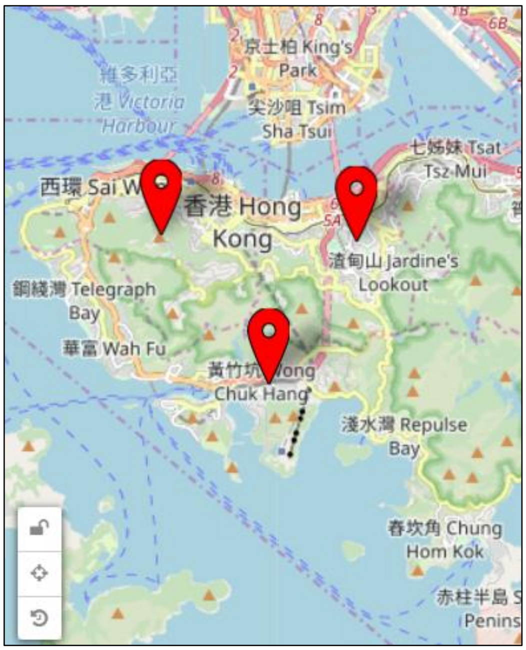
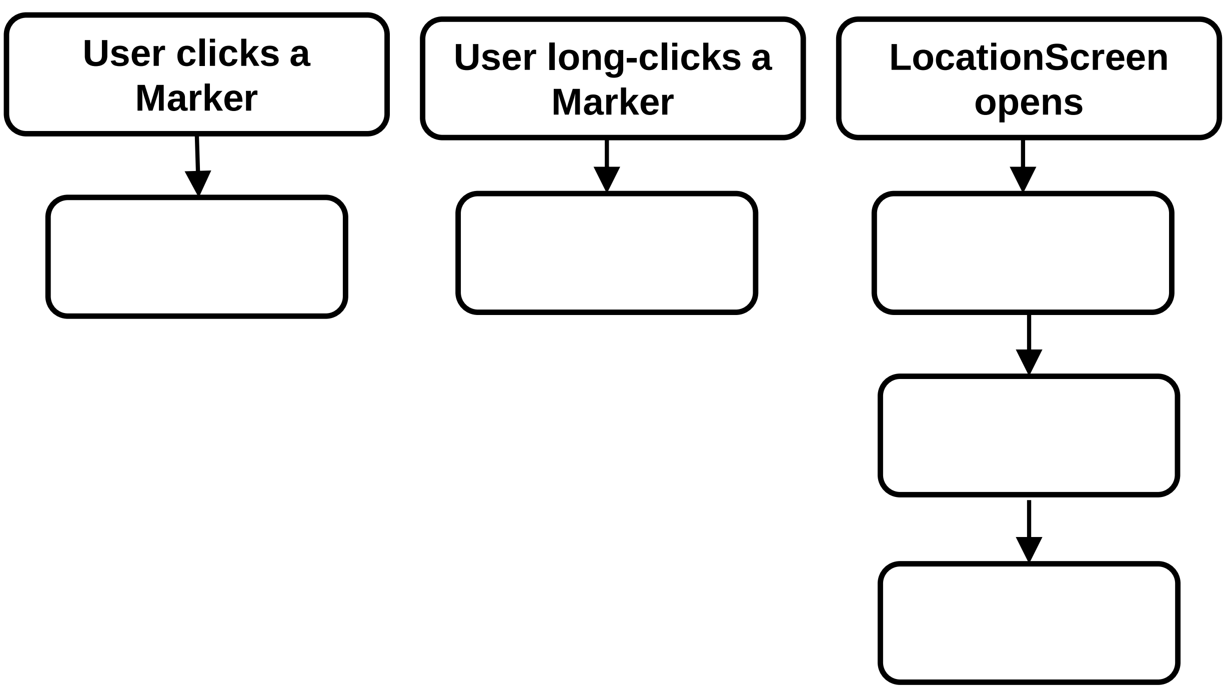
HONG KONG TOUR GUIDE

USER EVENTS

- ❑ Complete the flowchart below with the correct corresponding letter (A, B, C, D, E).



A. Open LocationScreen, passing marker name as start value.
B. Infobox appears and displays the title and description for a marker.
C. Correct location, description and picture is displayed on the LocationScreen.
D. Index is used to get location, description and picture information from lists.
E. Start value is used to determine correct index for lists.



