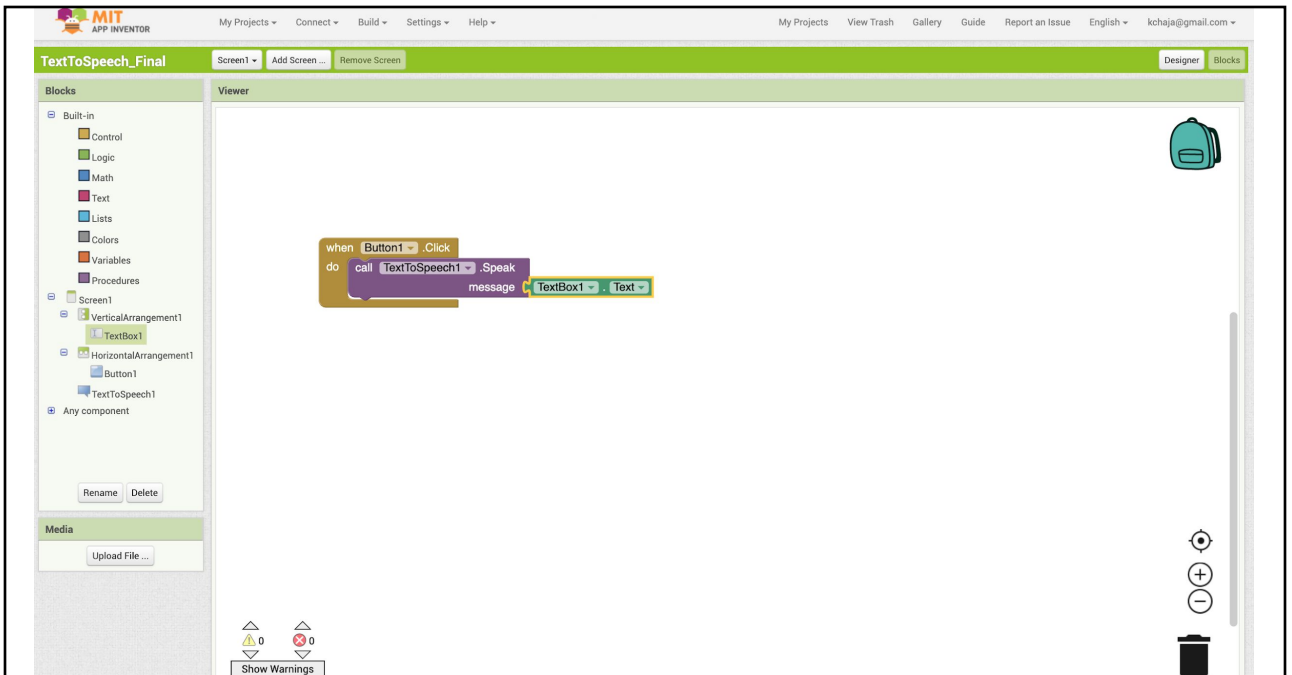
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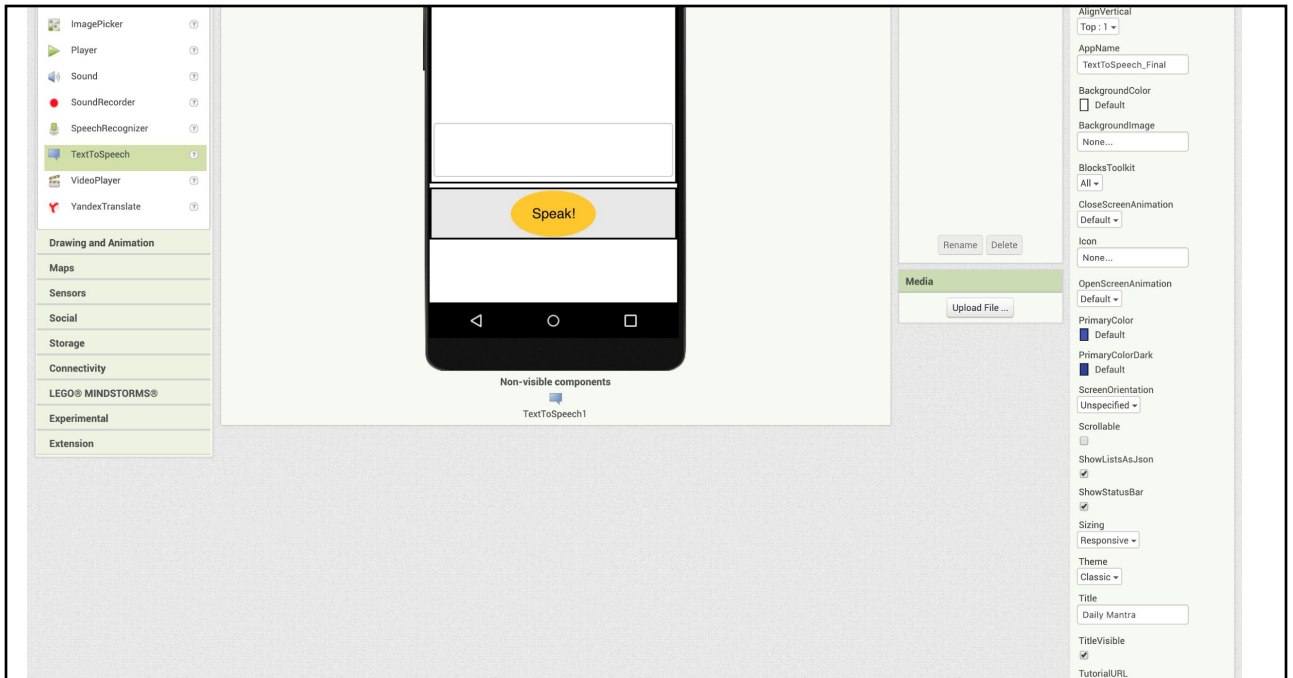
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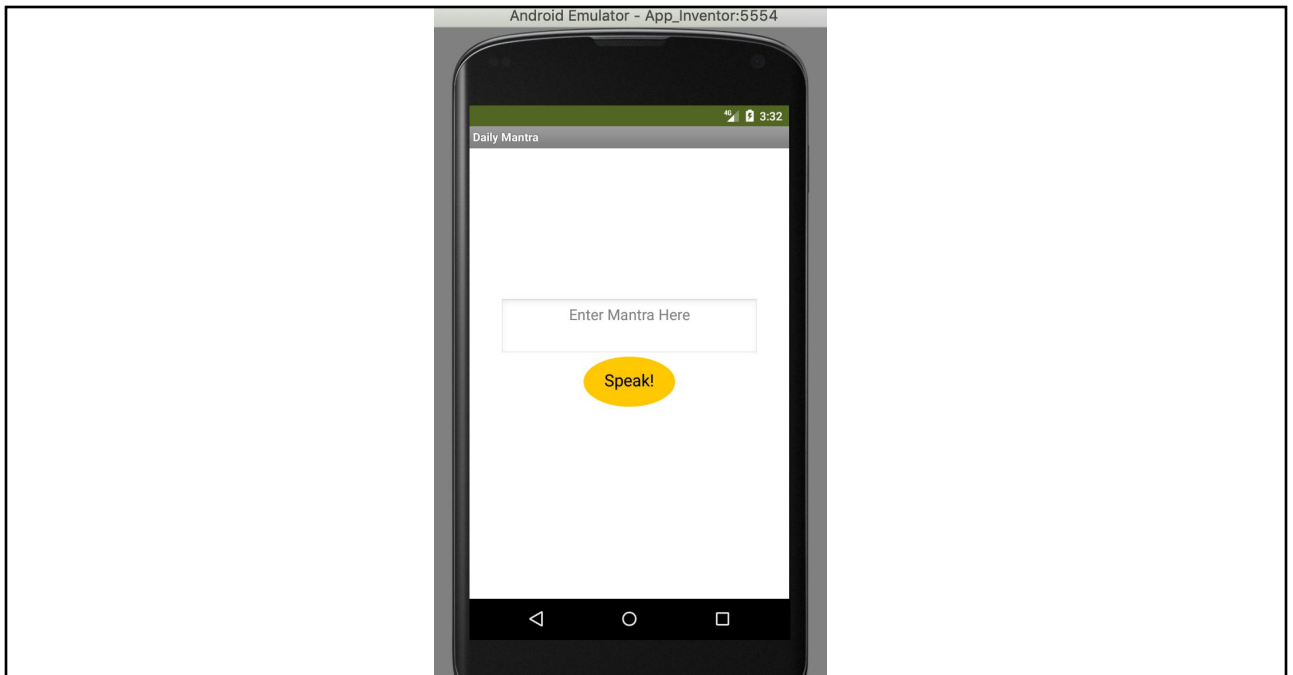
