



# Scratch Programming

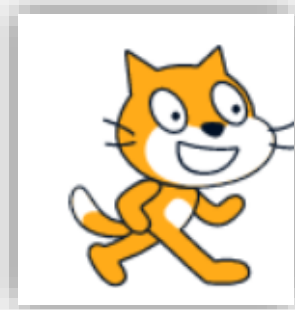
## Lesson 4

# Animation & Scene Transition

Presented by Advaspire Team



# Revision - Conversation Arrangement



## Script:

```
when green flag clicked
say Hi Doggy! for 1.5 seconds
wait 1.5 seconds
say What's up! for 1 seconds
say How are you? for 1 seconds
wait 4.5 seconds
say Sure! Let's go! for 2 seconds
```

## Script:

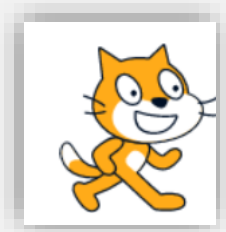
```
when green flag clicked
wait 1.5 seconds
say Hi Catty! for 1.5 seconds
wait 2.5 seconds
say Quite busy lately... for 1 seconds
say I'm going to have my lunch for 1.5 seconds
say Wanna grab some food together? for 1.5 seconds
```

Arrange the conversation accordingly.

For example, cat will be the first one to talk, then it will say "Hi Doggy!" for 1.5 seconds, then dog will wait for 1.5 seconds until cat finishes its speaking, then only say "Hi Catty!", so and so on.



# Revision - Conversation Arrangement



## Script:

```
when green flag clicked
  say Hi Doggy! for 1.5 seconds
  broadcast message1

when I receive message2
  wait 0.5 seconds
  say What's up! for 1 seconds
  say How are you? for 1 seconds
  broadcast message3

when I receive message4
  wait 0.5 seconds
  say Sure! Let's go! for 2 seconds
```

## Script:

```
when I receive message1
  wait 0.5 seconds
  say Hi Catty! for 1.5 seconds
  broadcast message2

when I receive message3
  wait 0.5 seconds
  say Quite busy lately... for 1 seconds
  say I'm going to have my lunch for 1.5 seconds
  say Wanna grab some food together? for 1.5 seconds
  broadcast message4
```

We can also arrange the conversations with Broadcast function.

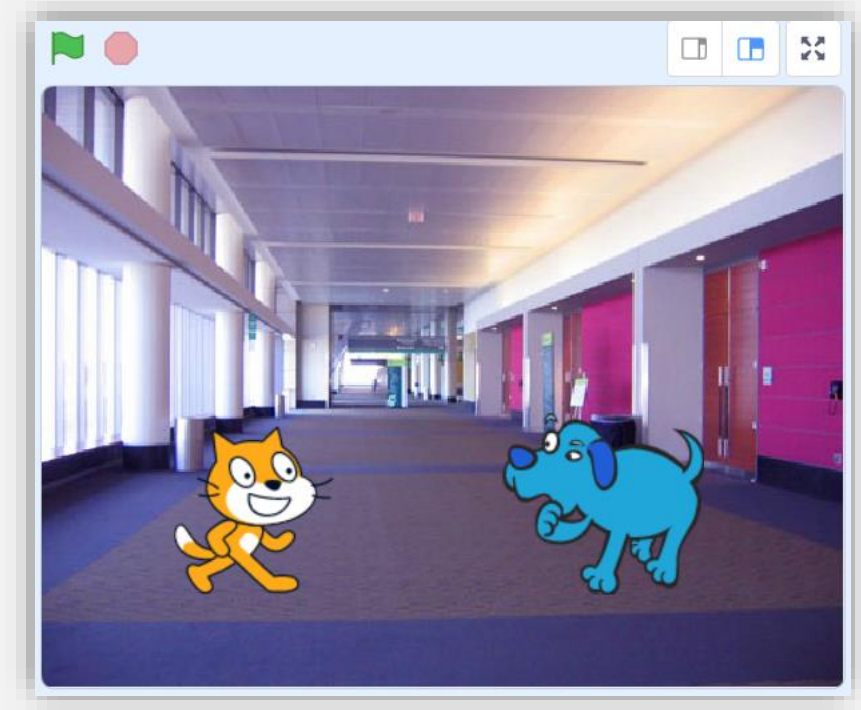
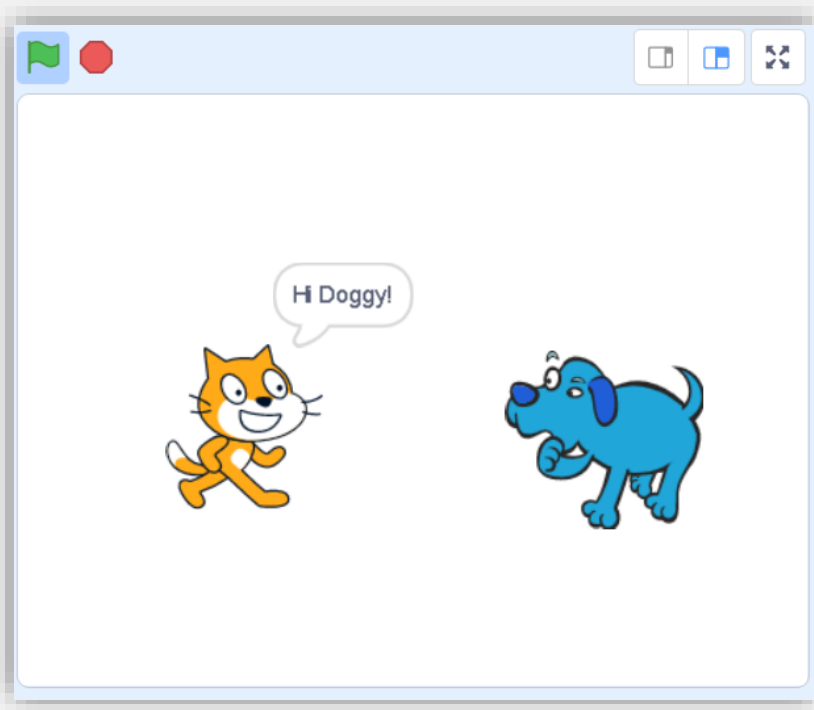
Broadcast function is like acting based on cues.

If Catty is the conversation starter, after first sentence, Catty will send a message to Doggy as it's Doggy's turn.

Then after Doggy ends its turn, it will tell Catty to start its turn.

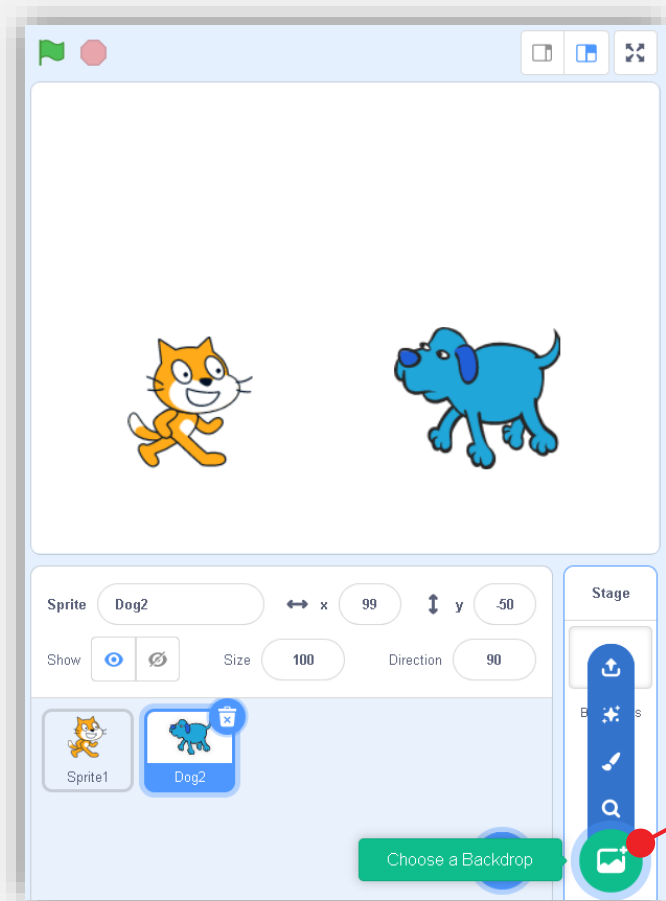


## Adding a backdrop





# Add a backdrop to your scene



Click “Choose a Backdrop” to add a backdrop to your scene.

I will add “Hall” as my backdrop.

# Add motion to your character

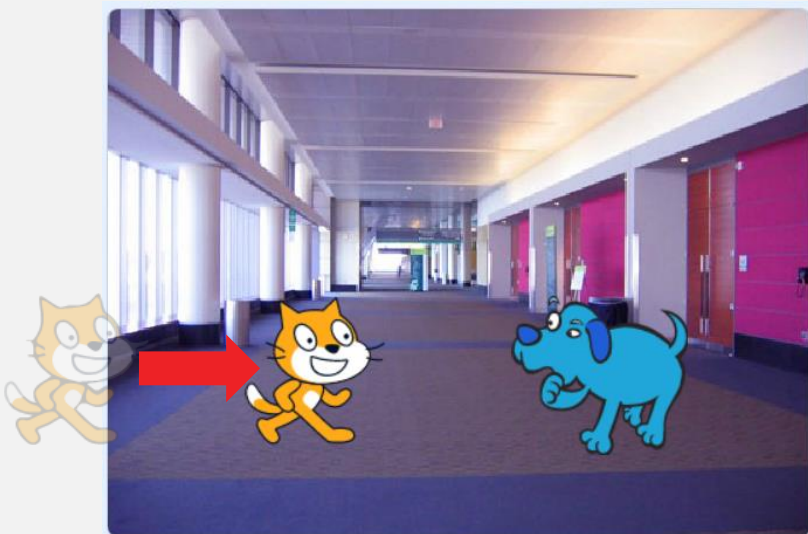
## Script:



a

```

when green flag clicked
  go to x: -273 y: -67
  repeat (35)
    move 5 steps
  say Hi Doggy! for 1.5 seconds
  broadcast message1
  
```

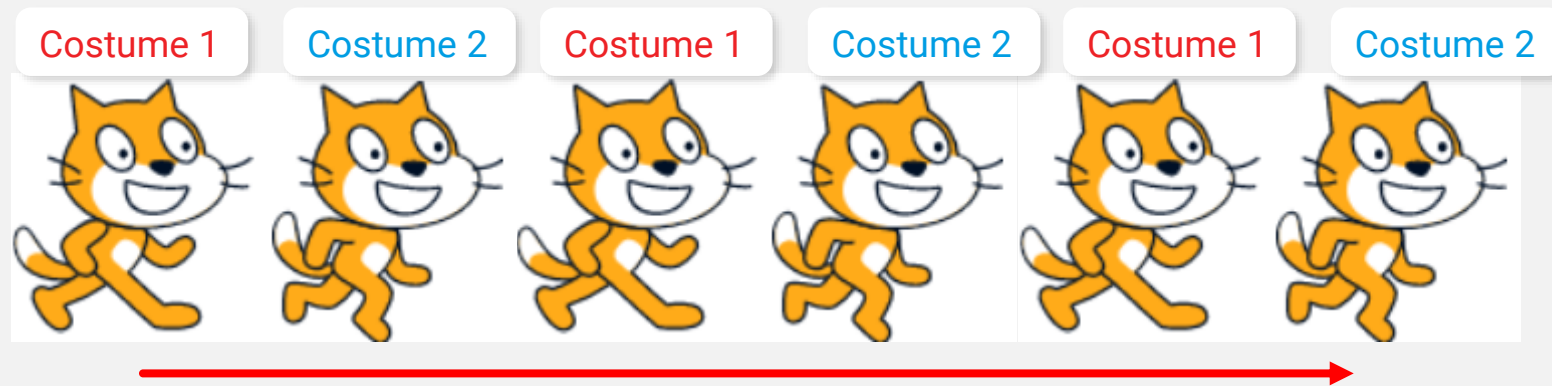


a

Let's add a motion to the cat and make it walk from outside from the left to the stated position, we remain the dog static in this case.



## Adding animation to the Cat

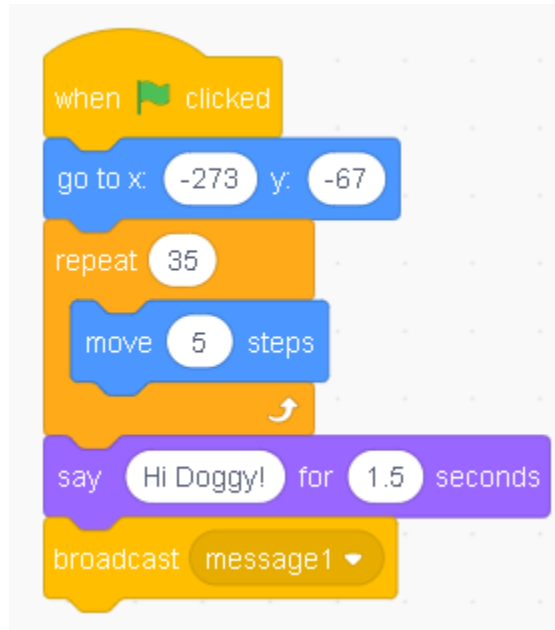
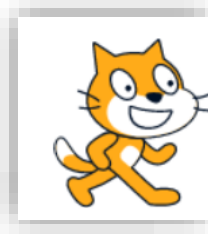


We will want to keep switching the costume when we move the cat into the scene, so you will see the cat walking into the scene.

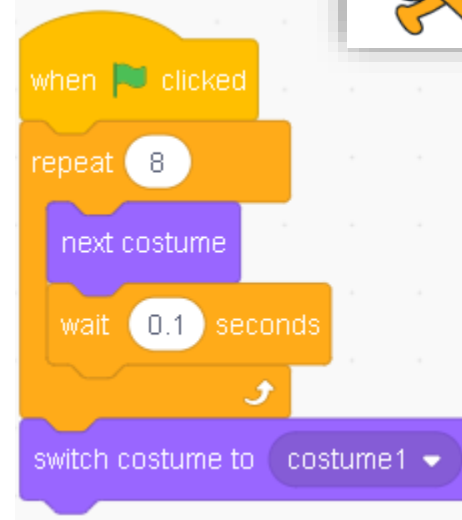


# Adding animation to the Cat

## Script:



**Motion**



**Animation**

I will add another event next to the first event, which is to animate the cat.

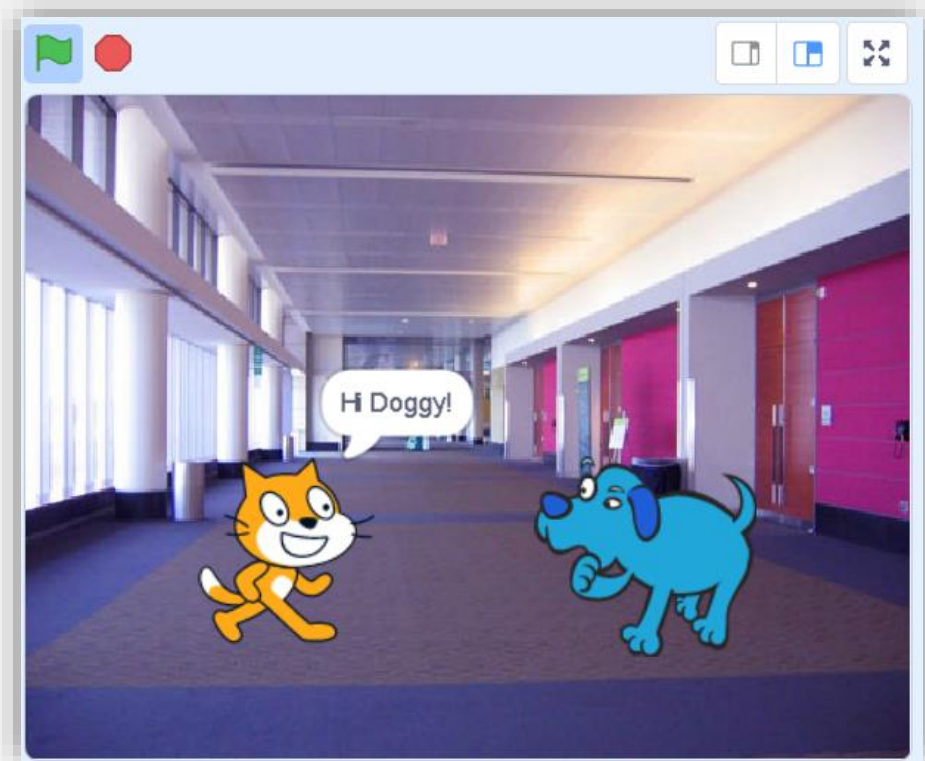
This is like making the frames of animation and make the cat like moving its leg, and here I want to make sure the last frame stops at costume 1.







# Setup the conversation (as previous lesson)



## Conversation:

Cat: Hi Doggy!

Dog2: Hi Catty!

Cat: What's up!

Cat: How are you?

Dog2: Quite busy lately...

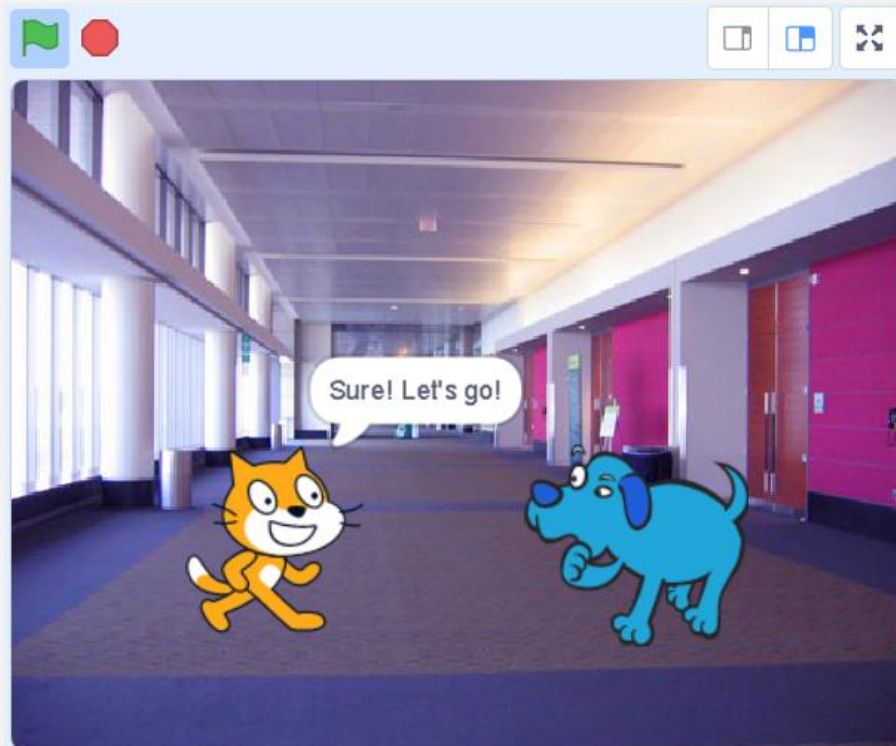
Dog2: I'm going to have my lunch

Dog2: Wanna grab some food together?

Cat: Sure! Let's go!



## Setup the conversation (as previous lesson)

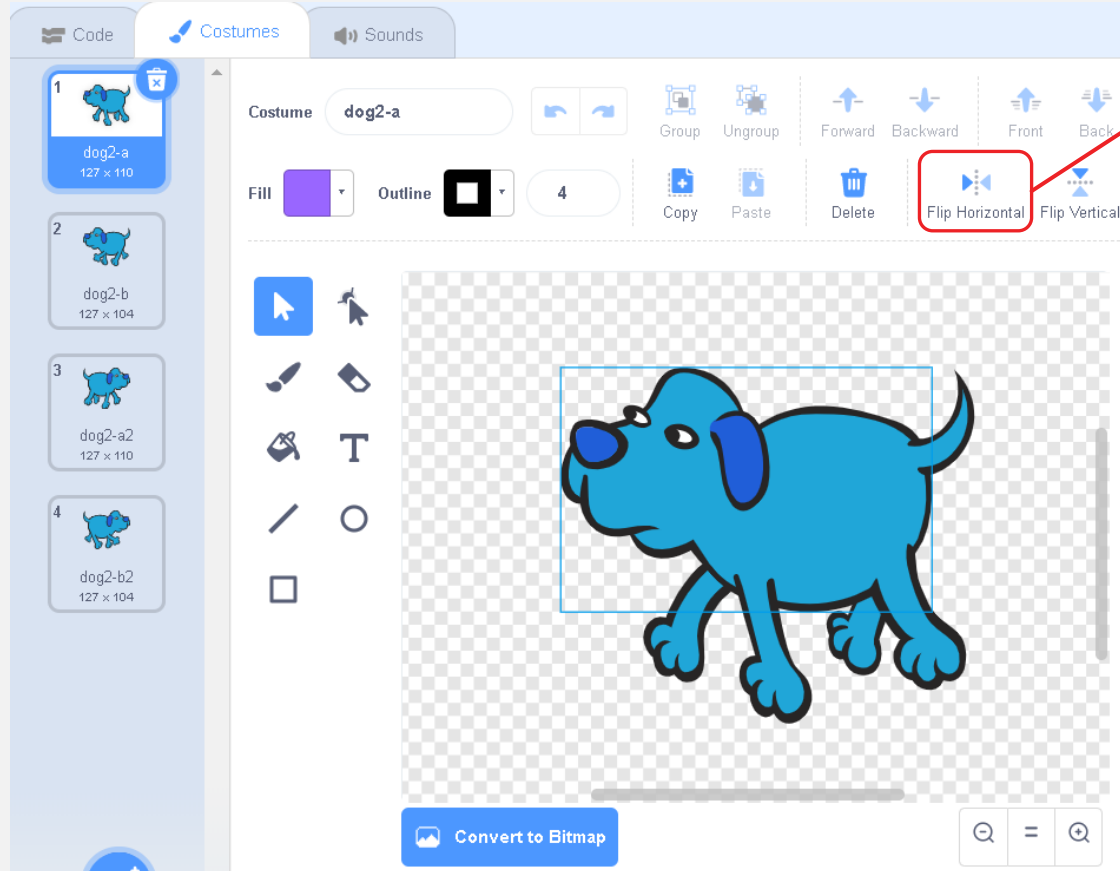


After the last sentence, we will make both of them go to the right, and disappear from the screen.

This is to setup a story like after conversation, it will change scene to other place.

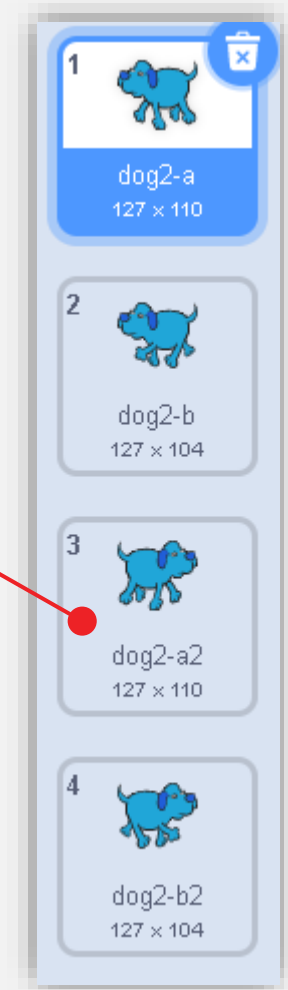


# Add Costumes to your Dog (Left & Right)



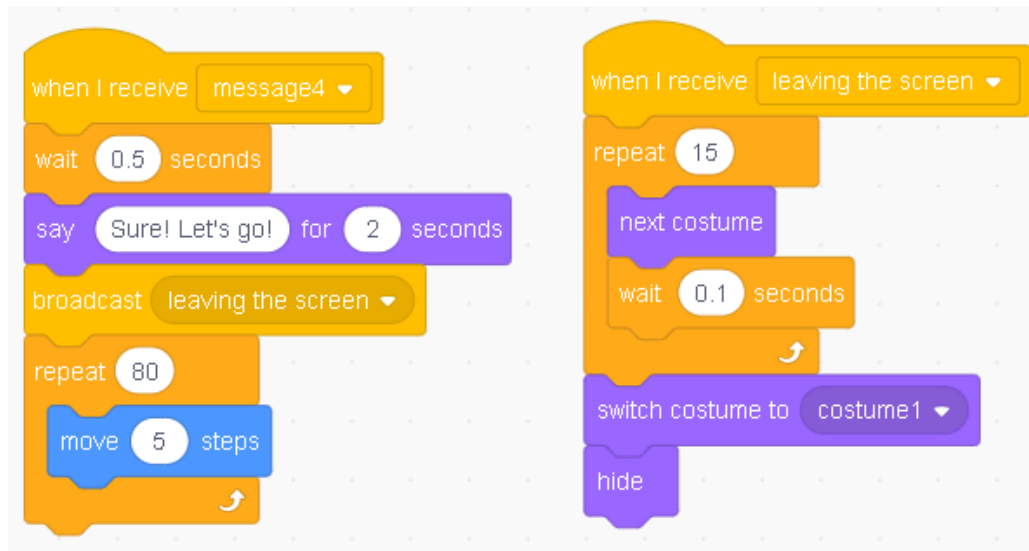
Click this button to flip the costume.

I will duplicate 2 for walking to left and 2 for right.



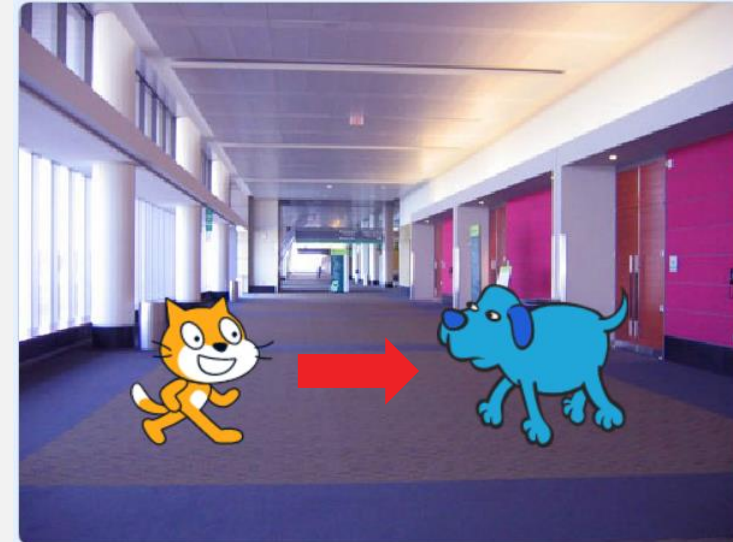
# Add move out screen's animation to the Cat

## Script:



**Motion**

**Animation**

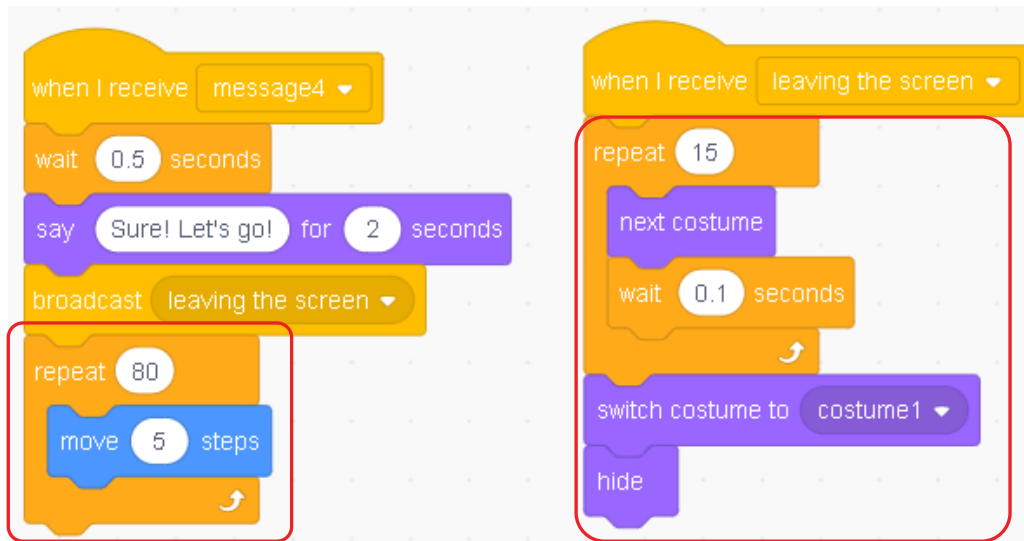


I will add a broadcast “**leaving the screen**” at the end of the conversation to tell the dog to leave the screen.

Then my cat will keep moving to the right then hide itself.

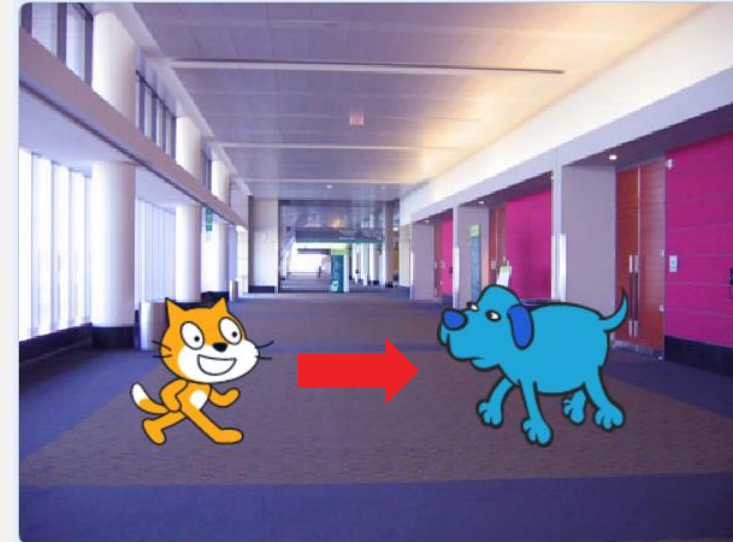
# Add move out screen's animation to the Cat

## Script:



**Motion**

**Animation**



These are the motion and animation for the car to leave the screen.

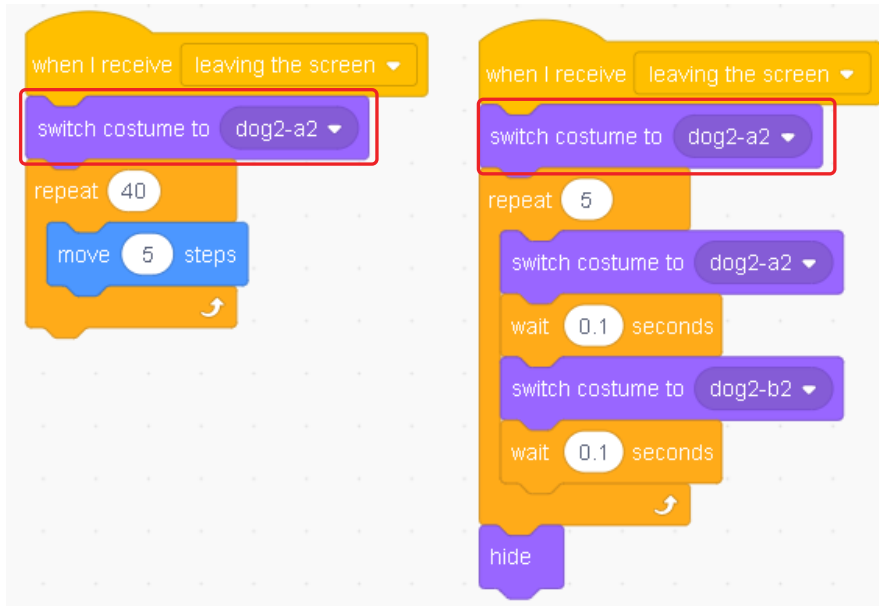
I will place a "hide" block at the end to make sure the Cat disappear from the stage.





# Add move out screen's animation to the Dog

## Script:



**Motion**

**Animation**

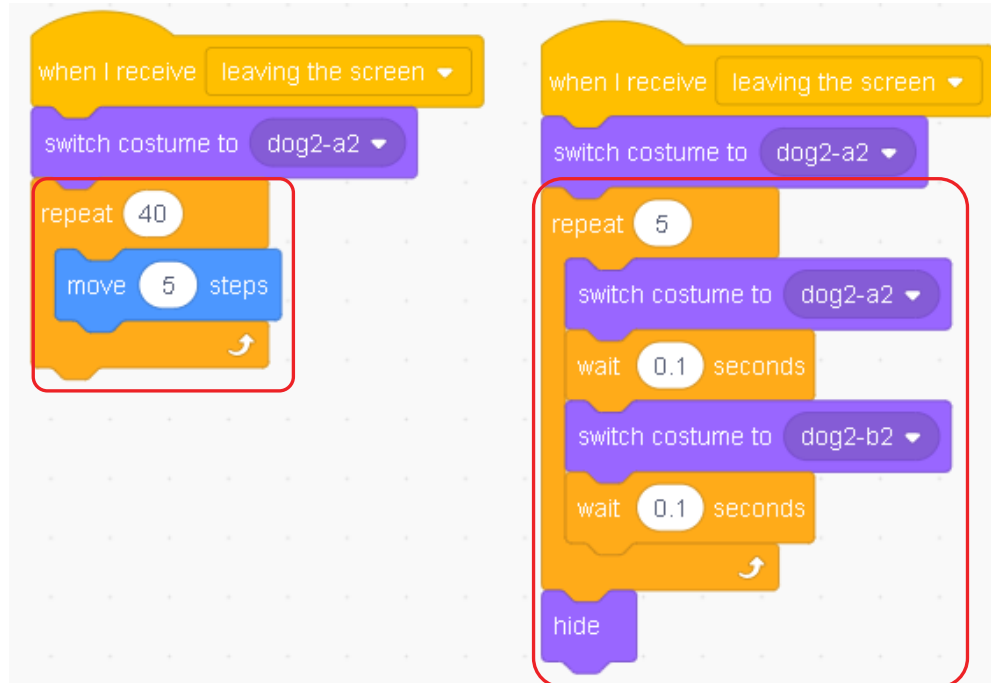


For my dog's script,  
Once receiving "leaving the screen",  
my dog will switch the costume to  
dog2-a2 (facing right) before it  
starts moving out from the screen.



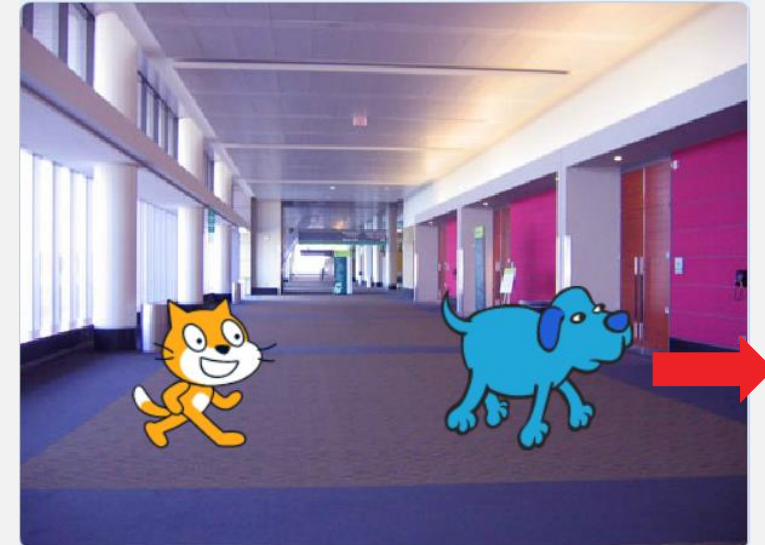
# Add move out screen's animation to the Dog

## Script:



**Motion**

**Animation**



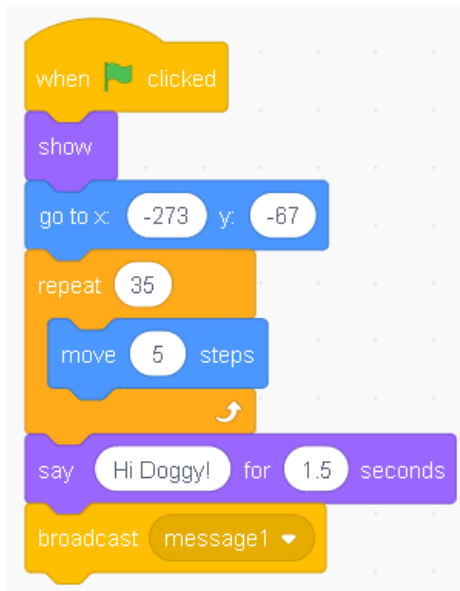
Then the dog will move out from the screen with walking animation.

After my dog fully reach the edge of the stage, it will hide itself. Basically it's the same concept as the cat's script.

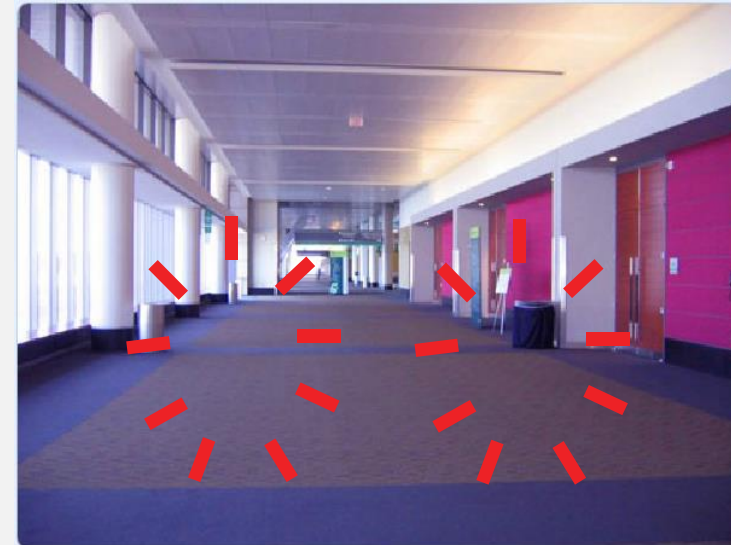


# Adding Show Block & Setting Starting Position

## Script:



## Script:

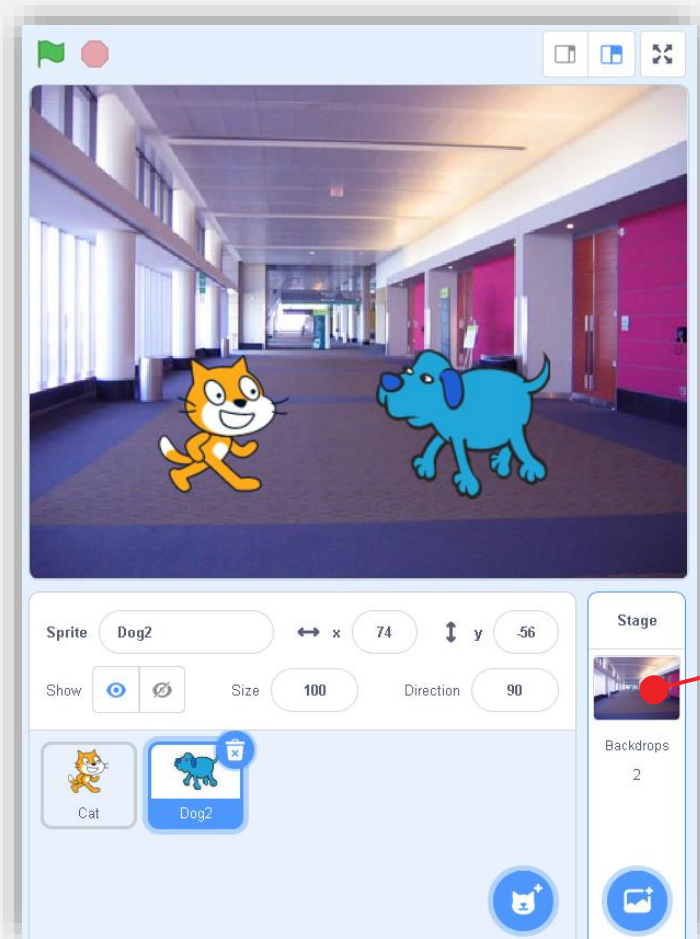


As I hide them at the end when they left the screen, so I need to fix their starting position and put a “show” block after “flag” is clicked so that they will reappear if you click “go” or “flag”





# Add sound to the backdrop

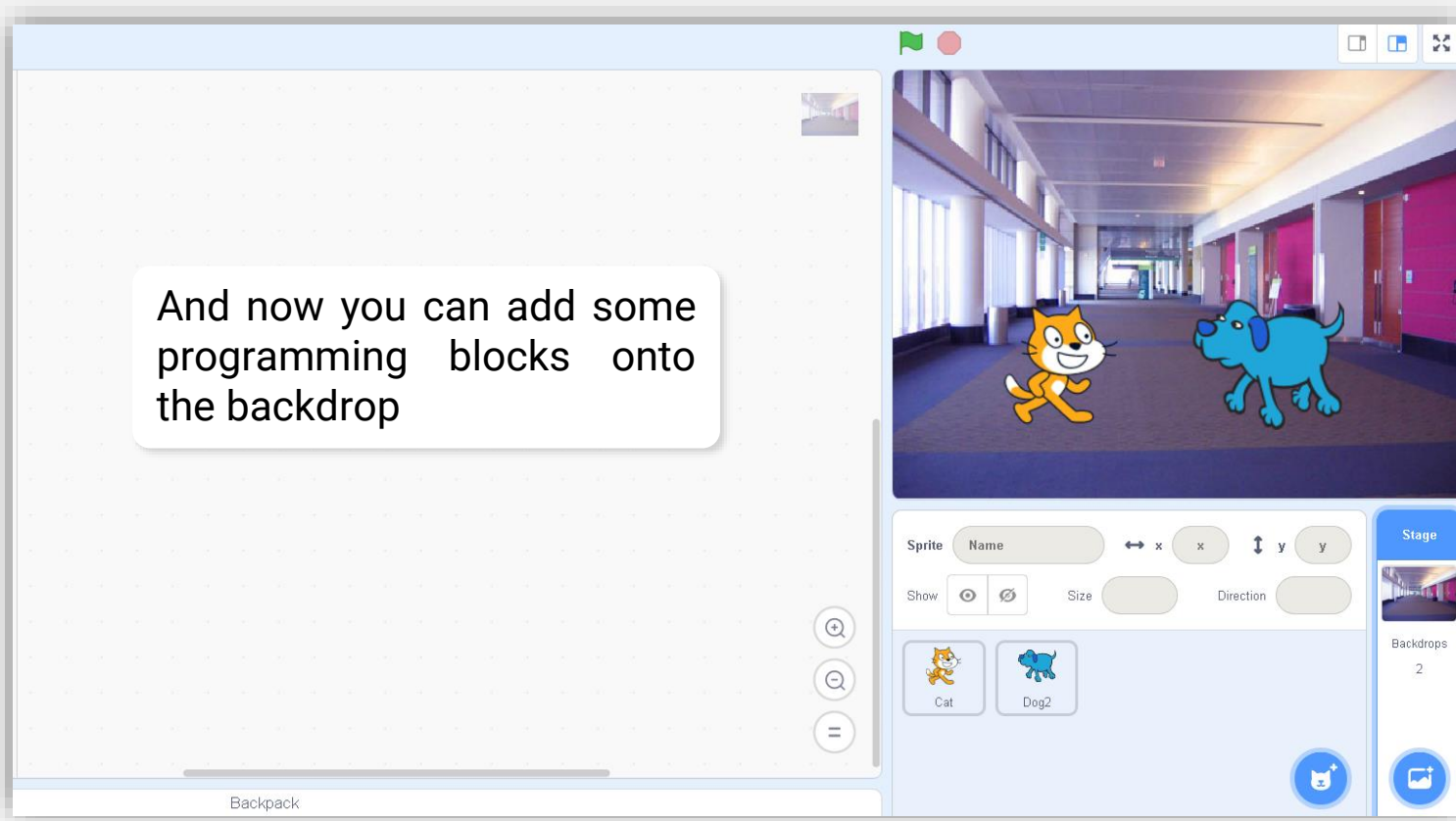


Select your Backdrop by clicking here.

We will add play "sound" script to your backdrop

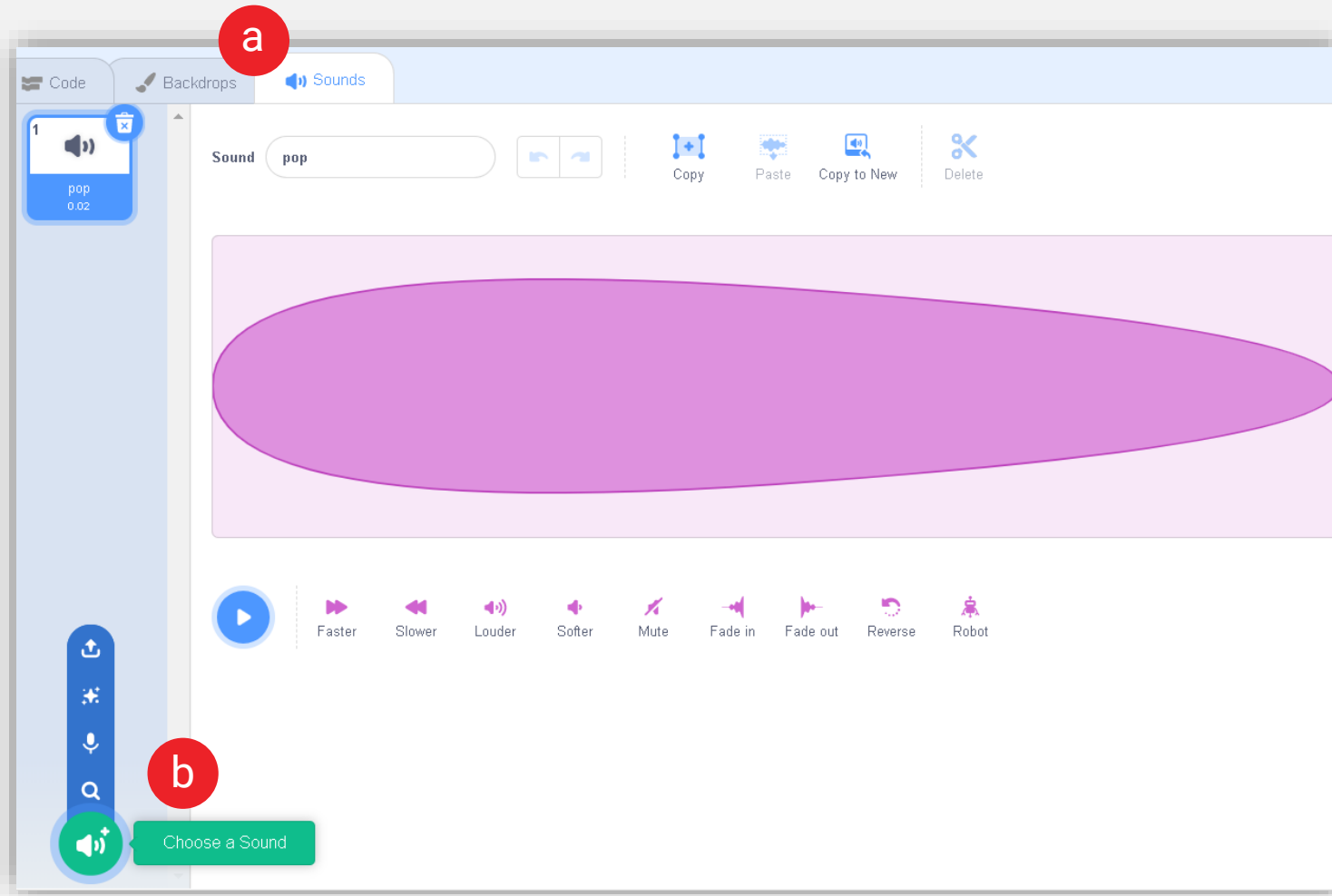


# Add sound to the backdrop





# Add Background Music



a

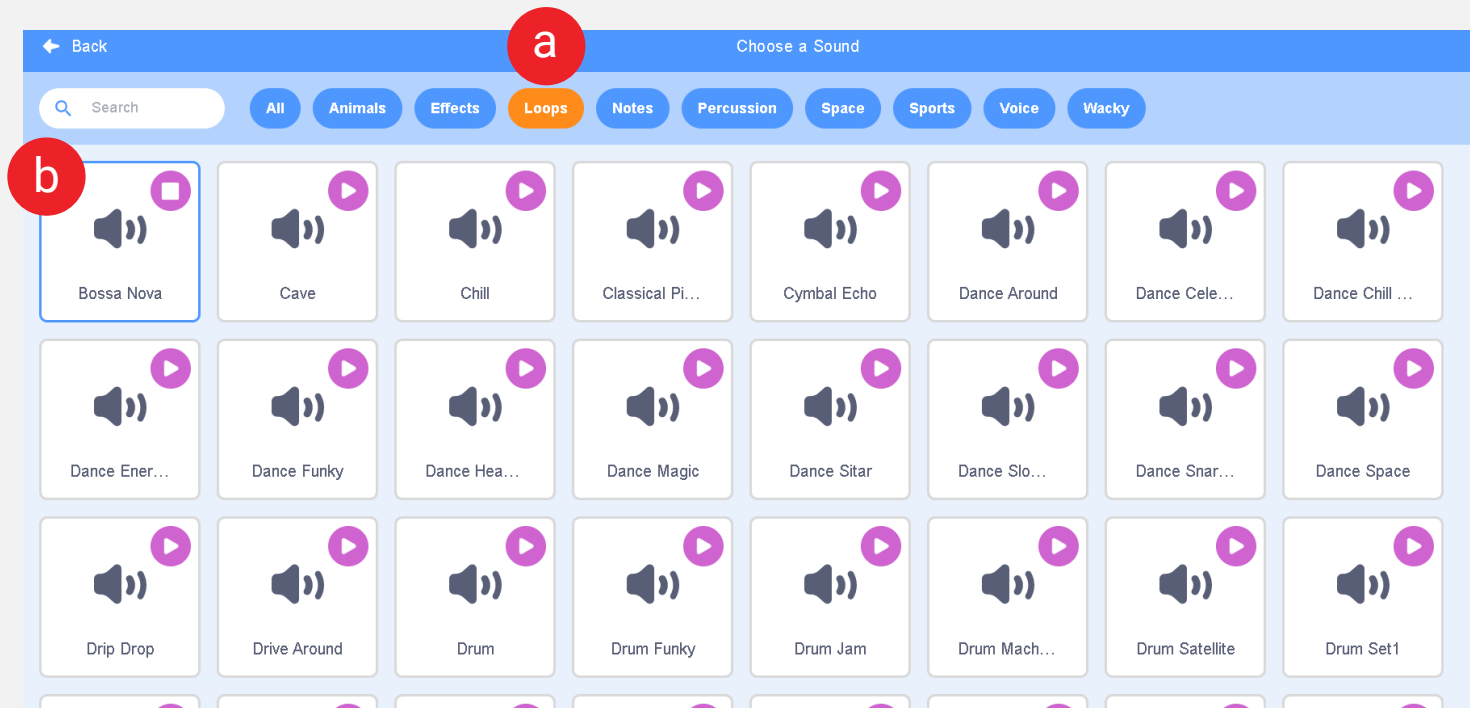
Switch to sound tab.

b

Then click “Choose a Sound”.



# Add Background Music

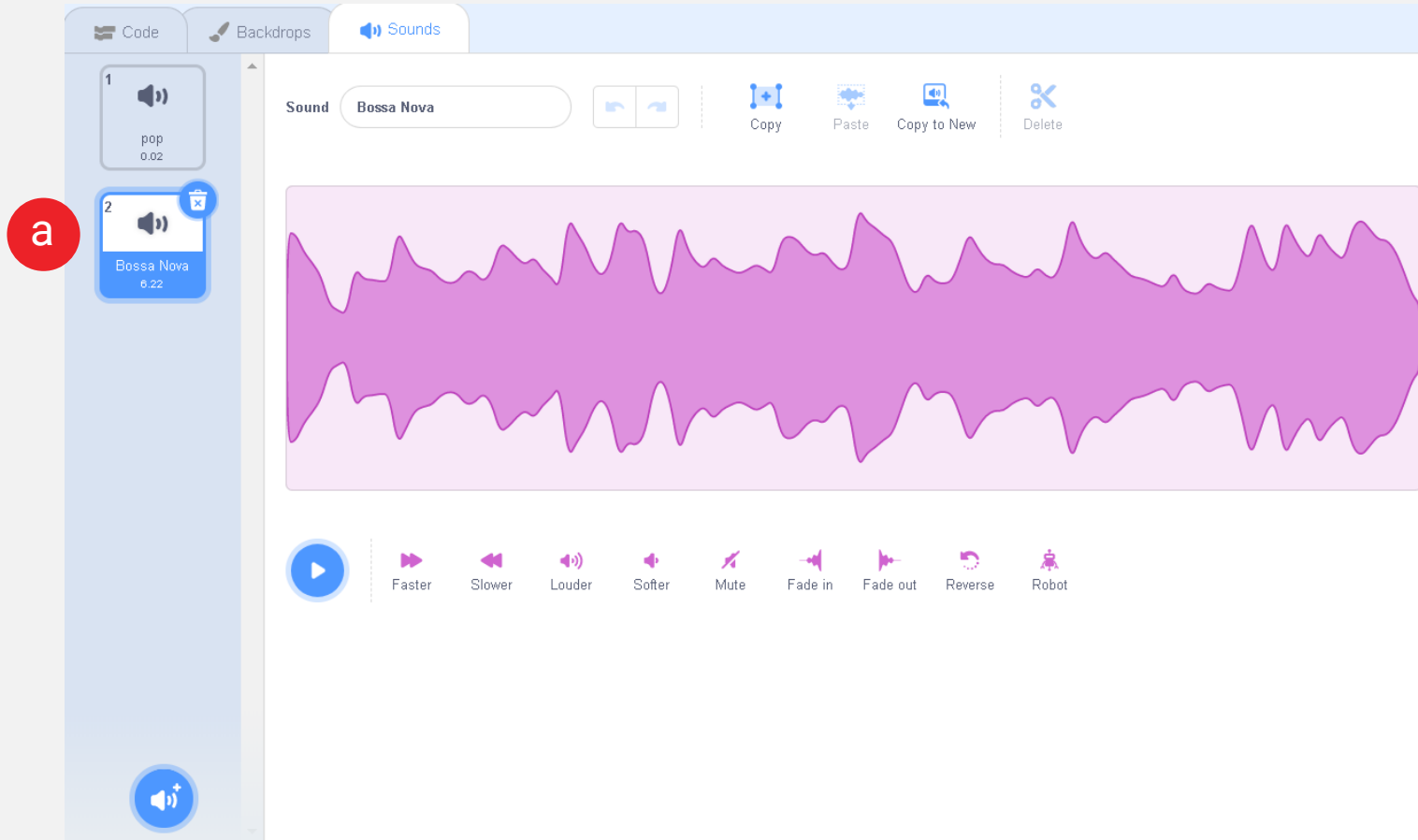


a  
Go to “loop” tab.

b  
I will choose “Bossa Nova” as my background music.



# Add Background Music

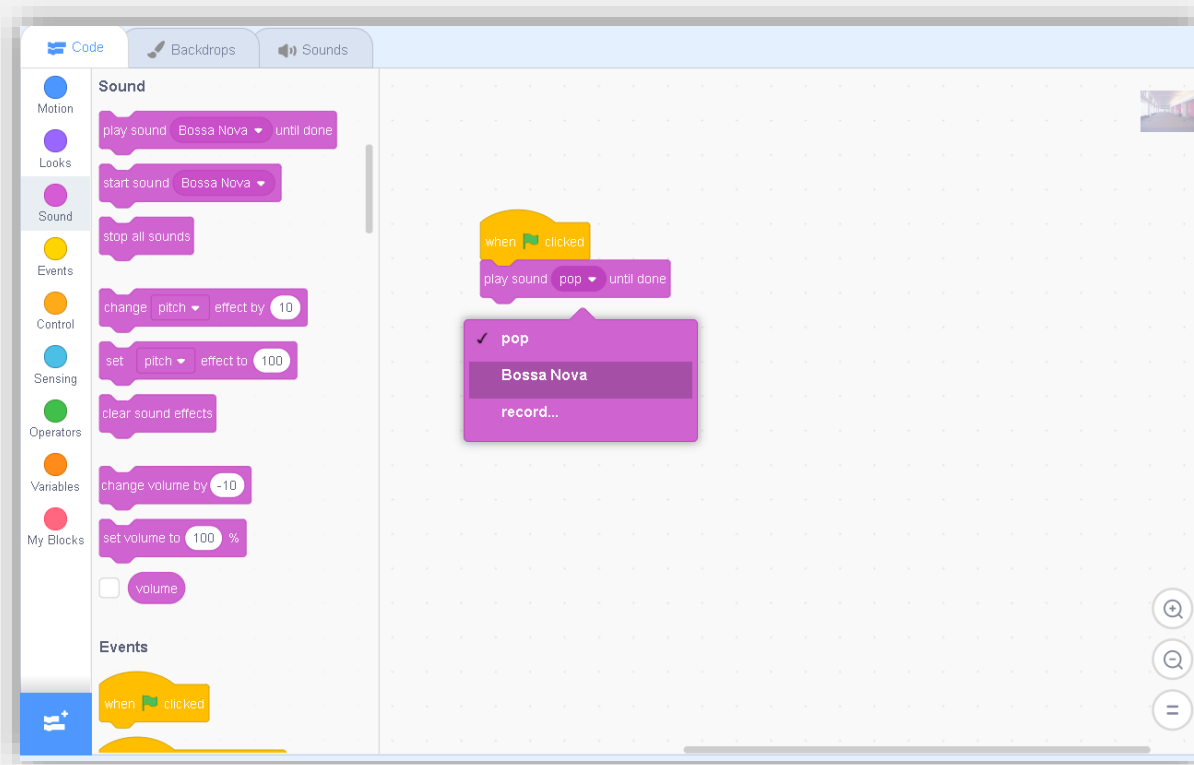


a

You will see that you have “Bossa Nova” sound clip on your Sounds tab.



# Add sound to the backdrop

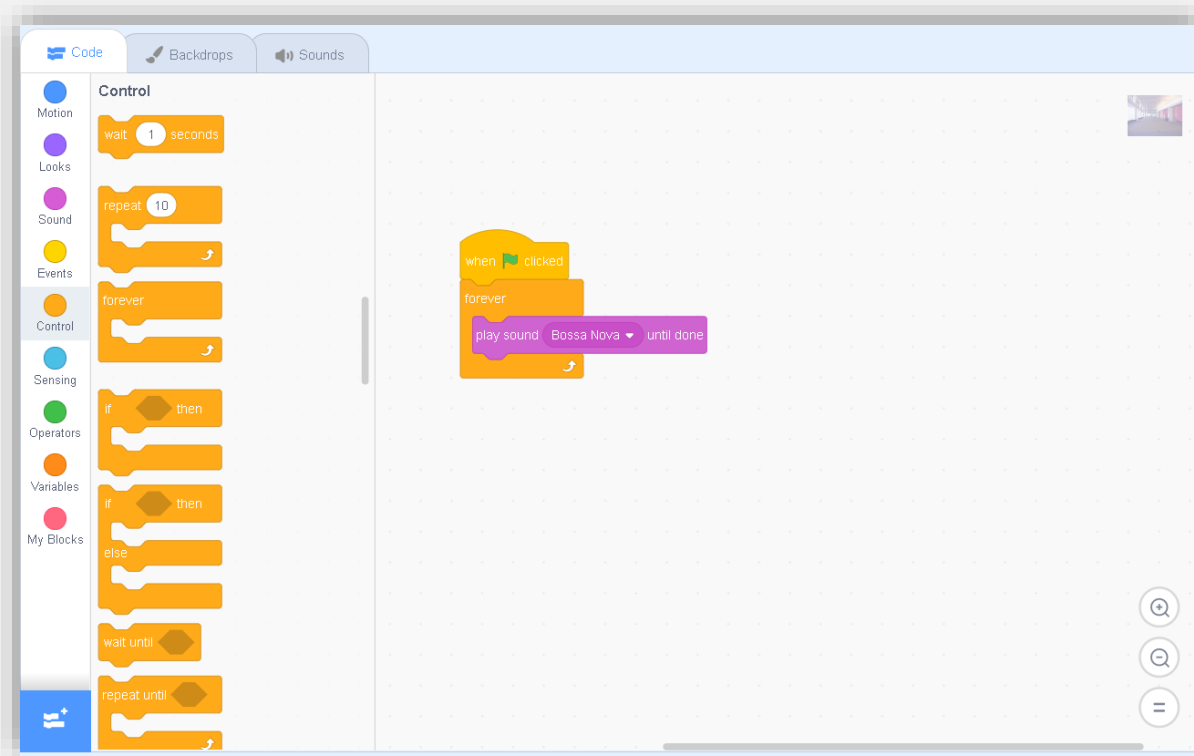


Drag out events block “when flag clicked” followed by “play sound until done”.

Then change the “pop” sound to “Bossa Nova”.



# Add sound to the backdrop

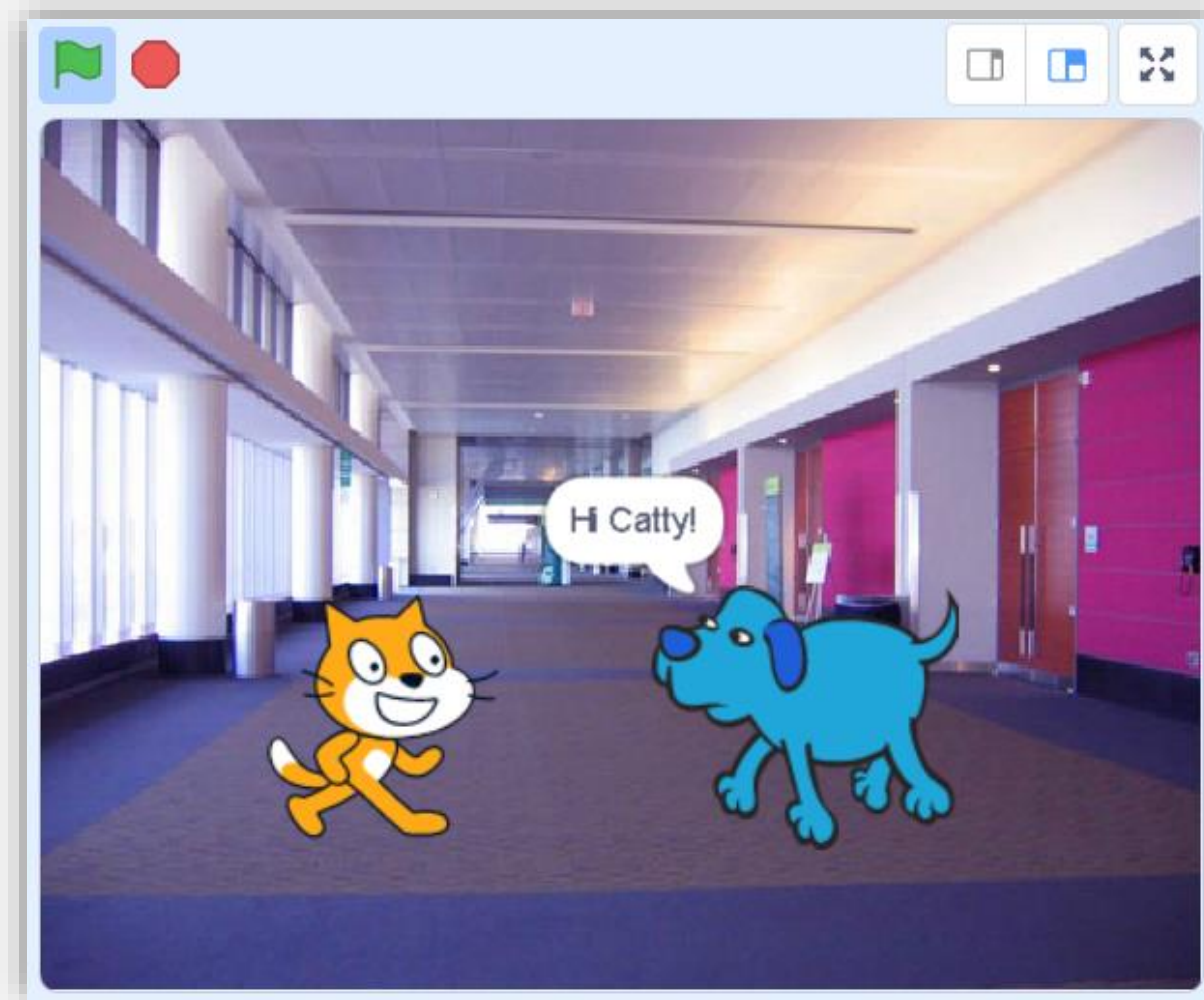


Since “Bossa Nova” only last for 6 seconds.

If you want it to keep repeating, you can add a “**forever**” loop to it.



# Now you can Click Go to watch your Story







# ASSIGNMENT *for*

## *Lesson 4*

# L4 – Mission 1

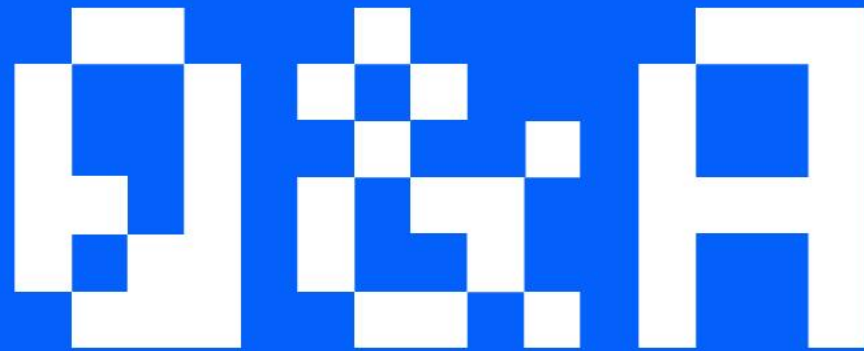
**Based on your last mission, add some motions to your sprites:**

1. Cat walking from outside to the scene.
2. After conversation ends, Both leave the screen together.
3. Add Backdrop and background music.





You can direct message your teacher and ask your question through [Slack Robotene Community](#) or arrange a [One-to-One Consultation](#) with your teacher.



# Any Questions?



Thank you :)