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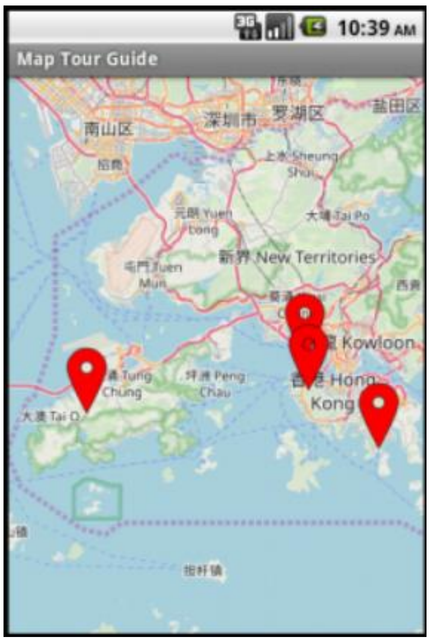
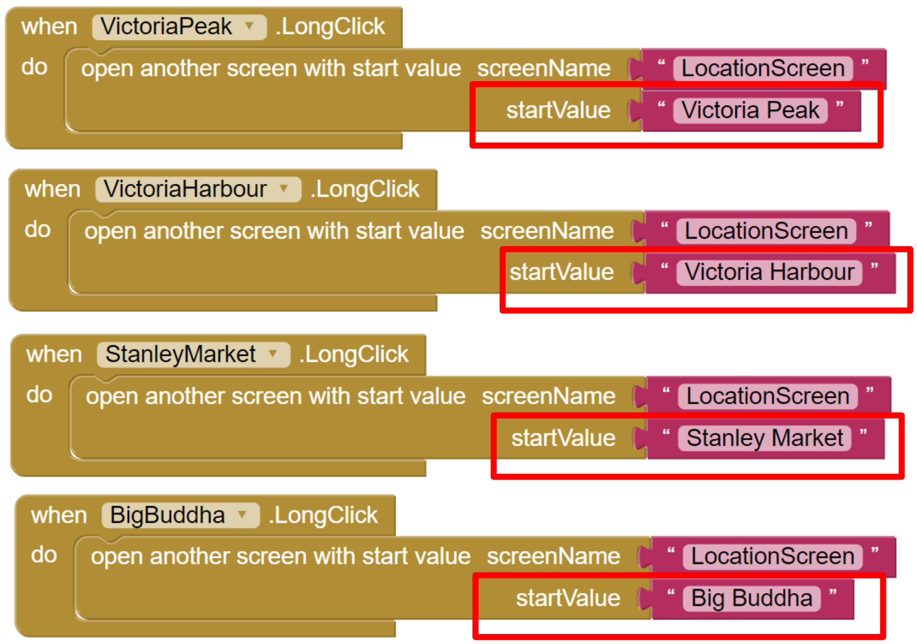
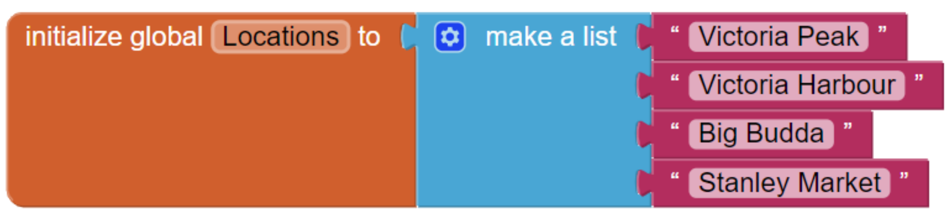
DATA PASSING FROM SCREEN1 TO LOCATIONSCREEN

When user LongClicks on the Marker, the corresponding startValue will be passed to LocationScreen.





In LocationScreen, it will look up the index in the Location list using the startValue from Screen1.



What is the index of Victoria Peak in the Locations list?

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DATA MANIPULATION

In Lesson 2, you used lists to store

- locations;
- descriptions; and
- pictures.

Are you aware of the importance of sequences?

In this lesson, you will write the code for the second screen (LocationScreen) of your app~~,~~ to show the user more information about your four sites!

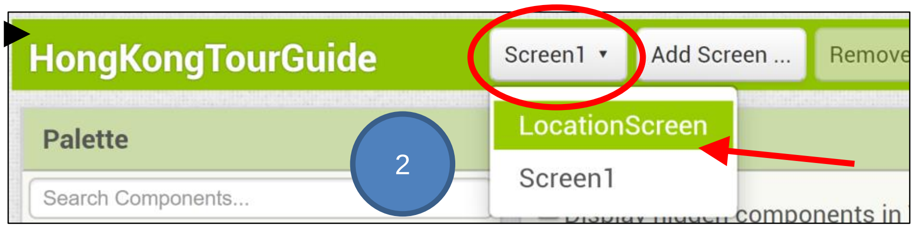
CT Tips

Lists are a type of data structure. They store multiple items that are related using a single name.

HONG KONG TOUR GUIDE

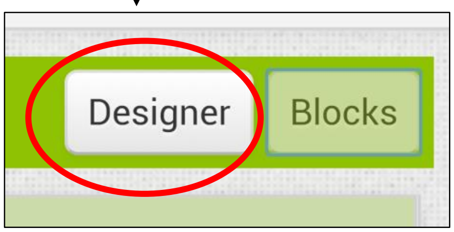
START HERE

- ❑ Open your HongKongTourGuide project. 1
- ❑ Open the “LocationScreen”.



- ❑ Switch to Designer.

3



The layout is shown to the right.

- ❑ With your partner, look at the user interface and try to identify what each component does. 4

