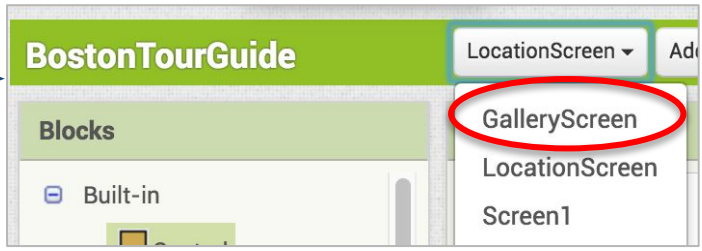
TOUR GUIDE: MULTIPLE PICTURES

You'll add the functionality for more than one picture in the Gallery!

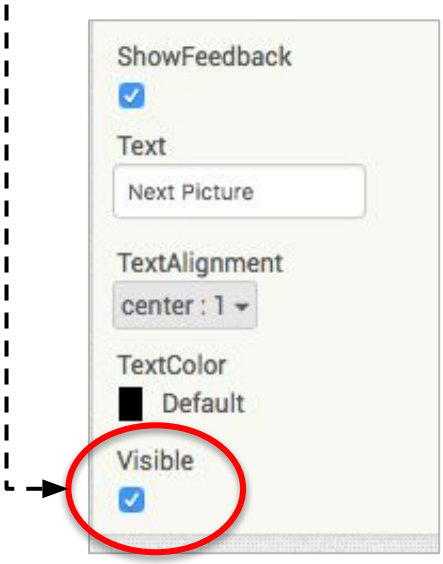
UPDATE GALLERY SCREEN

1. Go to the "**GalleryScreen**".

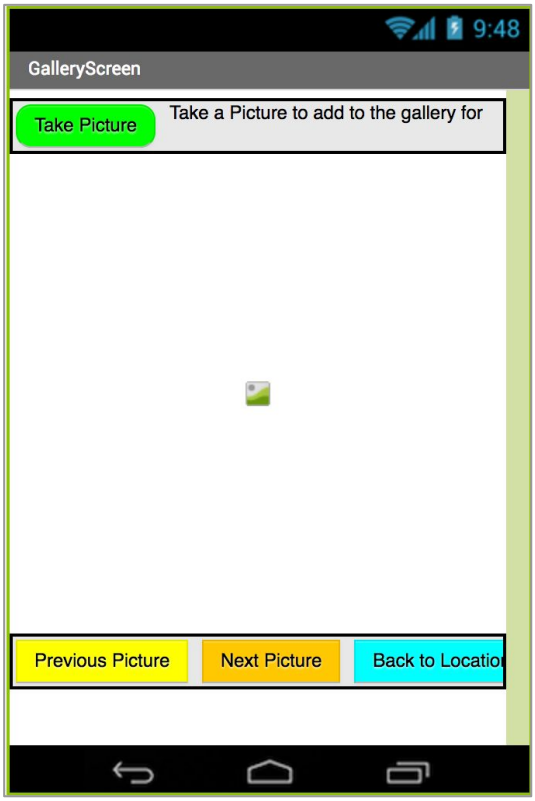


2. Switch to the Designer.

3. The template contains two invisible buttons, **PreviousButton** and **NextButton**. Find them in the Components panel and check their Visible property.



The two buttons appear next to the **BackButton**.



AFTER PICTURE

Make your app more versatile, by allowing users to take many pictures instead of just one! You'll use a List called **photoList** to store the images in the app, and **TinyDB** to store the list so it can be retrieved each time the user runs the app.

