

Sketch and Guess

One person draws on their device - other players
guess what they are drawing!

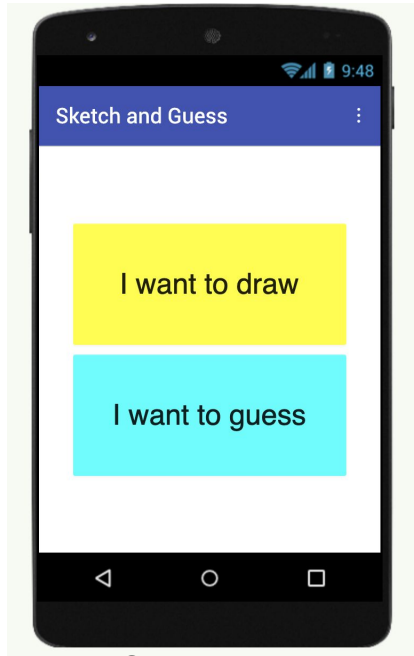
Essential Questions

- How can drawing information be passed from one device to another within an app?
- How does an app manage multiple players?

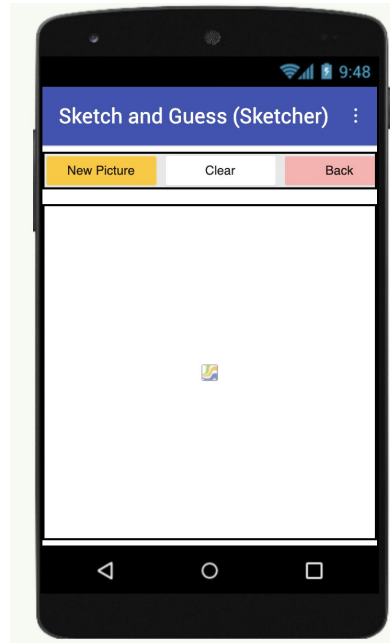
Objectives

1. Make a multiplayer drawing app that uses CloudDB.
2. Use CT concepts such as sequences, events, conditionals, parallelism, naming, operators, and data manipulation in creating an app.
3. Demonstrate understanding of how to use CloudDB to pass multiple pieces of information between devices;.
4. Work collaboratively to code and test a working multiplayer app.

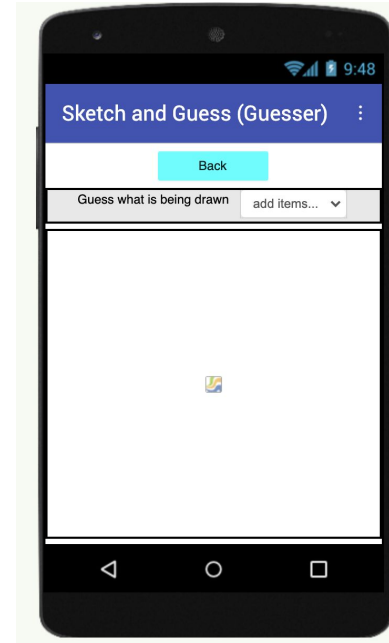
Lesson 1: Multiple Screens



Screen1



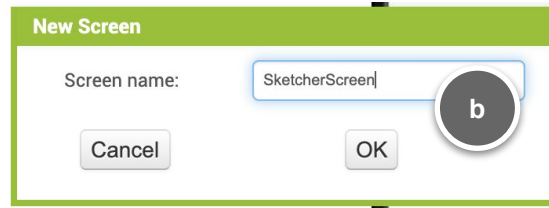
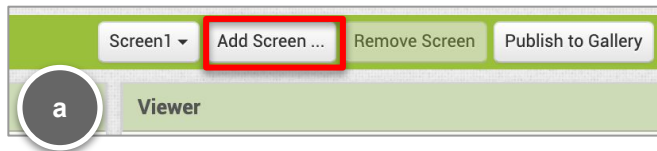
SketcherScreen