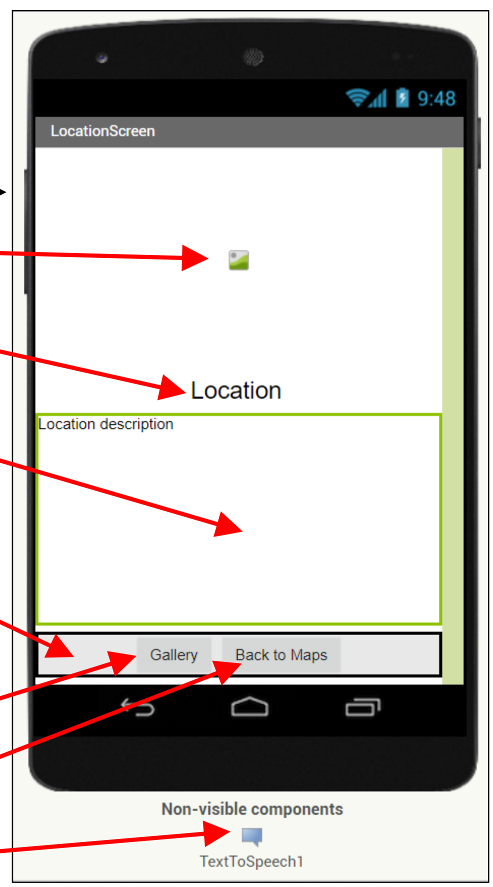


Image1

LocationLabel

DescriptionLabel

HorizontalArrangement1

GalleryButton

BackButton

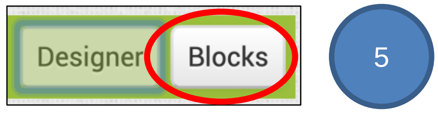
TextToSpeech1

HONG KONG TOUR GUIDE

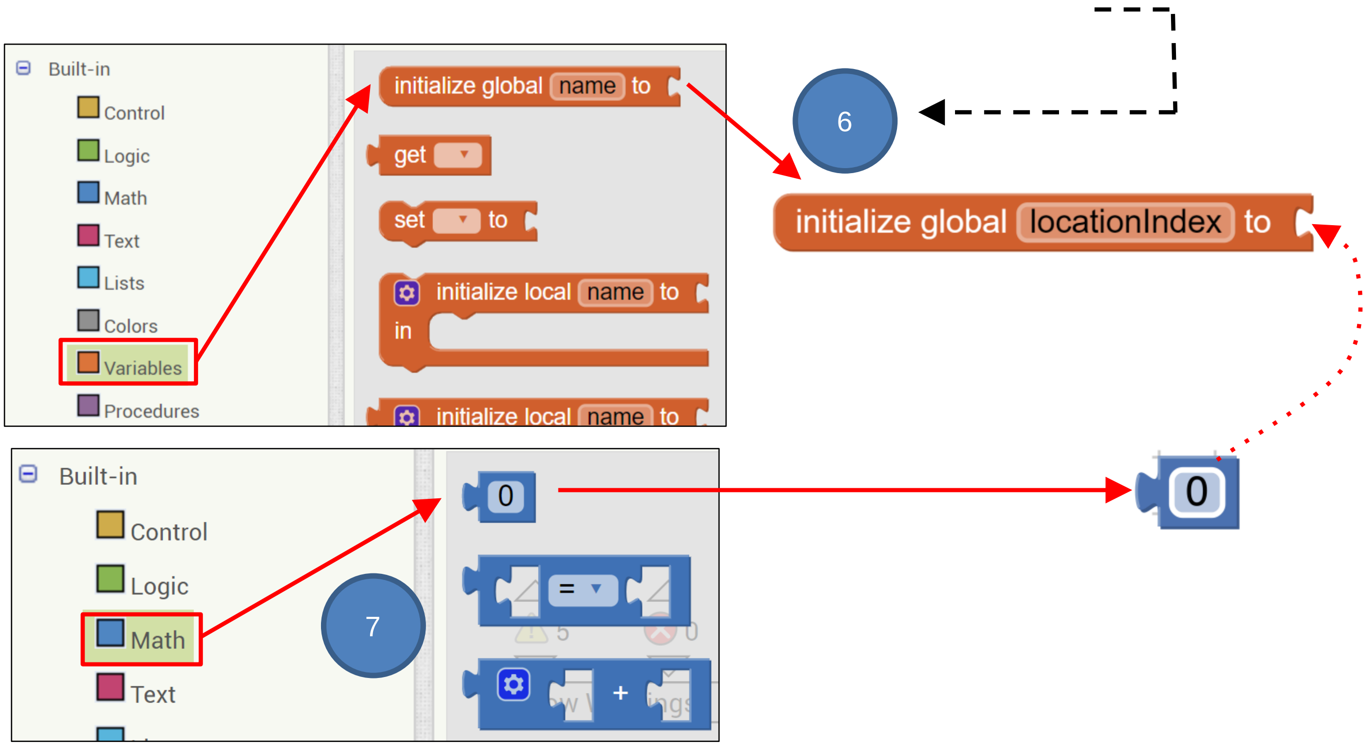
SET THE LOCATIONINDEX

In Lesson 2, we initialised three lists, Locations, Descriptions and Pictures. When we open the LocationScreen, we need to point to the correct index for our selected marker from Screen1.

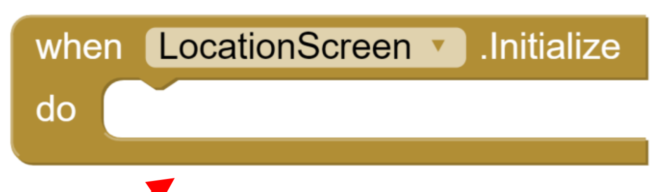
- ❑ Switch to the Blocks Editor.

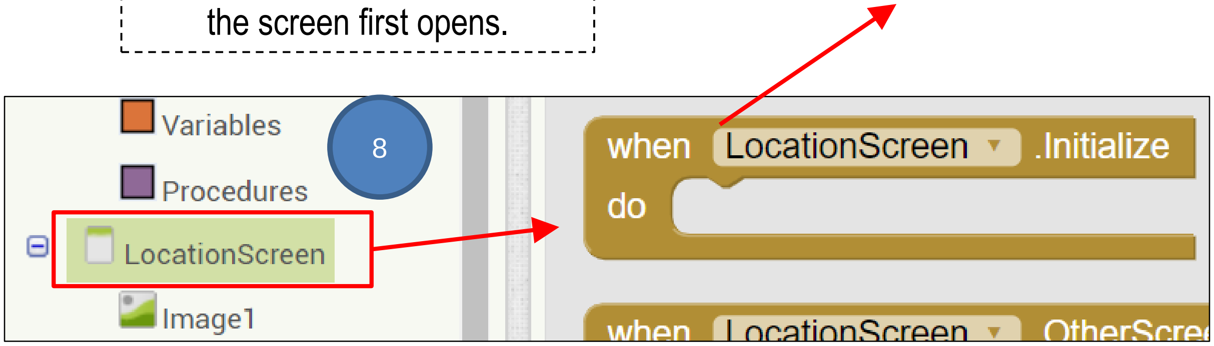


- ❑ Let's make a new variable, **locationIndex**.



We'll set the value of **locationIndex** in the **when LocationScreen.Initialize** block, the event triggered when the screen first opens.





