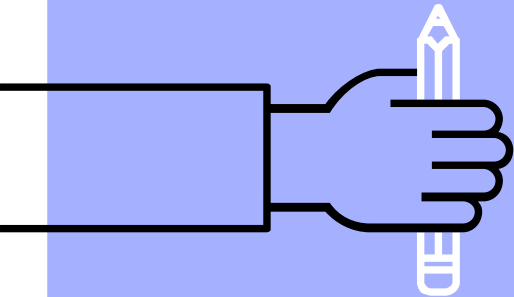
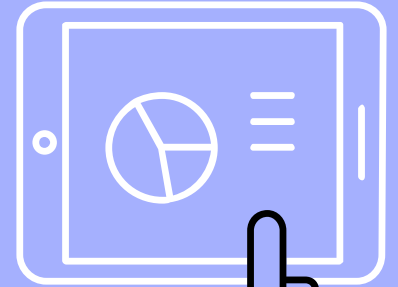
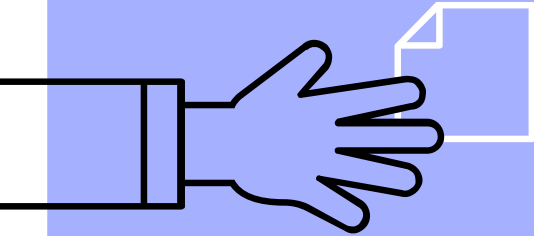
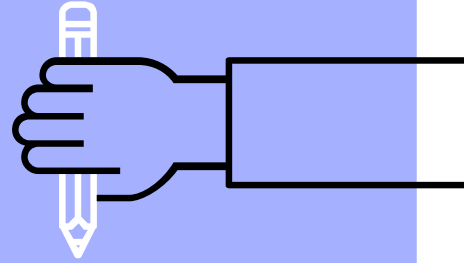


APP INVENTOR

By Alicia, Vaishnavi, and Yoomin



About App Inventor



What is App Inventor?

- Website for making simple apps
- Fun, useful, easy to use, and free!
- Languages: Java, Kawa, Scheme
- Great for: teaching understanding, basics, troubleshooting, and persistence of programming
- Similar to Scratch
- Can use your own app on an android or emulator
- Website: <https://appinventor.mit.edu/>

History of App Inventor

- ▶ 2007 - App Inventor began at Google
- ▶ MIT Professor Hal Abelson worked at Google Labs during a period of leave
- ▶ Google Labs closed in 2011, causing App Inventor project to be moved to MIT
- ▶ Professor Abelson joined two other professors from an Education Lab and MIT Media Lab to continue building the software



MIT Professor
Hal Abelson



App Inventor
Logo

Uses of App Inventor



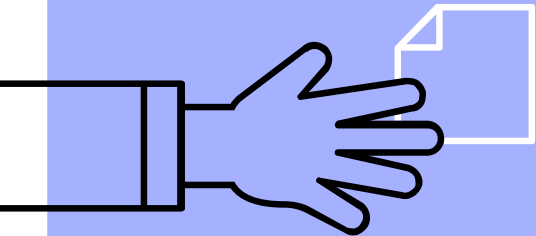
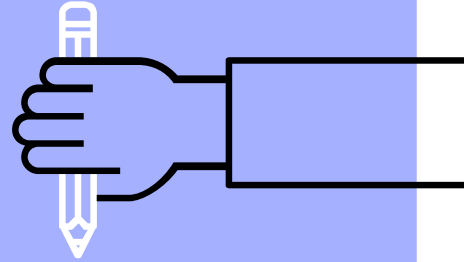
You can...

- Get introduced to coding
- Make cool apps in a short amount of time without having to learn code
- Test out ideas for apps
- Learn about the general structure of code
- Express your creativity

Possible types of apps you can make!