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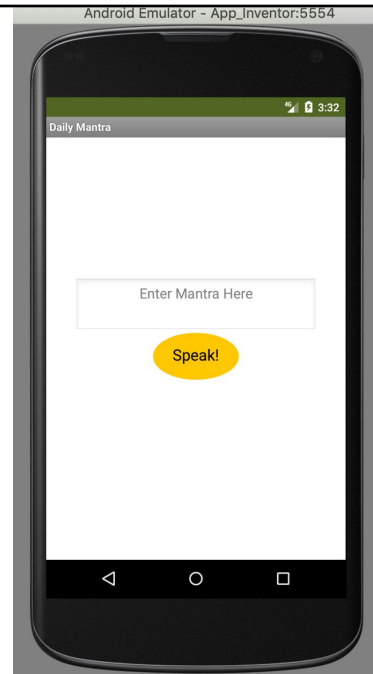
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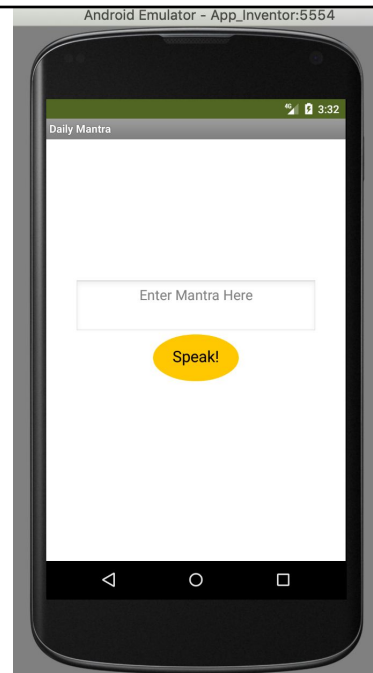
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Iterate ...