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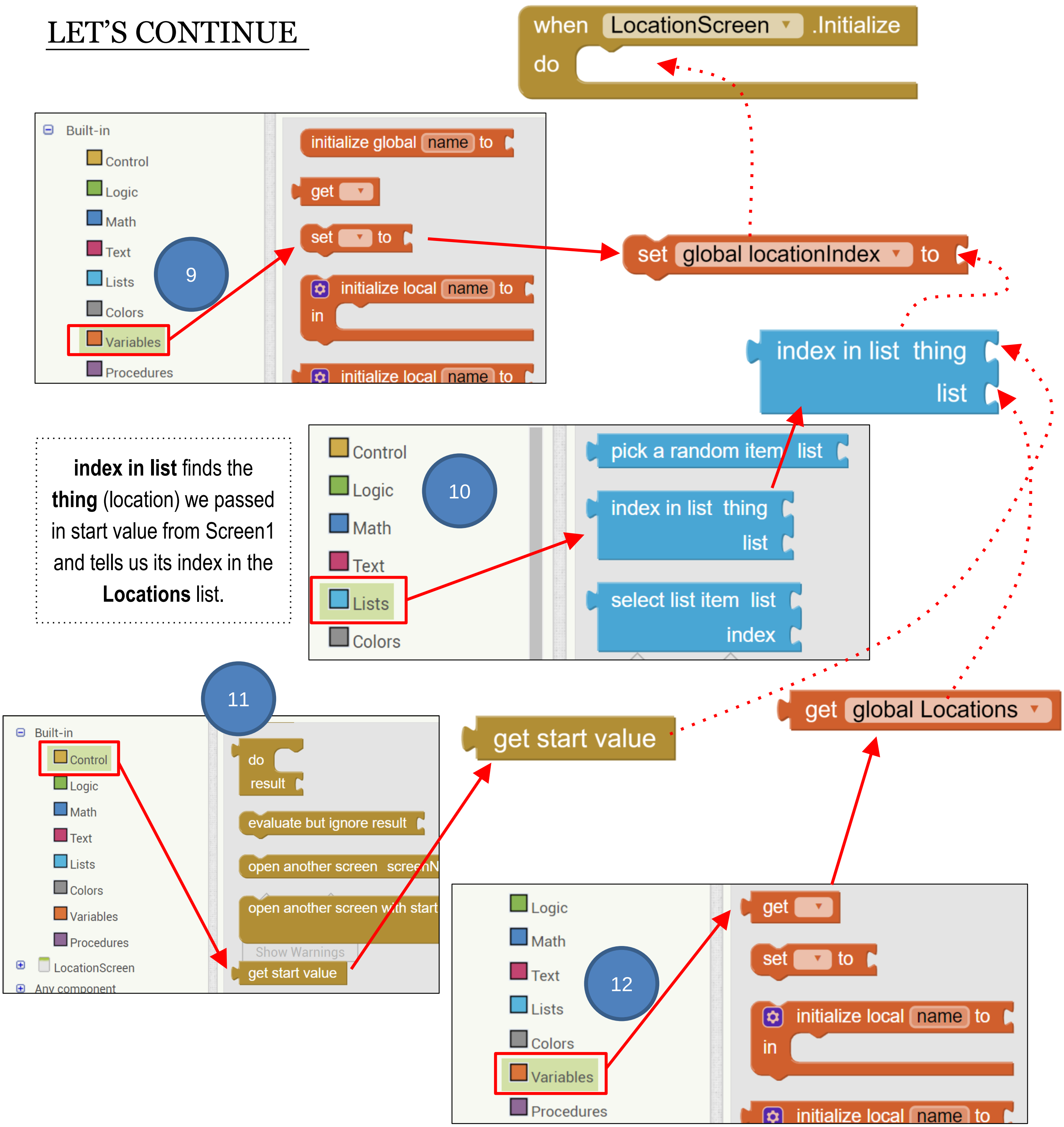
LET'S CONTINUE



index in list finds the **thing** (location) we passed in start value from Screen1 and tells us its index in the **Locations** list.