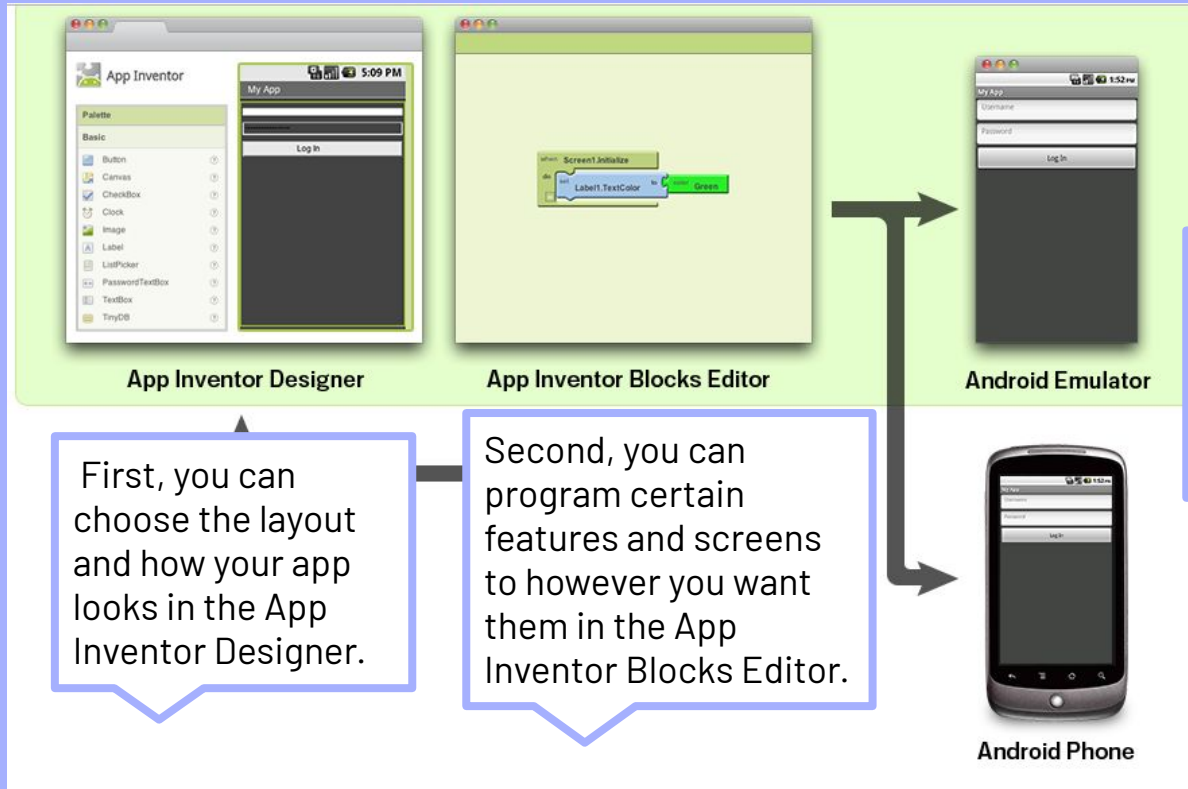
- Choose your own adventure game
- Personality quiz app
- Soundboard app
- App that provides information on a specific topic
- Name that movie app

How to use App Inventor



How to use App Inventor (Part 1)