Iterate ...

- “Branded” background, button, and color palette.
- TinyDB to store the user-inputted Mantra in the app on the local device.
- User-choice from drop-down menu or random selection from themed mantras.



More User Interface (UI) Resources:

Smashing Magazine's Comprehensive Guide to Mobile App Design:

<https://www.smashingmagazine.com/2018/02/comprehensive-guide-to-mobile-app-design/>

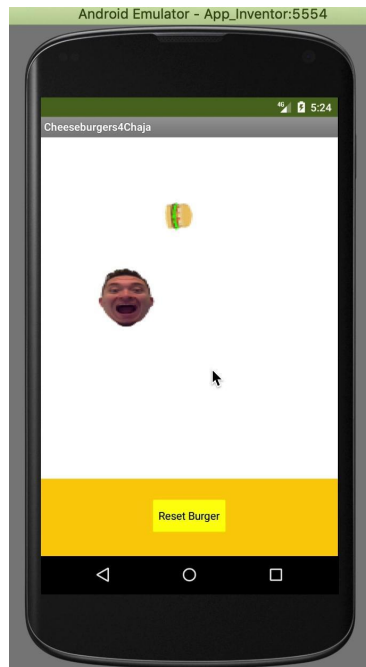
Apple's UI Design Do's and Don'ts:

<https://developer.apple.com/design/tips/>

Material.io's Resources for icons, color palettes, layouts, and more:

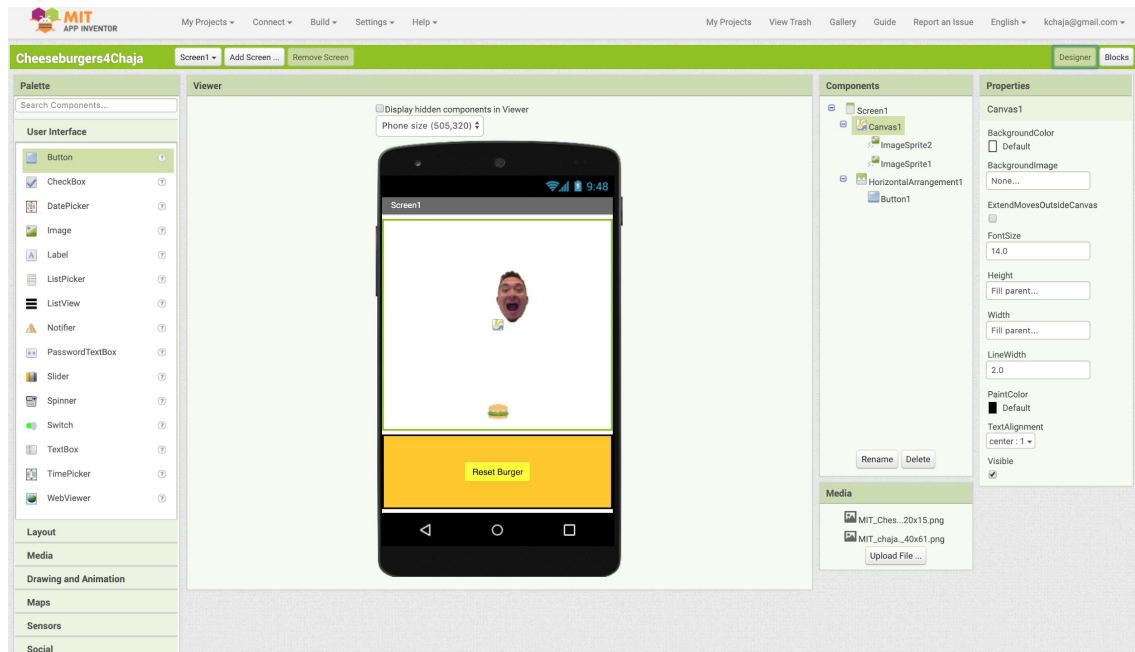
<https://material.io/resources/>

Cheeseburgers4Chaja



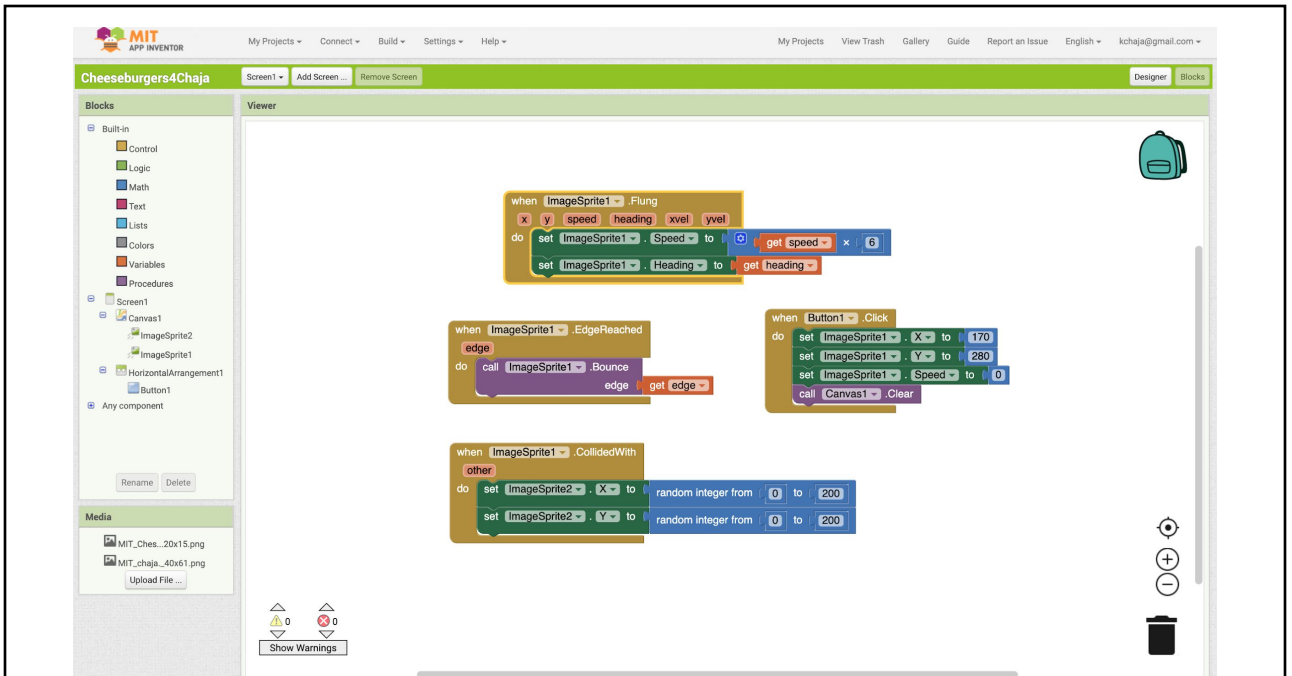
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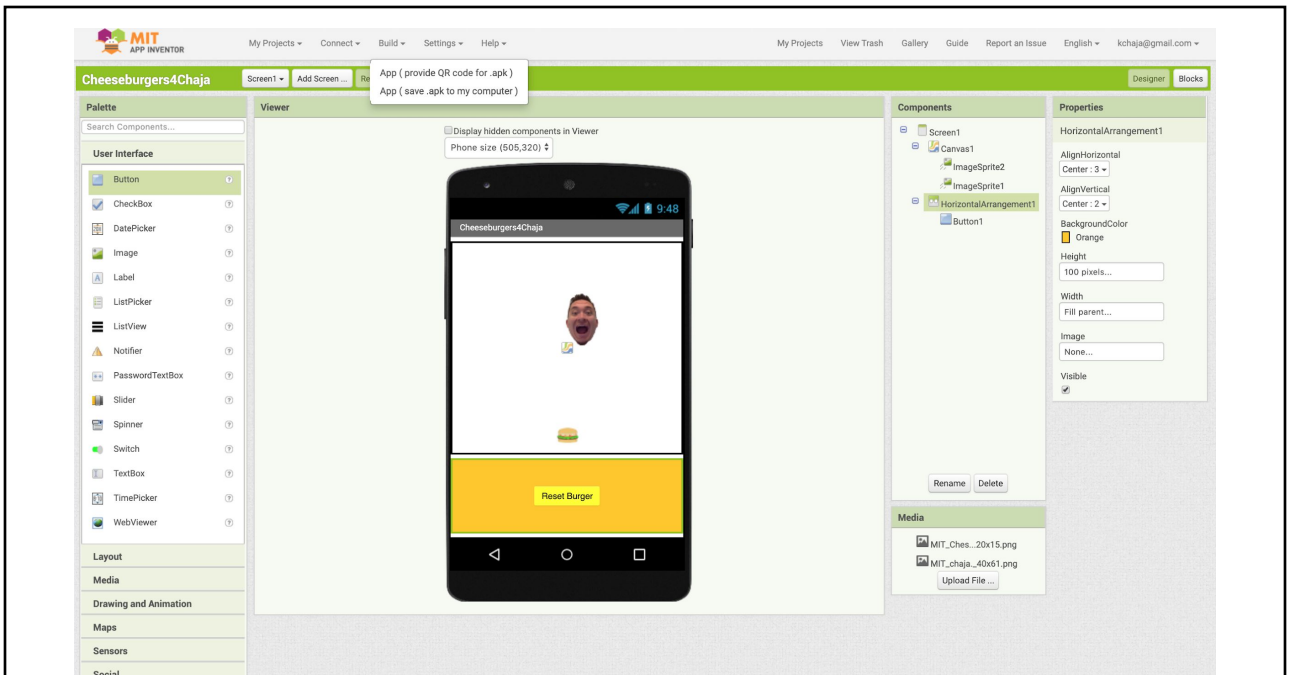