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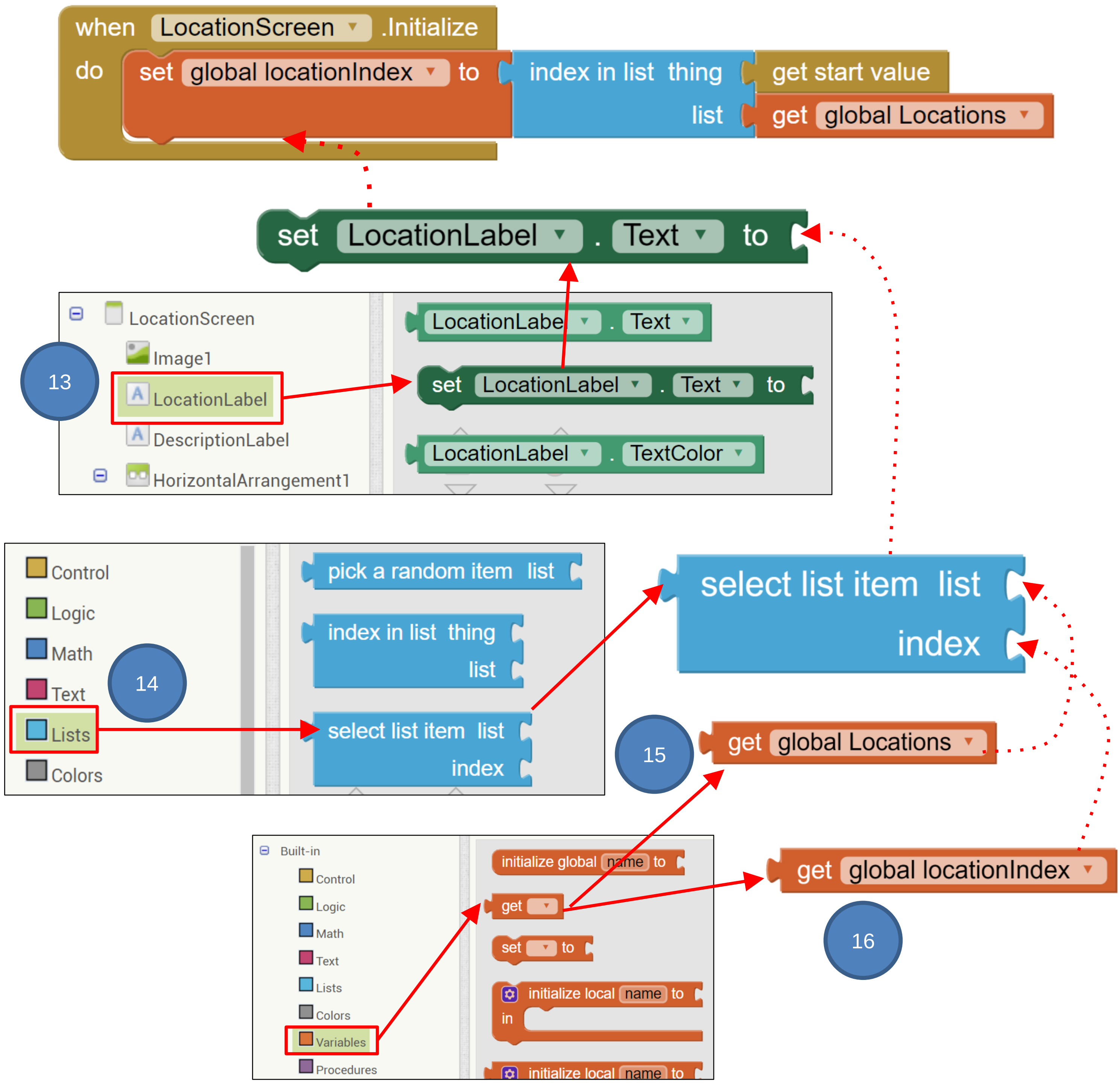
LET'S CONTINUE

Now we use **locationIndex** to point to the correct location, description and picture items in the three lists!

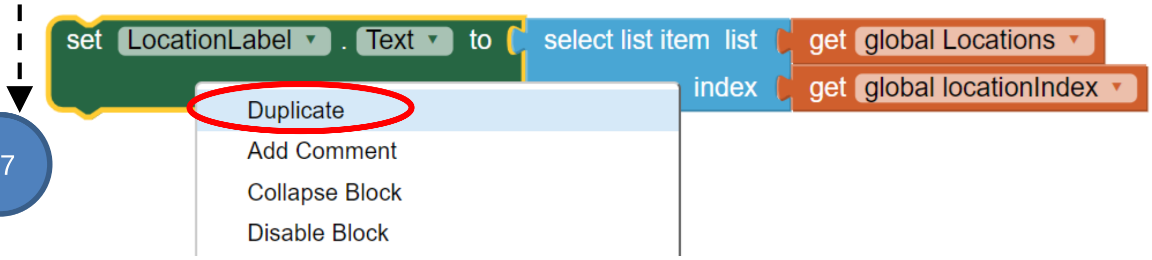


LET'S CONTINUE

Let's do the same for the description.

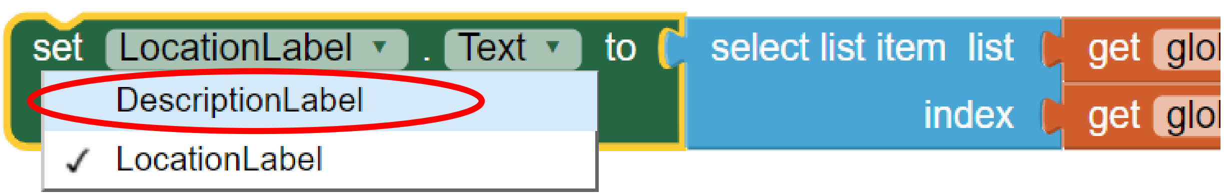
- ❑ Right-click on the **set LocationLabel.Text** block and Duplicate it.

17



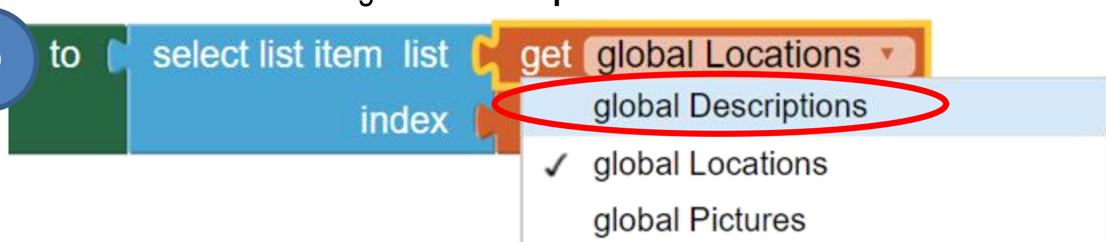
- ❑ Click on **LocationLabel** and change it to **DescriptionLabel**.