GuesserScreen

Lesson 1: Multiple Screens

- Add new screen



- Blocks: open and close screens

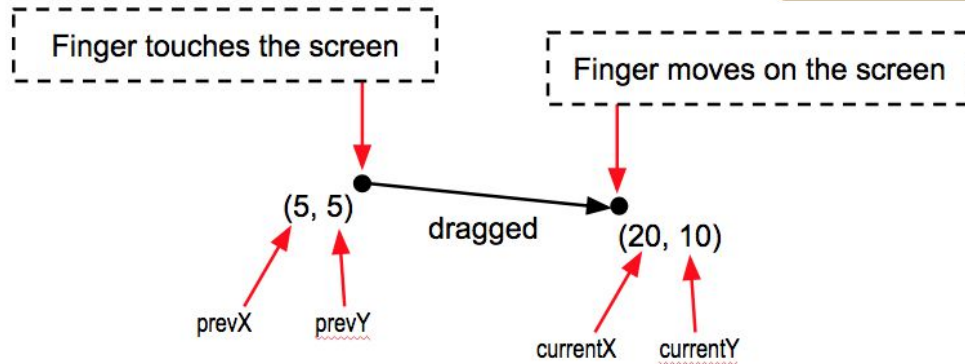
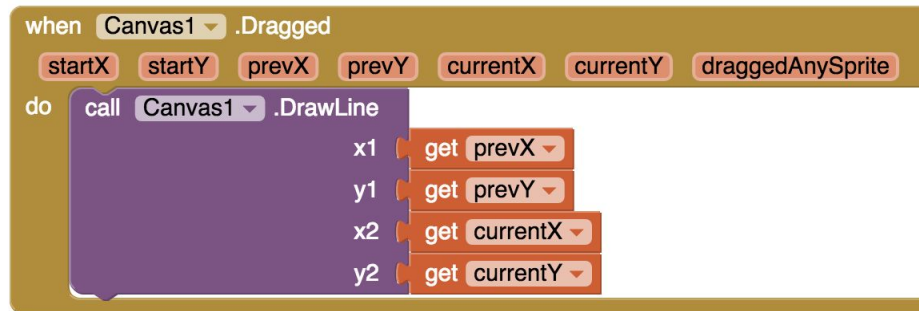


When you open a new screen, it appears *on top* of the screen that opened it, so if you *close screen* it removes the screen on top to uncover the one below.

Lesson 1: Complete Student Guide: Part 1

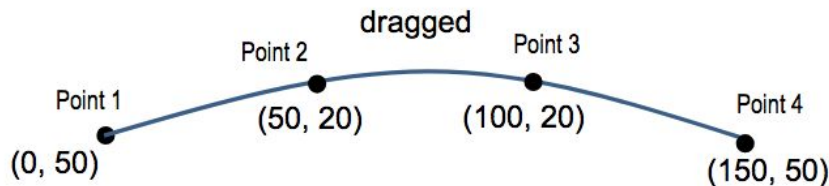
Lesson 2: Drawing on the Canvas

- Use Canvas1.Dragged event.
- Draw line from prevX,prevY to currentX, currentY.



Lesson 2: Drawing on the Canvas

- As the user drags, a series of tiny lines are joined to make the drawing.



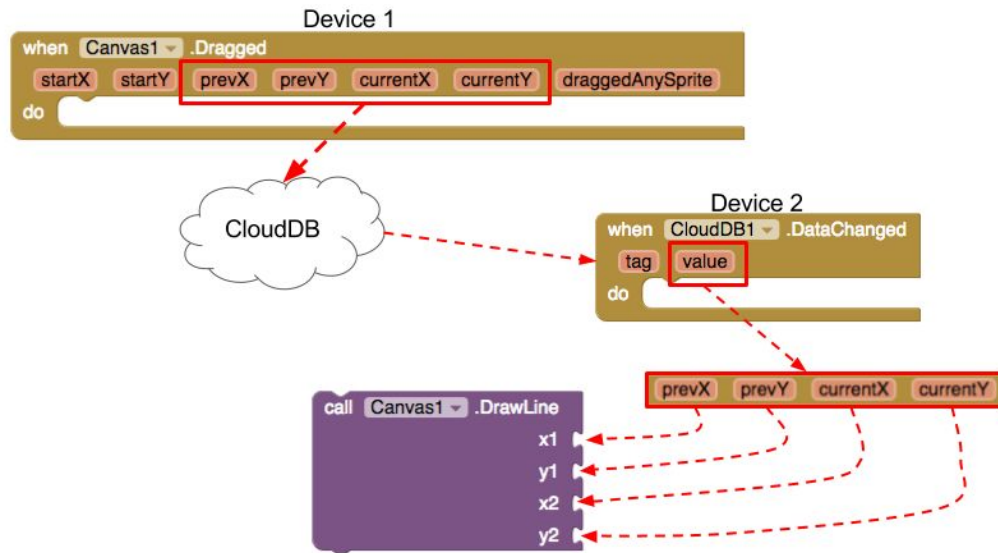
Lesson 2: Complete tables on pages 1,2 of Student Guide Part 2