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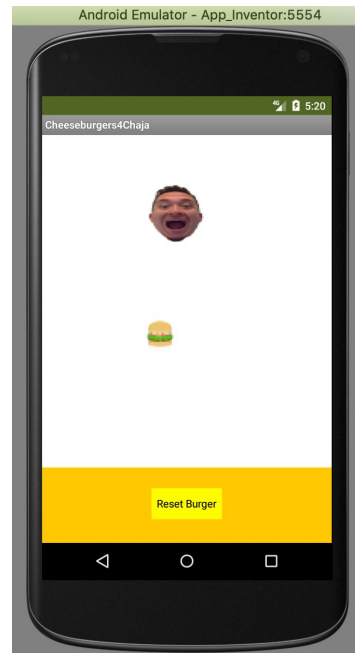
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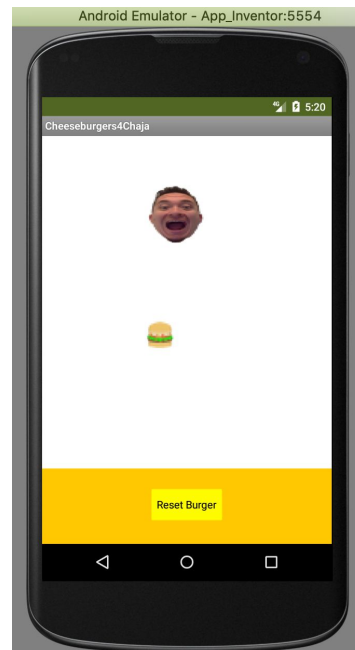
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Iterate ...