18



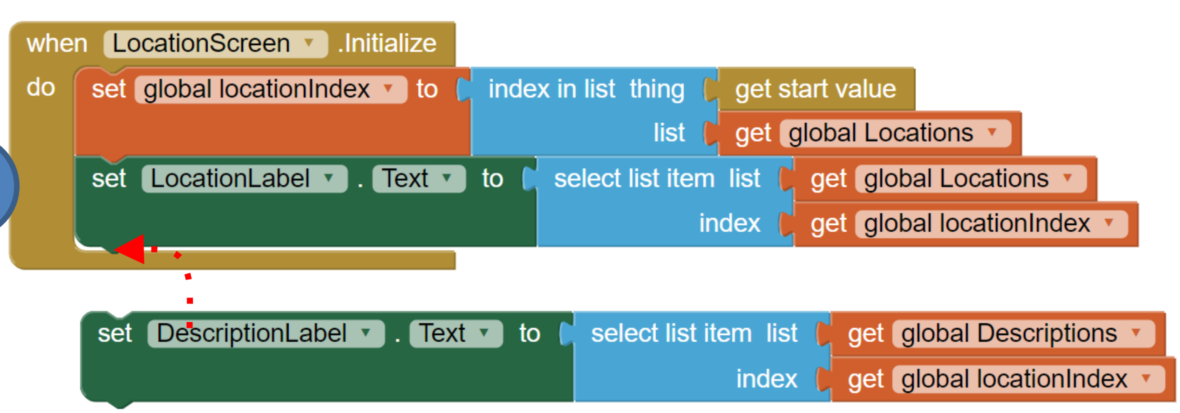
- ❑ Click on **Locations** and change it to **Descriptions**.

19



- ❑ And snap it in to the **when LocationScreen.Initialize** block, below the **set LocationLabel.Text** block.

20



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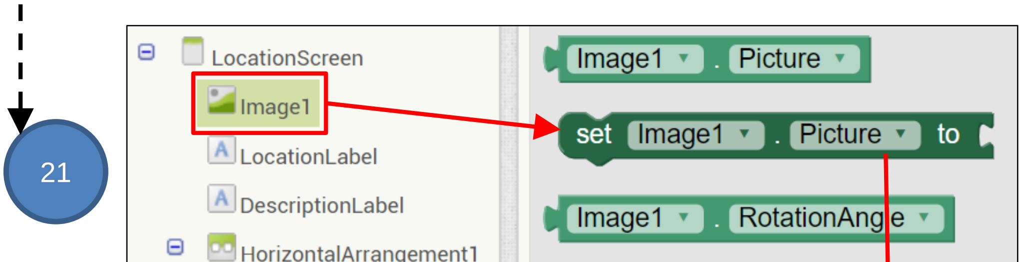
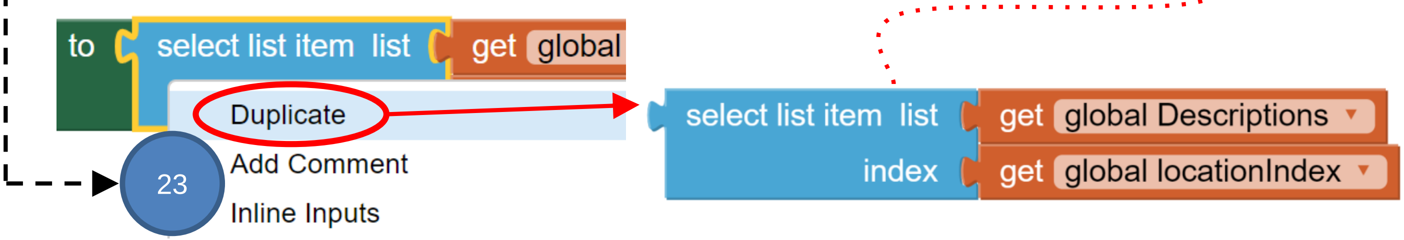
LET'S CONTINUE

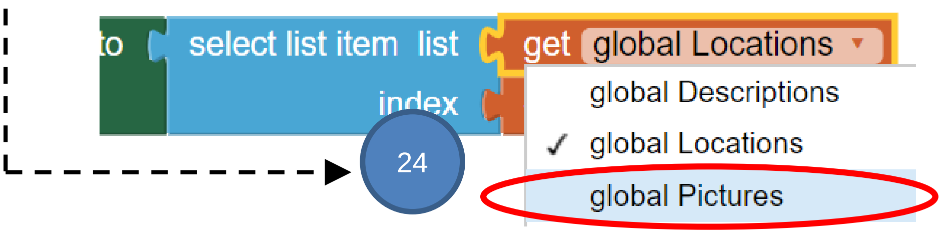
- ❑ Let's also set the **Image.Picture** to the correct ~~P~~picture.



- ❑ Duplicate *just* **select list item** this time.



- ❑ Click on **Locations** and change it to **Pictures**.



- ❑ And snap it in to the **when LocationScreen.Initialize** block, below the **set DescriptionLabel.Text** block.