How the process works



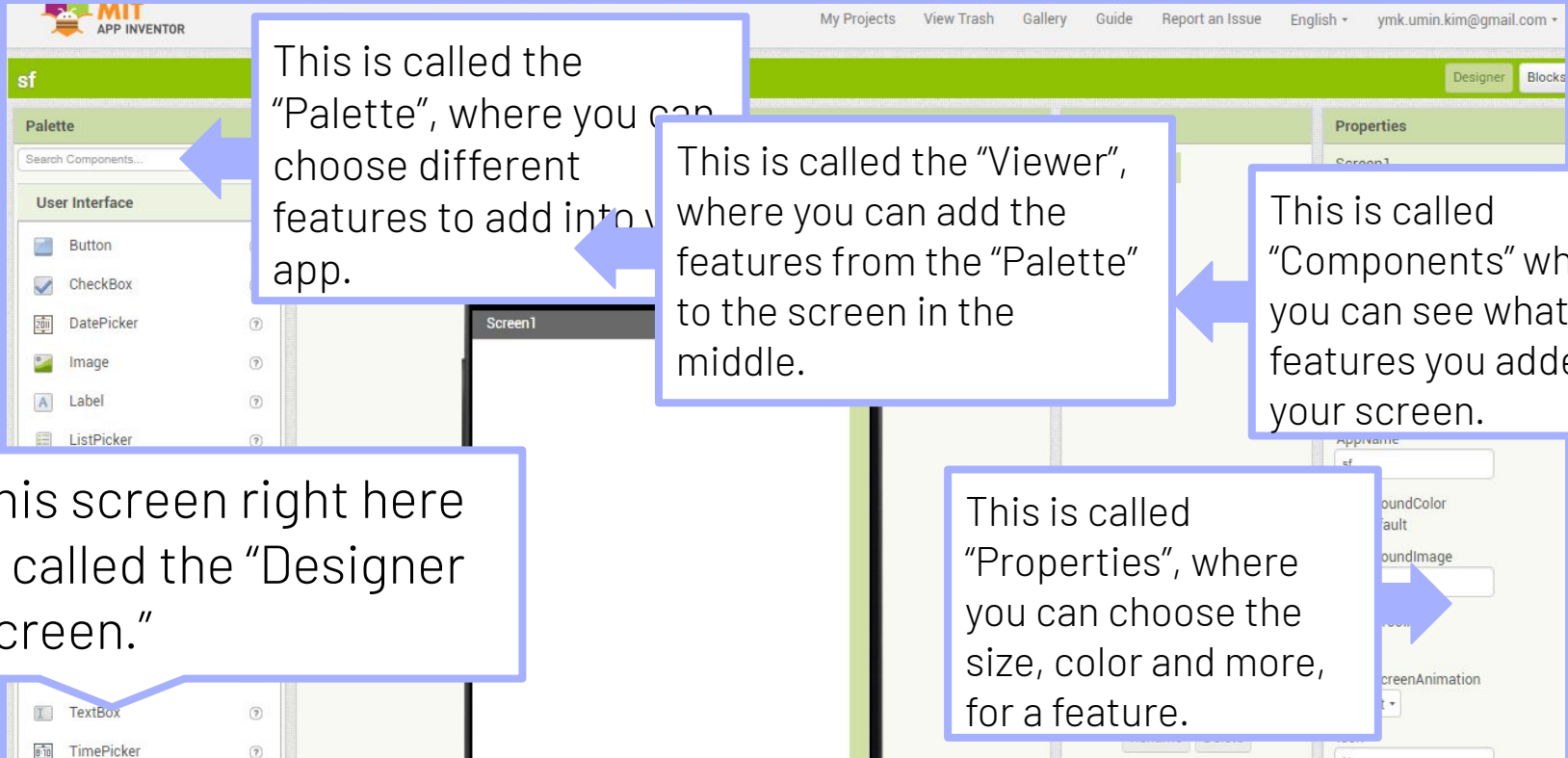
First, you can choose the layout and how your app looks in the App Inventor Designer.

Second, you can program certain features and screens to however you want them in the App Inventor Blocks Editor.

The final step is to try out your app on an Android Emulator or an Android phone.

How to use App Inventor (Part 2)

How to navigate the App Inventor website:



This is called the "Palette", where you can choose different features to add into your app.

This is called the "Viewer", where you can add the features from the "Palette" to the screen in the middle.

This is called "Components" where you can see what features you added to your screen.

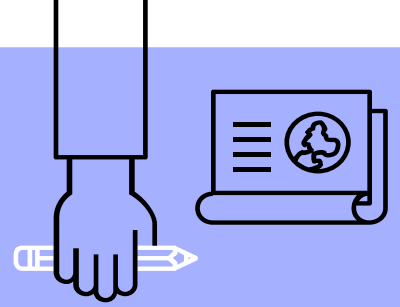
This screen right here is called the "Designer Screen."