Iterate ...

- Play background music.
- Play a sound effect when the cheeseburger hits Chaja.
- Track score.
- Take a pic of the user and import their face into the game.



Openly-licensed Media Resources:

Creative Commons Search:

<https://ccsearch.creativecommons.org/>

Open Game Art:

<https://opengameart.org/>

Sounds Bible:

<http://soundbible.com/>

Material.io's Sound Resources - Alerts, Notifications, and System Sounds:

<https://material.io/design/sound/sound-resources.html>

Pixlr - Free web-based Photoshop style application:

<http://pixlr.com>

Why does it matter?

The Power to Change their Community & the World

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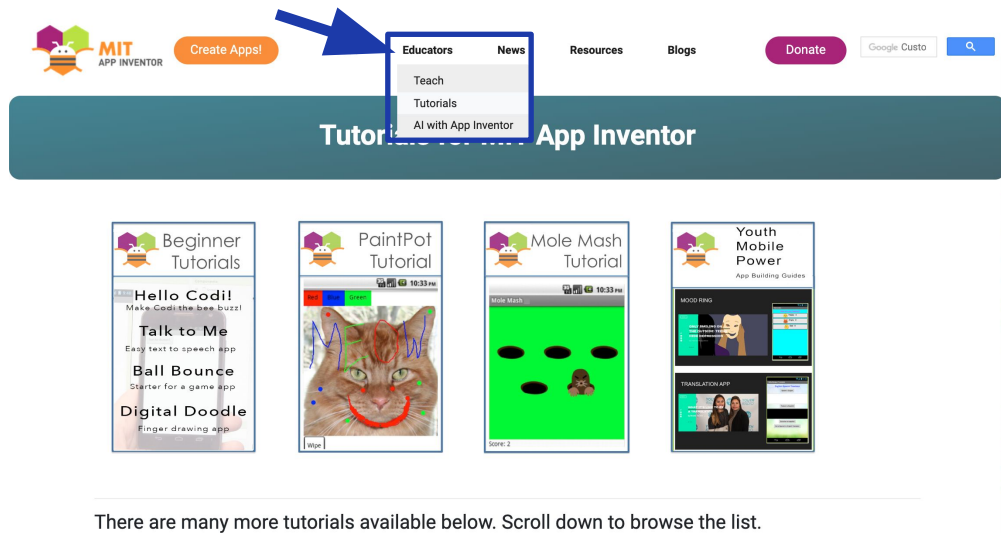
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Taking it to the next level...

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App Inventor Tutorials



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Edhesive App Design Curriculum

Or Other Curricular Resources

LESSON A6: ADDING MEDIA

Lesson Goals

Objective

Upon successful completion of this lesson, you will be able to:

- explain the concept of user interface
- integrate media into your app

Introduction

While you have started to program events in your apps, the apps you've made so far have been quite simple. In this lesson, you'll learn how to add media, like images and sounds, to enhance the look and functionality of your app.

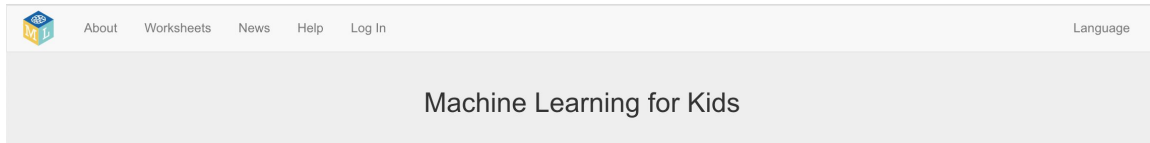
Code-Along Video Tutorials

In order to code-along with this lesson's videos, complete the steps below beforehand.

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Machine Learning for Kids



In 6 seconds...



In 20 minutes...



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Technovation Girls - <https://technovationchallenge.org/>



As a Technovation Girl, your team will...

- **Identify a problem** in your community ([see some examples](#))
- **Learn to code** and **create an app** to solve that problem with support from your mentor – you don't need to know how to code to participate!
- If you are between the ages of 10 and 18 by August 1, 2020, you can submit your idea to our global competition

Any girl or young woman (ages 10-18) interested in Technovation Girls is eligible to participate.

We welcome all transgender people and also those who identify as non-binary or gender nonconforming and want to be part of a female-identified environment, including student participants.

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Congressional App Challenge - congressionalappchallenge.us



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