Lesson 2: Simple drawing app

Complete Student Guide: Part 2

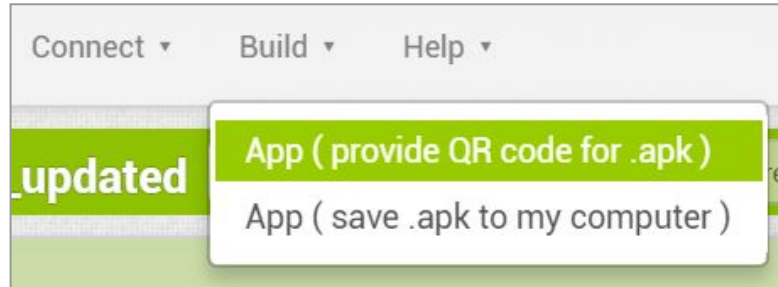
Lesson 3: Drawing over Devices

- Store the drawing information in **CloudDB**.
- **DataChanged** event retrieves the information on other Devices.
- Because 4 values are stored, use a list to store them.



Testing

Because you are testing with multiple devices, instead of connecting with MIT AI2 Companion, build the apk (use QR Code option) and download to device to test.



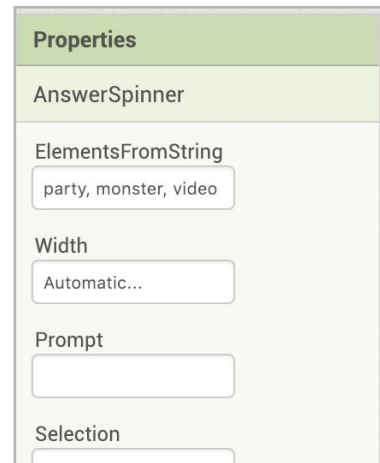
Note this installs the app on your device.

Lesson 3: draw on one device, see it on a second

Complete Student Guide: Part 3

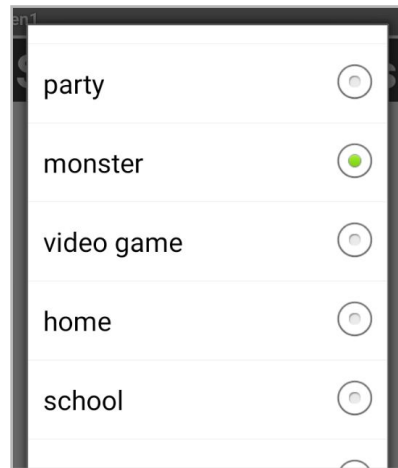
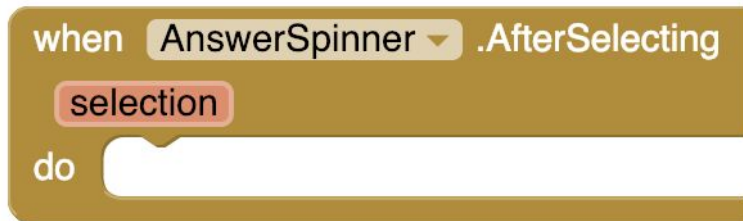
Lesson 4: Spinner Component

- Allows user to choose from a list.
- Set the list items in *ElementsFromString* property. ----->
- Or you can set it in the Blocks Editor.



Lesson 4: Spinner Component

- User chooses an item in the list. ----->
- AfterSelecting event is triggered.



Lesson 4: test if guess is correct or not

Complete Student Guide: Part 4

Lesson 5: Continue completing app or Complete Student Guide Challenge:

Vocabulary Words

Spinner

Spinner.Elements

CloudDB

DataChanged event

tag

value