This is called "Properties", where you can choose the size, color and more, for a feature.

How to use App Inventor (Part 3)

The image shows the MIT App Inventor web interface. At the top, there is a navigation bar with the MIT App Inventor logo and several menu items: My Projects, Connect, Build, Settings, Help, My Projects, View Trash, Gallery, Guide, Report an Issue, English, and ymk.umin.kim@gmail.com. Below the navigation bar, there is a green header bar with the text 'sf' on the left and 'Screen1', 'Add Screen ...', and 'Remove Screen' in the center. On the right side of this header bar, there are two tabs: 'Designer' and 'Blocks'. Both tabs are circled in red, and red arrows point from red boxes labeled 'Designer' and 'Blocks' to them. The 'Designer' tab is currently selected. Below the header bar, there is a left sidebar labeled 'Blocks' containing a list of built-in components: Control, Logic, Math, Text, Lists, Dictionaries, Colors, Variables, Procedures, and Screen1. The main area is labeled 'Viewer' and contains a large empty white space. At the bottom of the viewer, there are two warning icons (a yellow triangle and a red X) with a '0' next to each, and a 'Show Warnings' button. On the right side of the viewer, there are three circular icons: a target icon, a plus sign, and a minus sign, and a trash can icon at the bottom right.

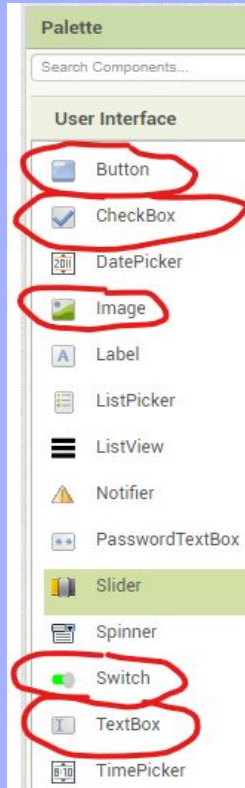
Using the Designer



Most Used Palette

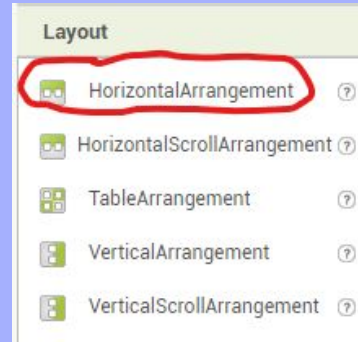
User Interface

- Button
- Checkbox
- Image
- Switch
- Textbox



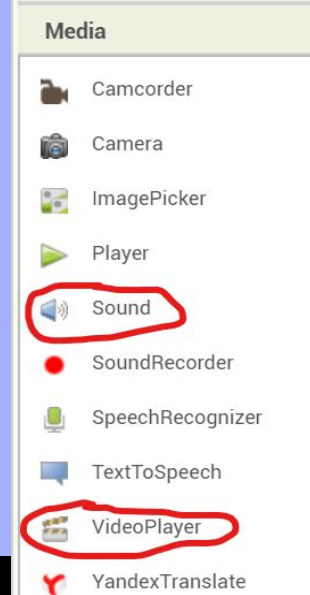
Layout

- Horizontal Arrangement.



Media

- Video
- Sound



Drawing and Animation

- Canvas



*Most
Commonly
Used
Palette
Features*

How to Insert Media in your App

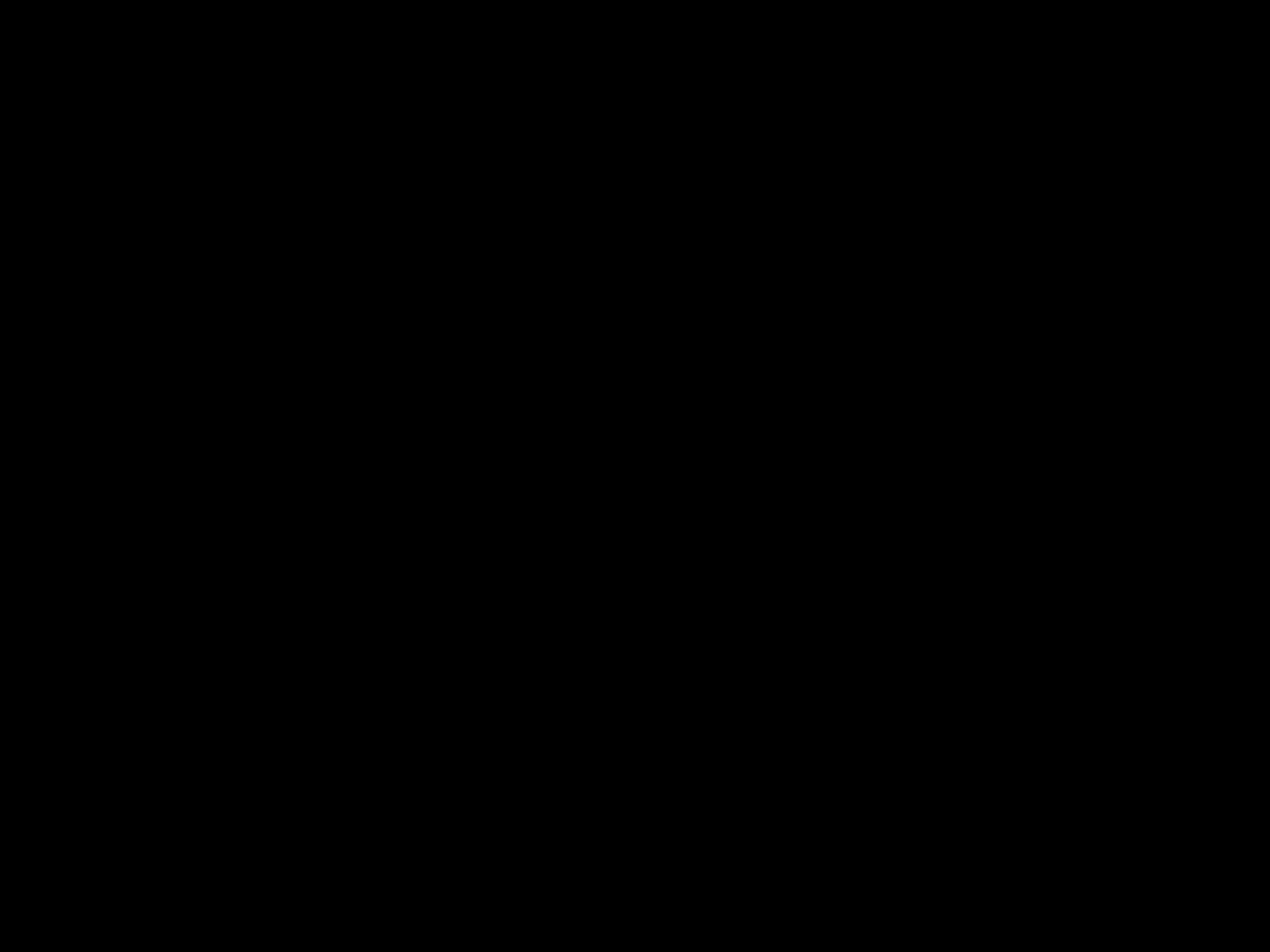
First, you must download the Media file to App Inventor

- 1) In the "Media" column, click → "Upload file"
- 2) Click → "Choose File"
- 3) Locate your desired media file.
- 4) Click → Open.
- 5) Now you should see the file in the "Media" column.

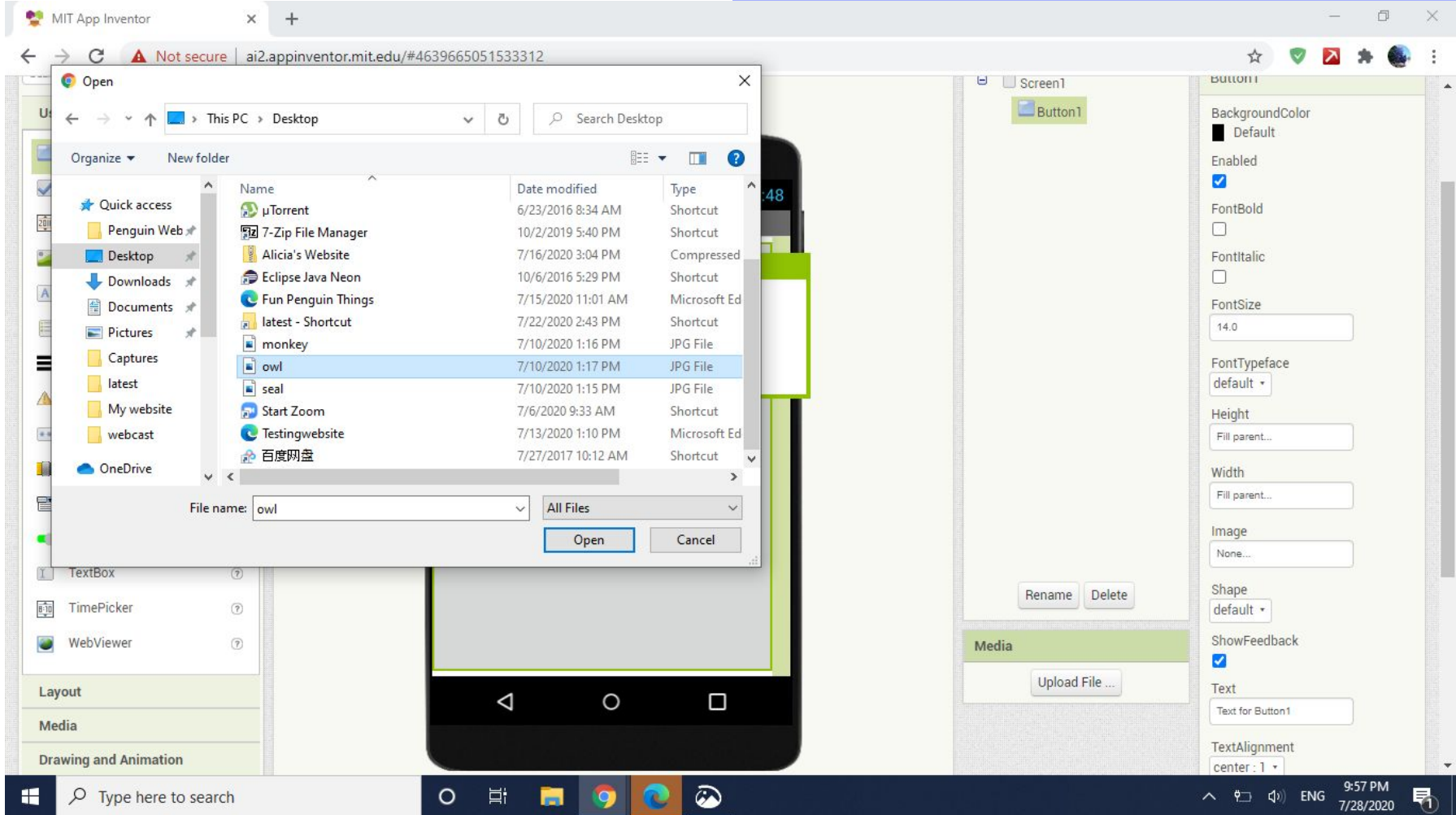
To insert the media file inside the app:

- 1) Unless you want to insert an image into your app's background, choose something under the "Palette" column that can support a media file. Then, drag it onto the Viewer.
- 2) Under the column called "Properties", find the "Image", "Background Image", or "Source" option and click on it.
- 3) Select the media file you want to insert.
- 4) For images and videos, you can adjust the size by clicking on the "Height" and "Width" option underneath "Properties".

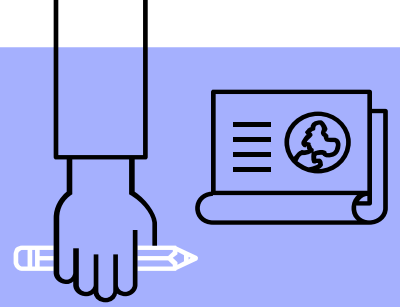




At one point in the video, I am searching through the files on my computer. It is located on a separate window. Since my computer does not support screen recording two windows, you cannot see the files window popping up on my screen.



Using the Coding Blocks





App Inventor Blocks



Control

Tell when or under what conditions parts of the program should run or perform direct tasks



Logic

Label or check certain conditions as true or false (boolean operators), check if arguments are equal or program a certain value to be returned



Math

Perform math operations along with absolute value and rounding, compare values or perform conversions



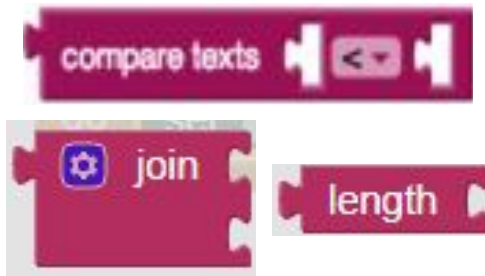


App Inventor Blocks



■ Text

Create and manipulate strings
(Ex. reverse a string, join strings, compare two strings, etc.)



■ Lists

Create and manipulate sets of values, or find a specific value in a list created (choose list items by naming their index or indices)



■ Dictionaries

Build and use data structures with key-value pairs, which can then be added to or changed





App Inventor Blocks



■ Colors

Pick colors for components of design or pen colors, make your own color by inputting R, G, and B values or split a color



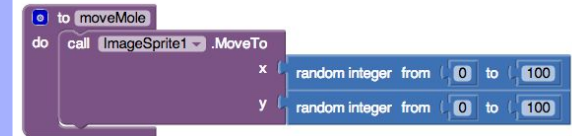
■ Variables

Create variables to store values mentioned before (lists, strings, integers) which you can get easily later in your program



■ Procedures

Similar to variable blocks, except instead of storing values, store a sequence of blocks which can be called later for efficiency







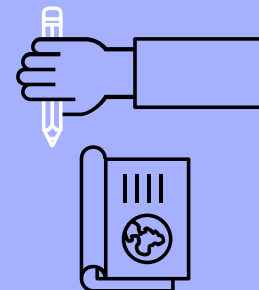
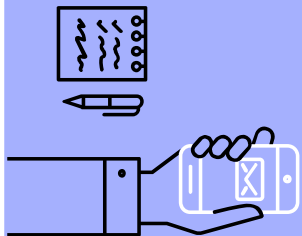
Bibliography

Patton E.W., Tissenbaum M., Harunani F. (2019) MIT App Inventor: Objectives, Design, and Development. In: Kong SC., Abelson H. (eds) Computational Thinking Education. Springer, Singapore. https://doi.org/10.1007/978-981-13-6528-7_3

"About Us." Appinventor.Mit.Edu, appinventor.mit.edu/about-us.

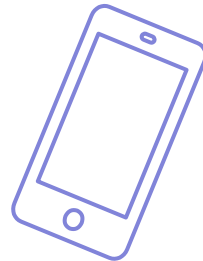
Accessed 29 July 2020.

"What Is App Inventor?" Appinventor.Mit.Edu, appinventor.mit.edu/explore/content/what-app-inventor.html. Accessed 29 July 2020.





Kahoot Time!



Thanks for
watching!