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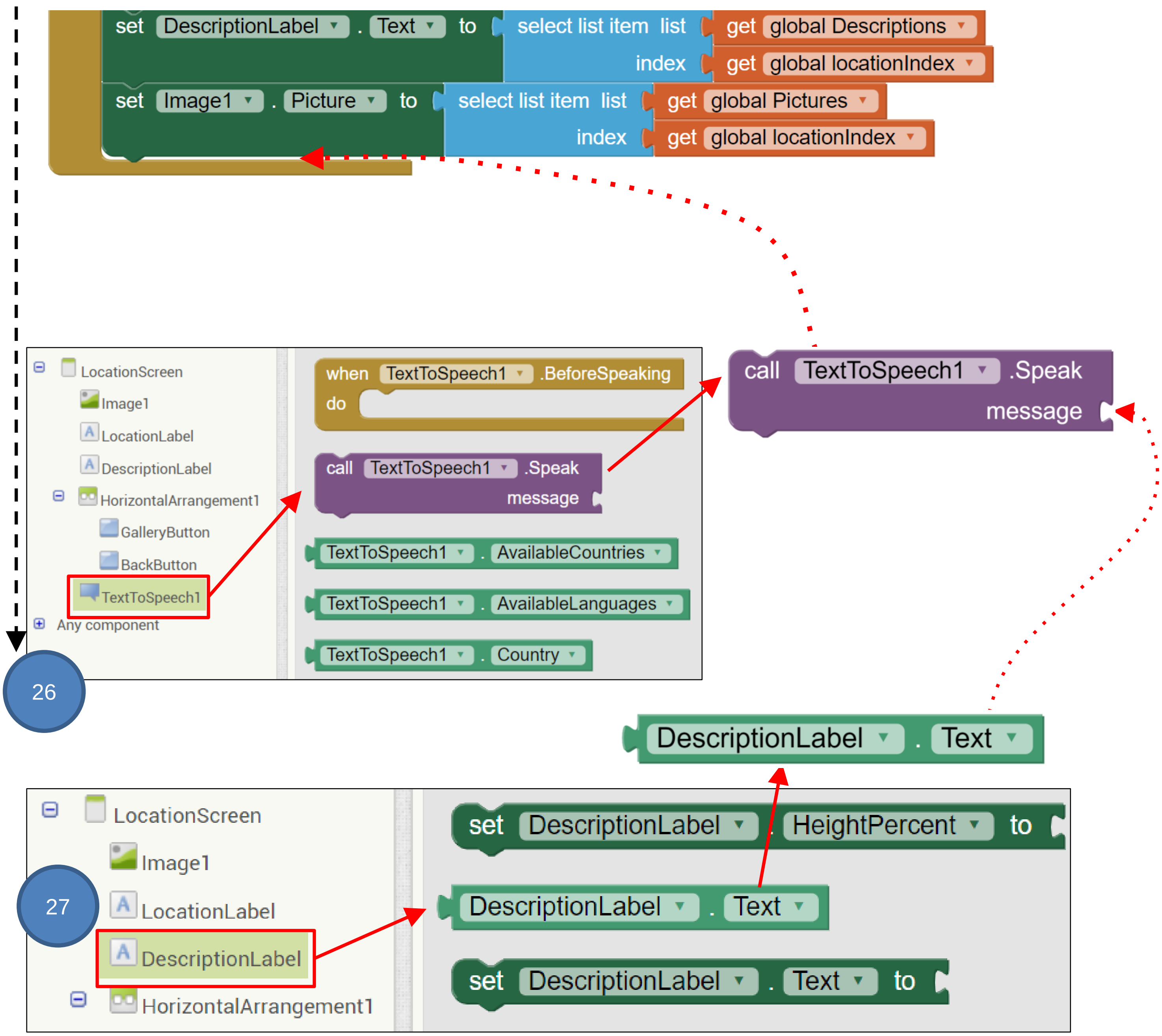
TEXTTOSPEECH

- ❑ Let’s also use the TextToSpeech component to have the app “speak” the description..



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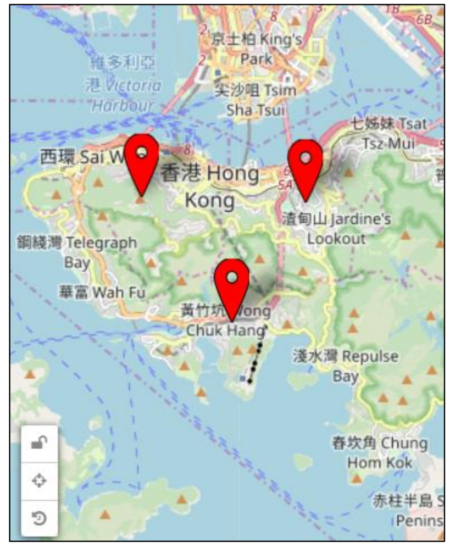
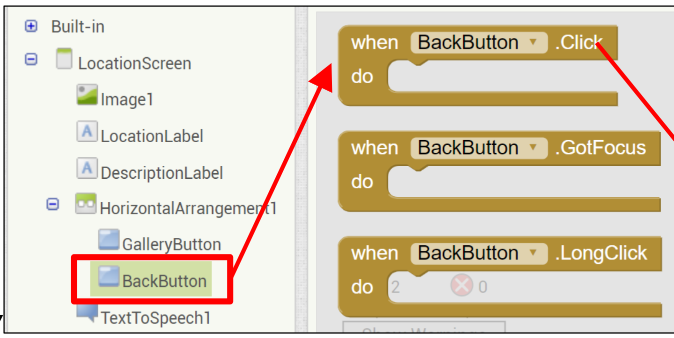
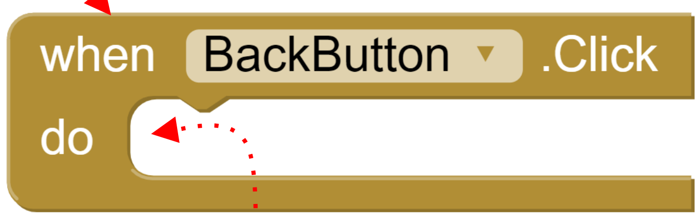


BACK BUTTON

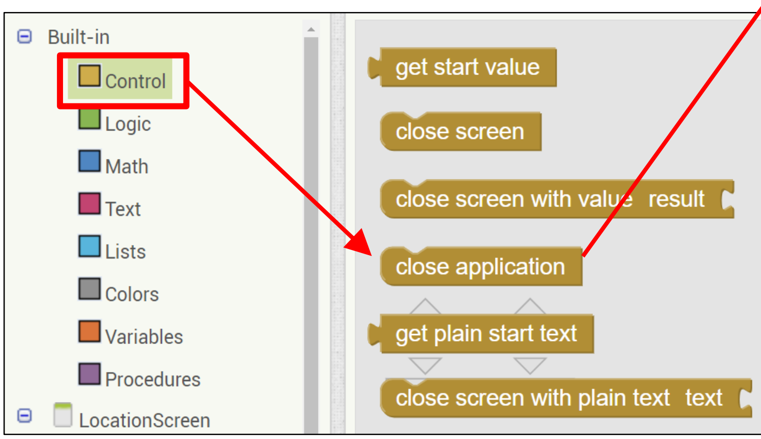
- [ ] The last thing to do is to take care of the two buttons on the screen!