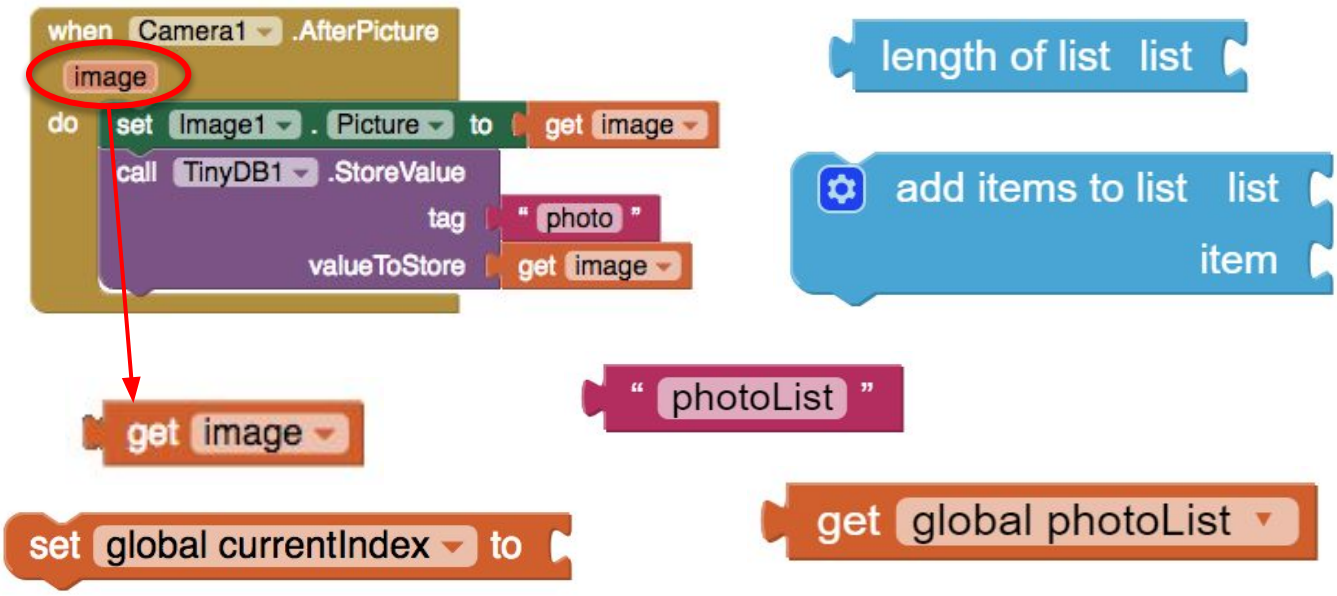
4 Initialize two new variables. Name them and set them as seen below.

- **currentIndex** points to the index of the current picture in **photoList**.
- **photoList** is the list of photos.

5 When a picture is taken:

- Add the **image** to the **photoList**.
- Save **photolist** to **TinyDB** with the tag "photolist". *(replace the current TinyDB1.StoreValue block with new tag/value)*
- Set **currentIndex** to point to the end of the list (HINT: use length of list block)

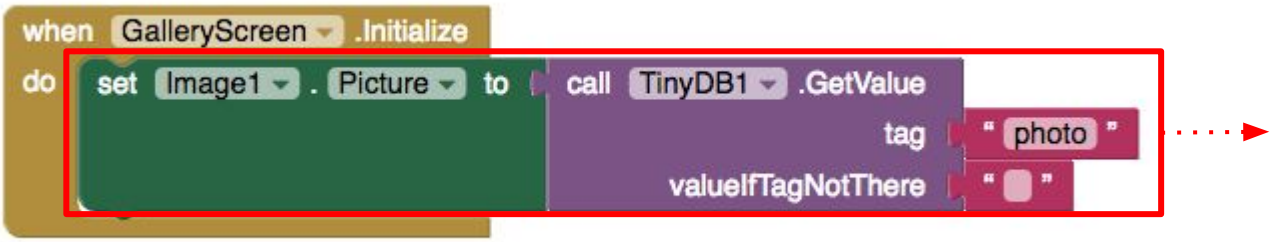
Use the following blocks.



INITIALIZE SCREEN

Because you are swtiching from a single photo to a list, you need to update the **GalleryScreen.Initialize** event.

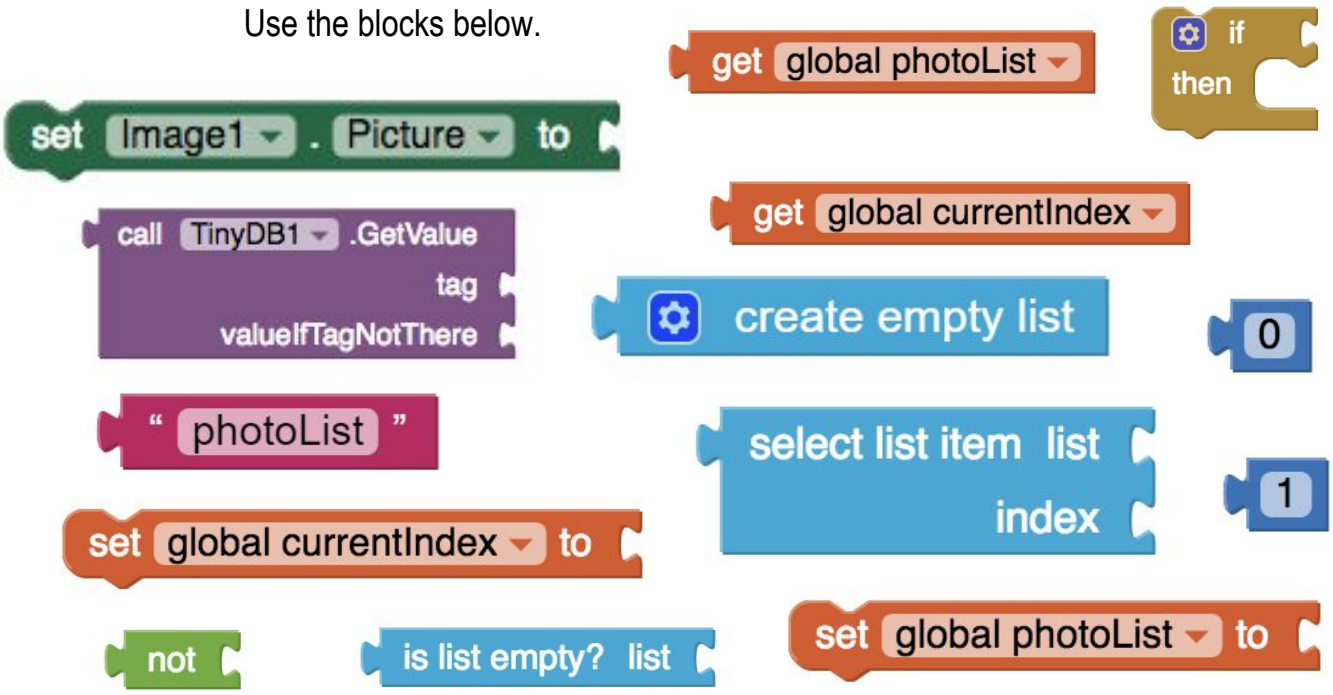
6 Remove the **set Image1.Picture** block, and set it aside. Don't delete it because you can reuse the blocks.



7 Here are the following steps needed in **GalleryScreen.Initialize**:

- Set variable **currentIndex** to 0.
- Set variable **photoList** to an empty list.
- Get the "photoList" tag from **TinyDB1** and store it in the **photoList** variable.
- If the list is not empty, there are pictures to see, so
  - set **Image1.PIcture** to the first item in the list
  - set **currentIndex** to 1, since it points to the first item in the list

Use the blocks below.



PREVIOUS AND NEXT BUTTONS

Now code the **PreviousButton** and **NextButtons** to allow the user to scroll through the images in the gallery. You will need to update **currentIndex**, by either adding or subtracting to go back or forward in our list of photos.

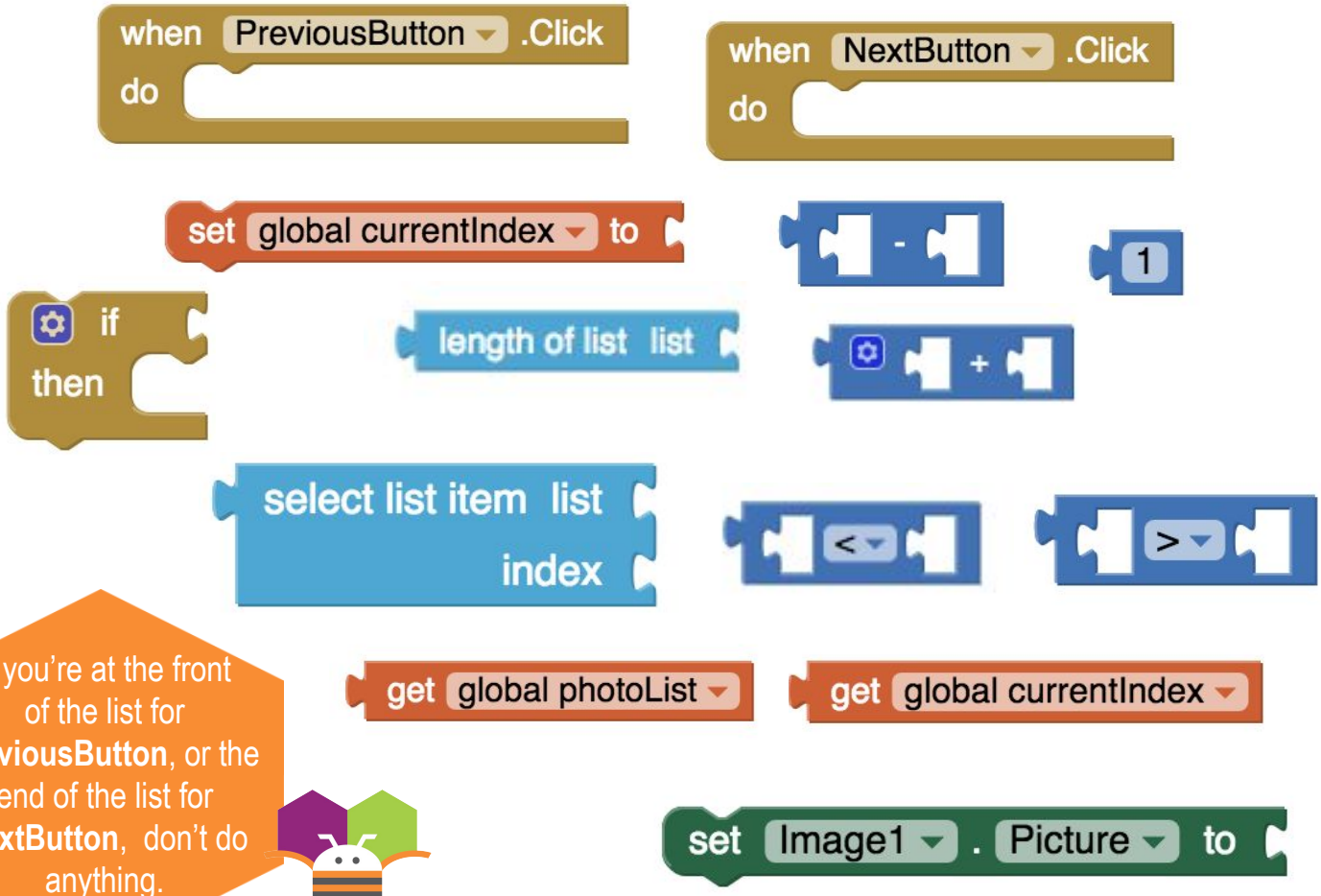
8 Use the blocks below to code the logic for **PreviousButton** and **NextButton**.

The algorithm for **PreviousButton** is:

- If currentIndex is not pointing to the beginning of the list
  - Subtract 1 from **currentIndex**.
  - Set **Image1.Picture** to the item pointed to by the new **currentIndex** value.

The algorithm for **NextButton** is:

- If **currentIndex** is not pointing to the end of the list
  - Add 1 to **currentIndex**.
  - Set **Image1.Picture** to the item pointed to by the new **currentIndex** value.



If you're at the front of the list for **PreviousButton**, or the end of the list for **NextButton**, don't do anything.

BACKBUTTON AND TESTING

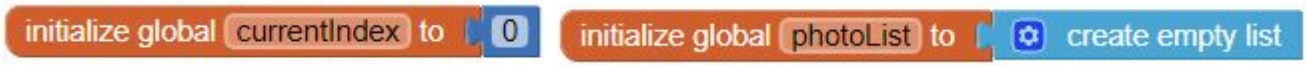
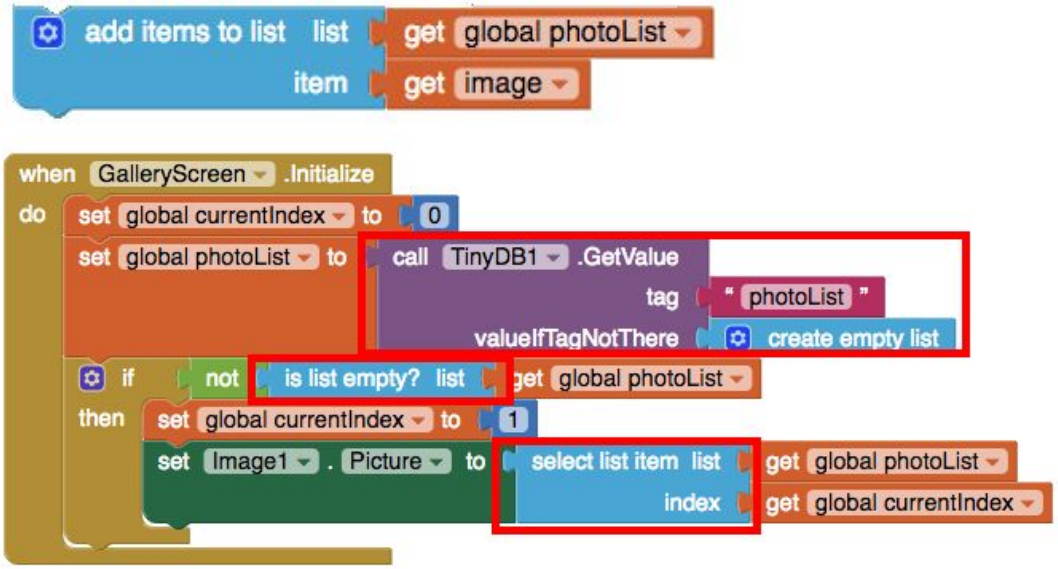
9 The **BackButton** works the same as it did in the **LocationScreen.**

10 Here you go! Test out your app with the MIT AI2 Companion.

- Go to the **GalleryScreen**.
- Take some pictures.
- Scroll through your pictures with the Previous and Next buttons.
- Close the app and reopen it. The pictures should still be there!

COMPUTATIONAL THINKING CONCEPTS

The following are the Computational Thinking Concepts used in Multiple Pictures.

Tour Guide
1. Naming/Variables 
2. Manipulation of data and elementary data structures 
3. Conditionals 
4. Operators