28

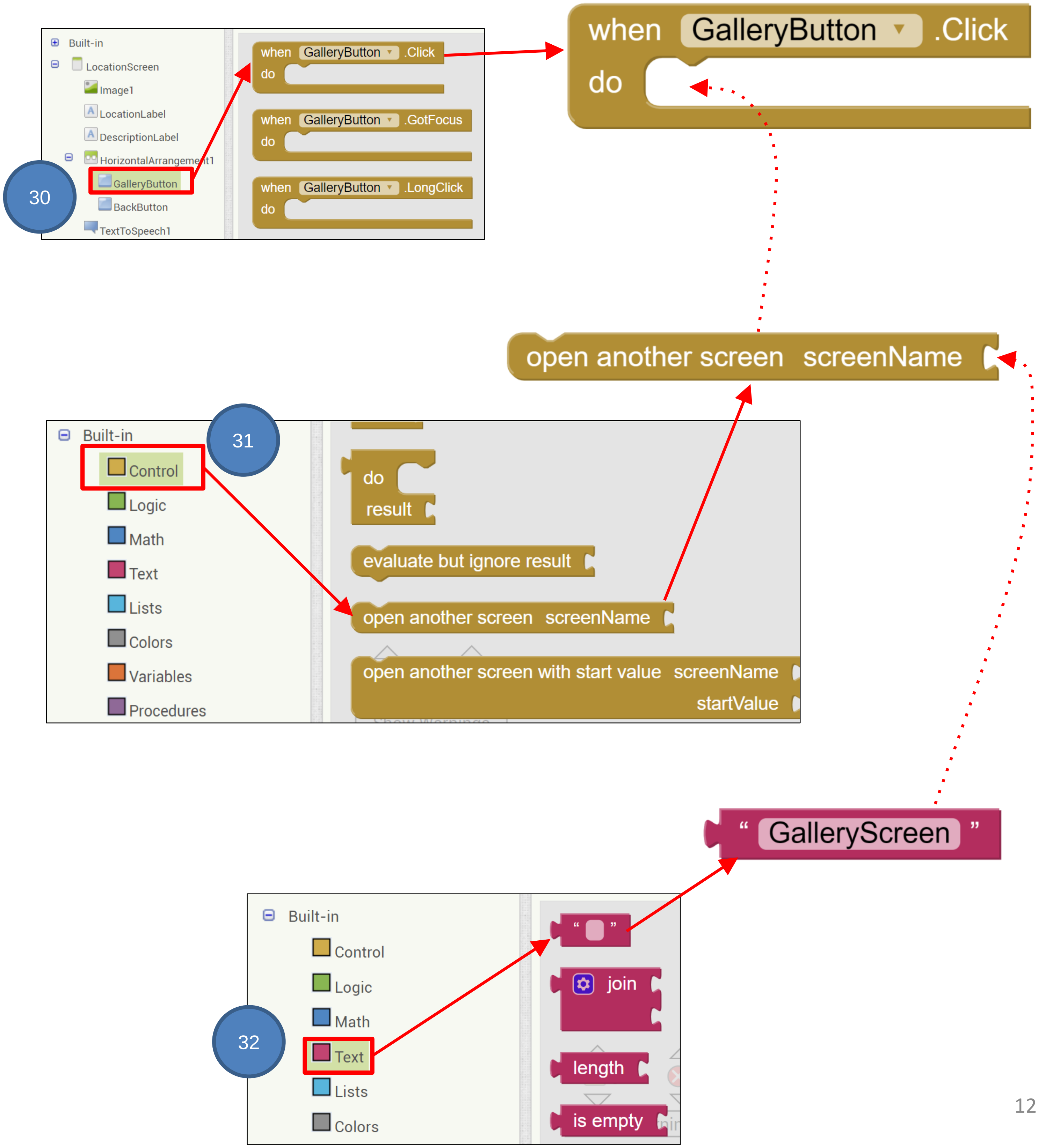


29



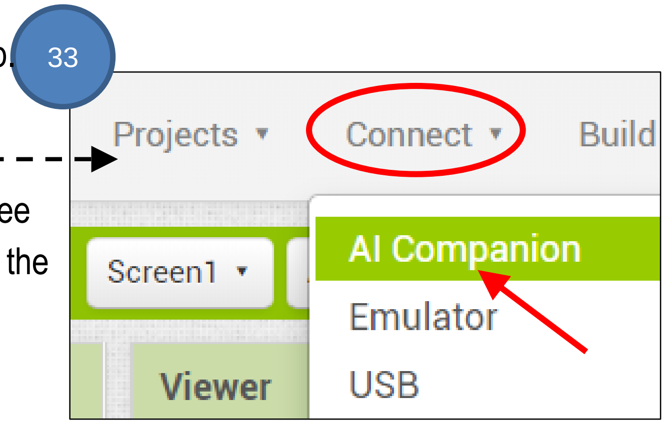
Screen1 is still open under this screen, so if we close this screen, the map will appear again.

GALLERY BUTTON



TESTING AND DEBUGGING

- ❑ Test your app with the MIT AI2 companion app.



- Long click on each of your markers and see that the **LocationScreen** opens, displays the correct description and picture, and the correct description is read aloud.
- Try the "**Back to Maps"** button to make sure you can go back and forth between the first two screens.
- If you press the "**Gallery"** button for now, it should open the **GalleryScreen** but nothing on that screen works, because you haven't programmed it yet!

In the next lesson, you will finish your app by adding a Camera feature!

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COMPUTATIONAL THINKING CONCEPTS

The following is the computational thinking concept learnt in Lesson 3.

L3U8.1-8.2 Hong Kong Tour Guide

1. Manipulation of data and elementary data structures: