



Scratch Programming

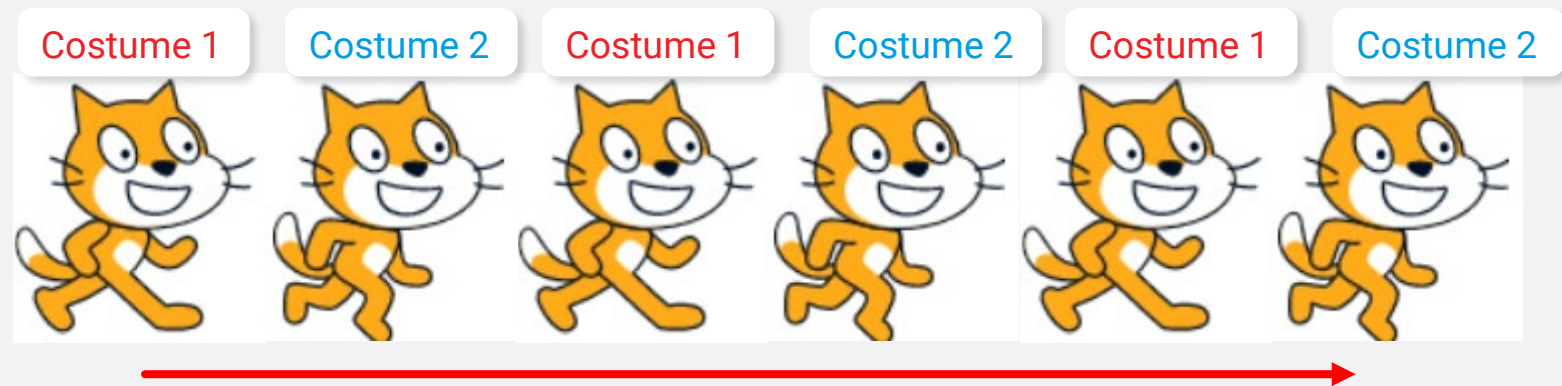
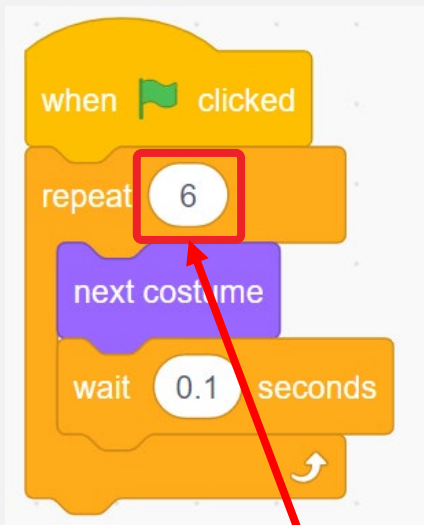
Topic 1.4

Animation & Scene Transition

Presented by Advaspire Team



Review Last Topic – Animation scripting

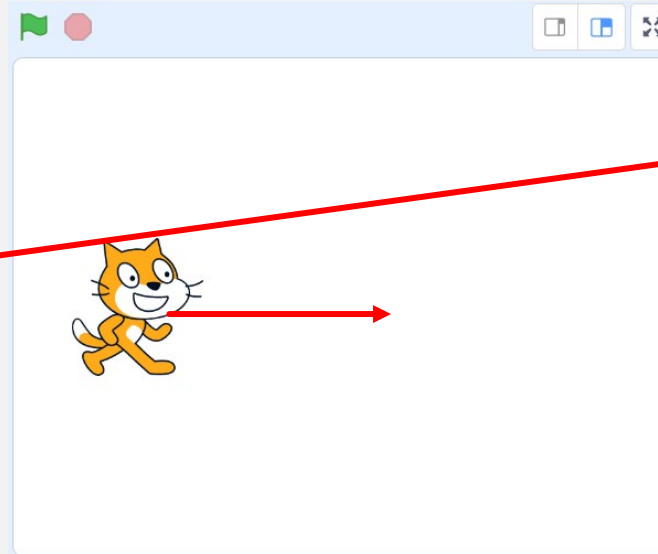
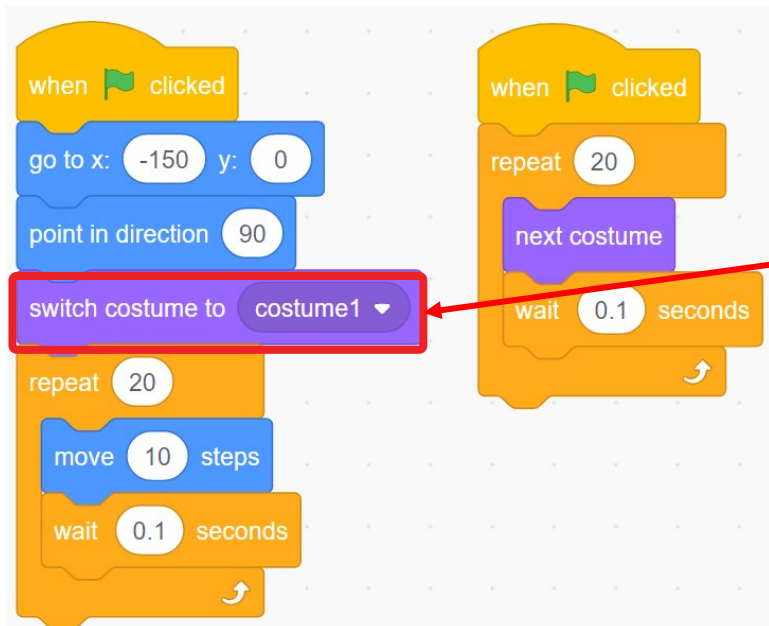


The value of the repeat loop basically control how many times you want to switch the costumes, if your cat need longer animation, you can put in higher value for number of repeat.



Review Last Topic – Set starting costume

Script:



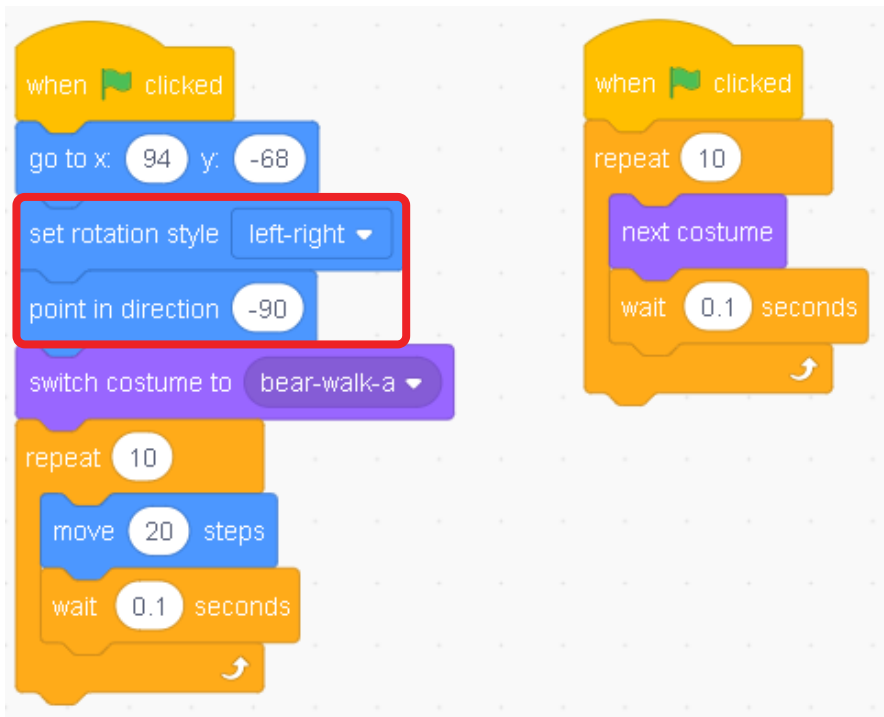
Same concept as the starting position and direction.

If you have many costumes in your sprite, you might want to set a starting costume when it start moving, you can use "switch costume to" block to set the first costume.



Review Last Topic – Set Rotation Style

Script:



The easier solution will be this, set rotation style to left-right, then set point in direction to -90 degree.

And make the bear move from right to left.



Today's Topic

1. Add a backdrop to your stage
2. Set up a starting scene
3. Add in Move out scene
4. Change backdrop for next scene
5. Add a Background Music

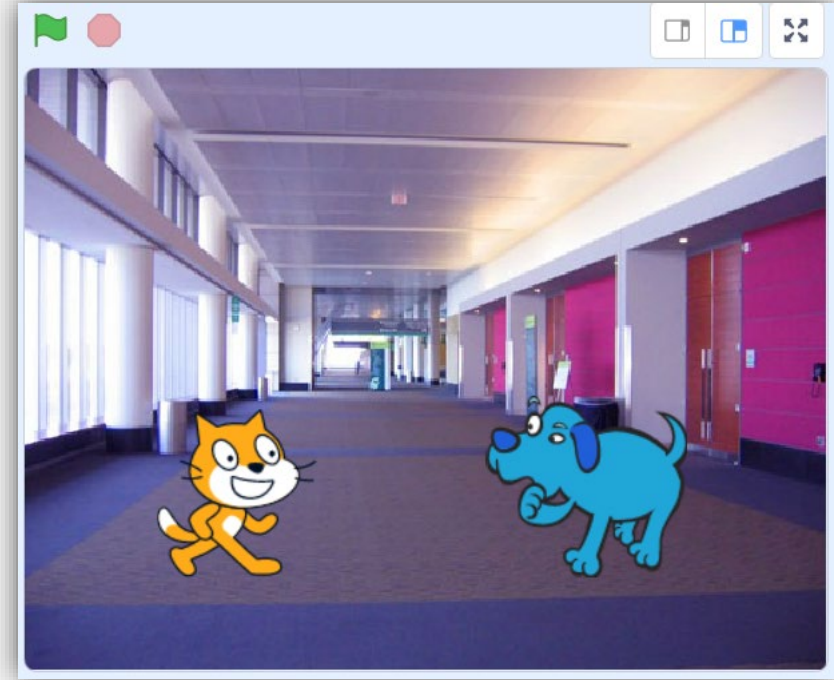
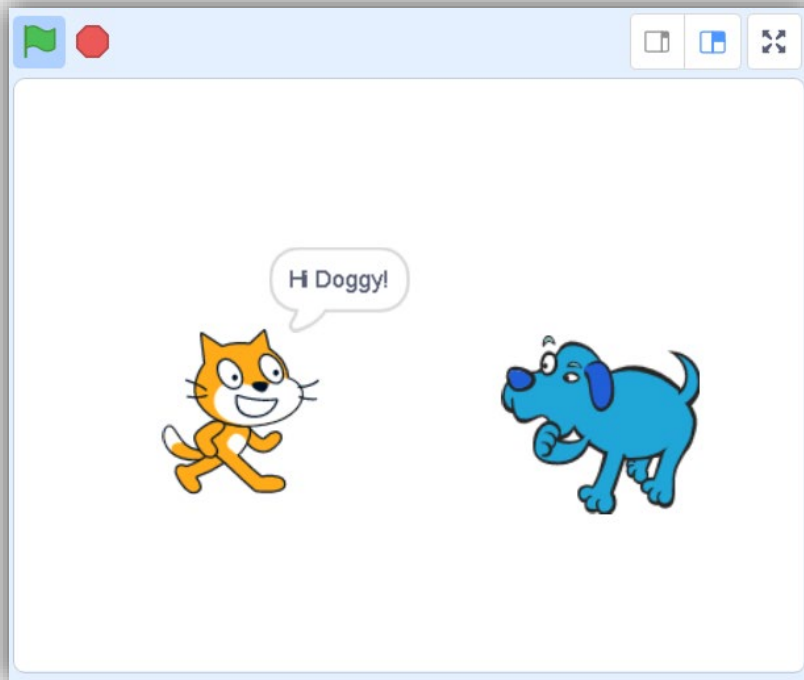


Learning Outcome

- 1. Learn how to add backdrop to the scene**
- 2. Able to set up starting and ending scene**
- 3. Able to set up scene transition**
- 4. Know how to add background music for the scene**

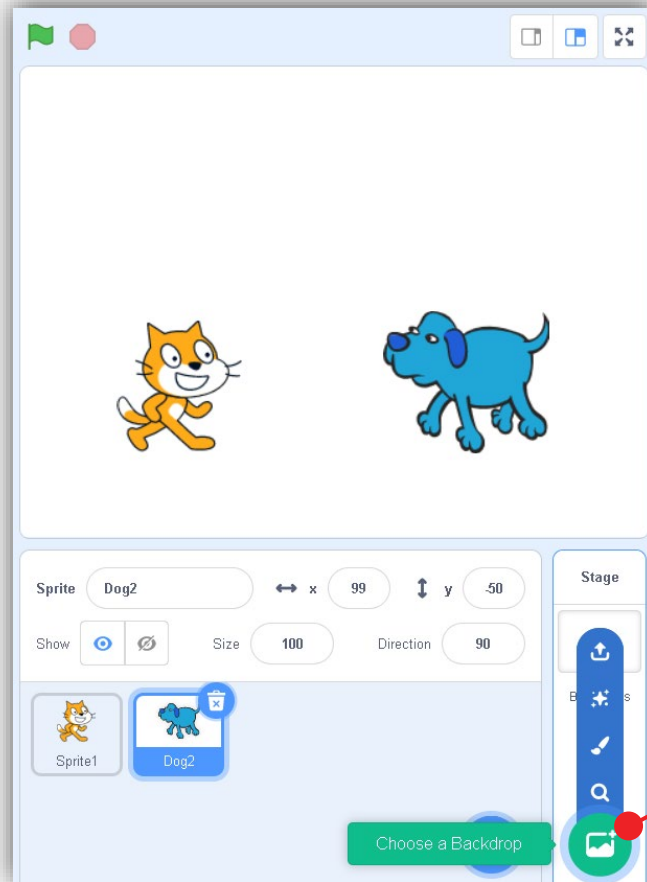


Adding a backdrop





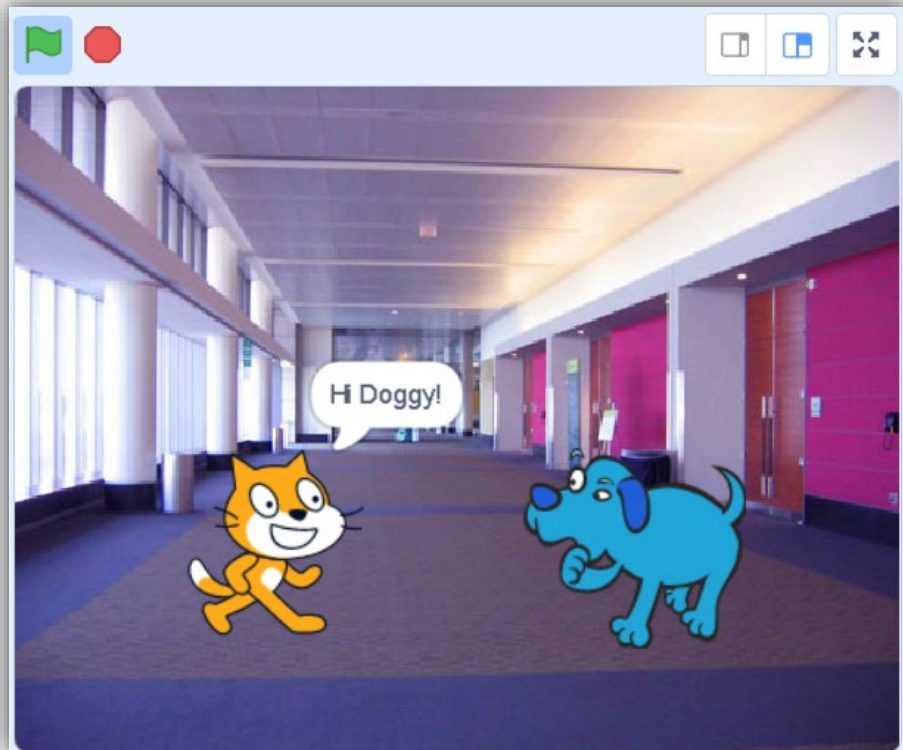
Add a backdrop to your scene



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

I will add “Hall” as my backdrop.

Setup the conversation (as previous lesson)



Conversation:

Cat: Hi Doggy!

Dog2: Hi Catty!

Cat: What's up!

Cat: How are you?

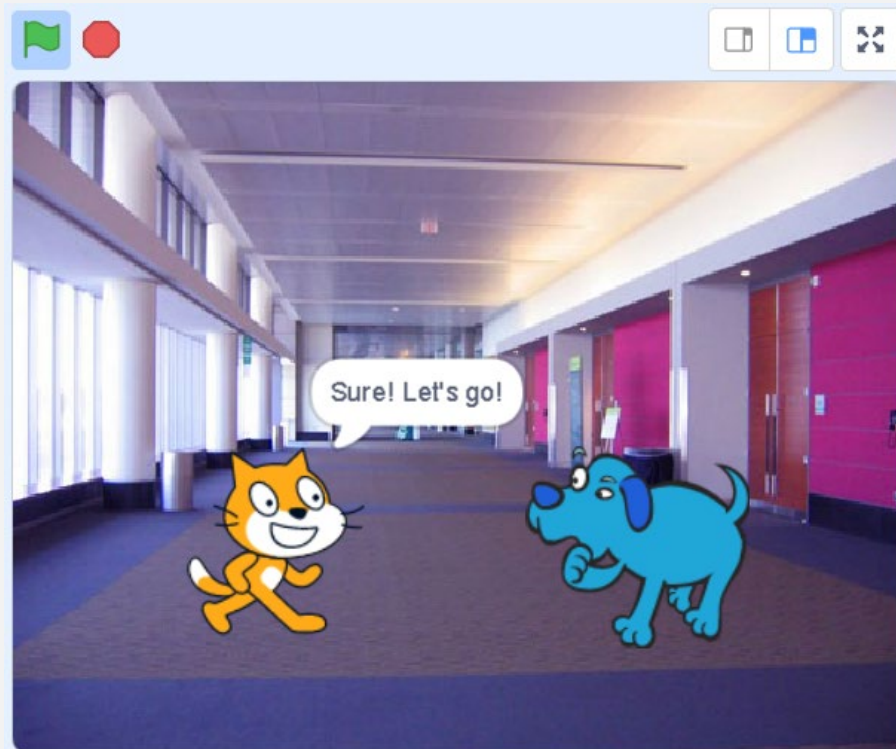
Dog2: Quite busy lately...

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 motion to your character

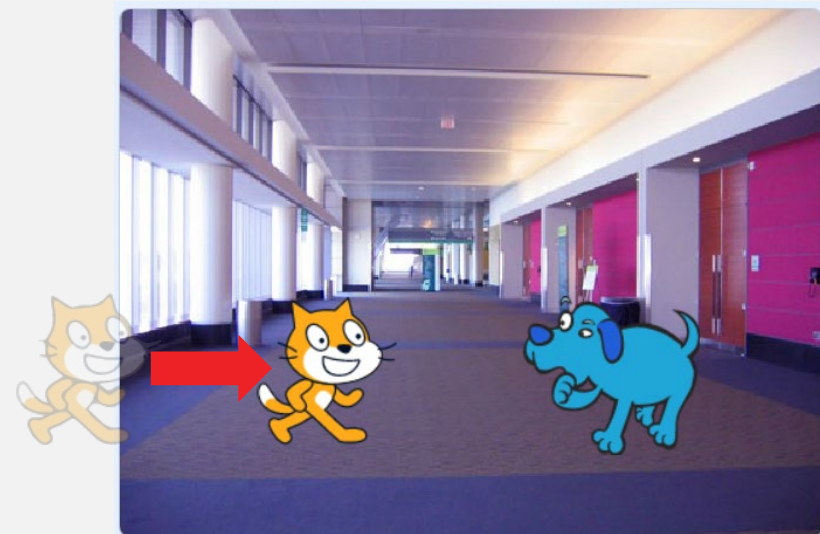
Script:



a

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

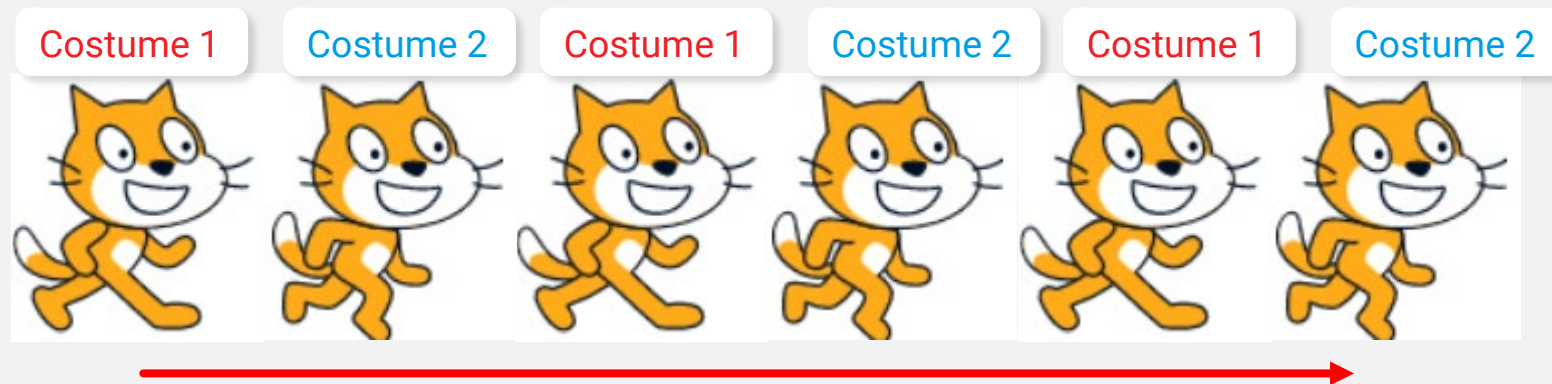


a

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

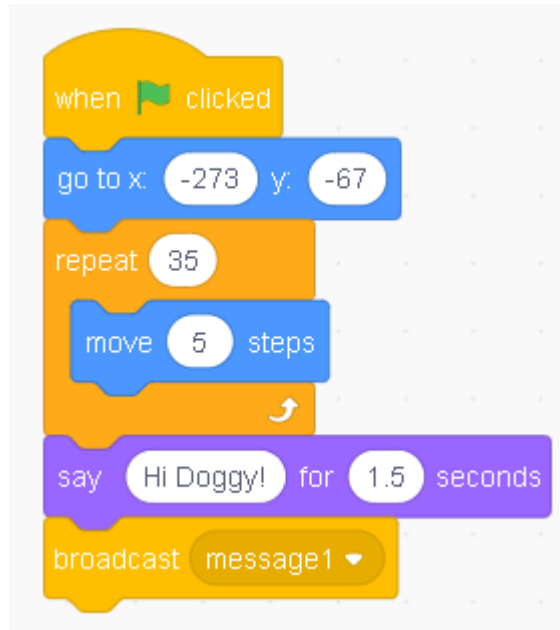
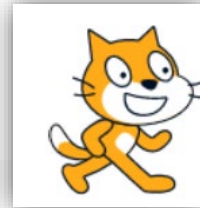


We will want to keep switching the costume when we move the cat into the scene, so you will see the cat walking into the scene.

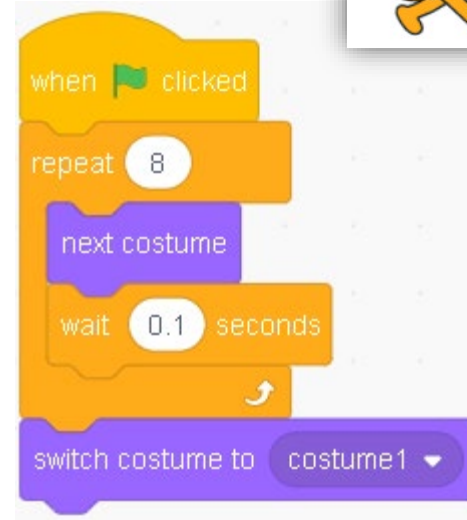


Setting up the starting scene

Script:



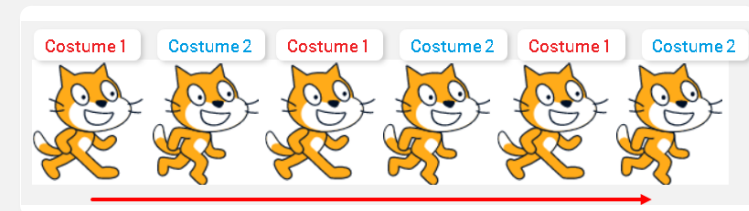
Motion



Animation

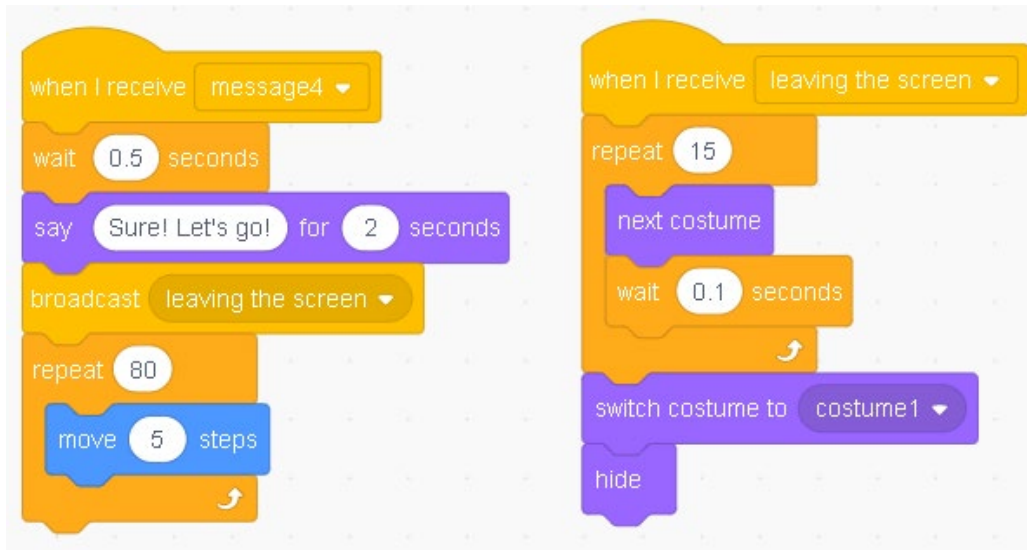
I will add another event next to the first event, which is to animate the cat.

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.



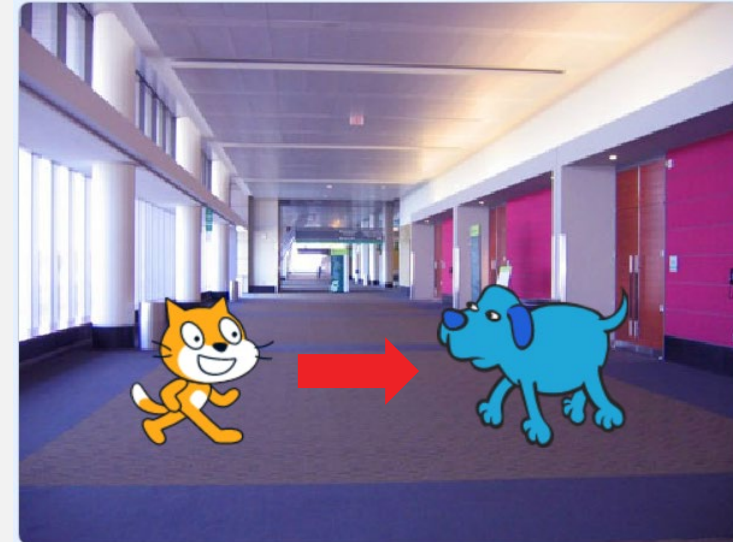
Add move out screen's animation to the Cat

Script:



Motion

Animation

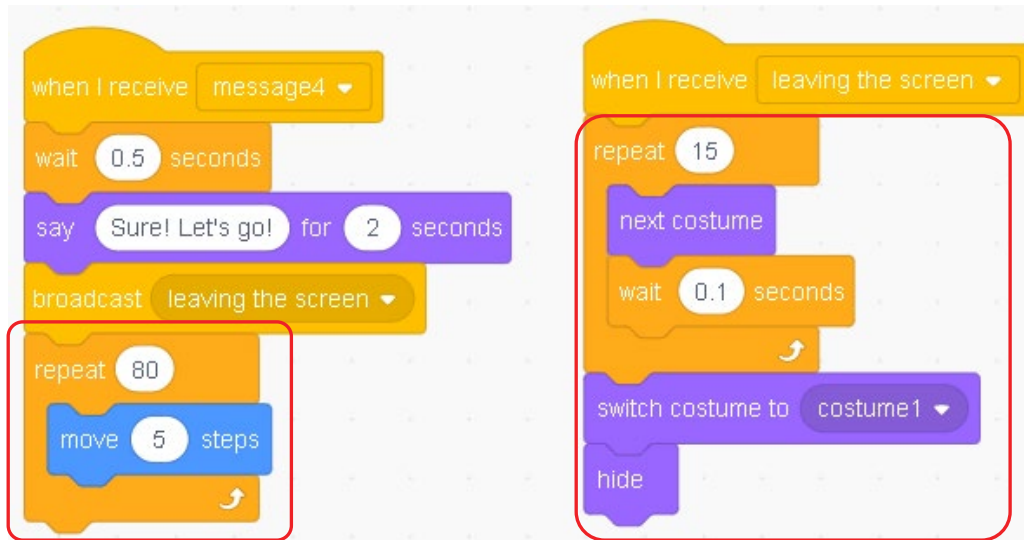


I will add a broadcast “**leaving the screen**” at the end of the conversation to tell the dog to leave the screen.

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

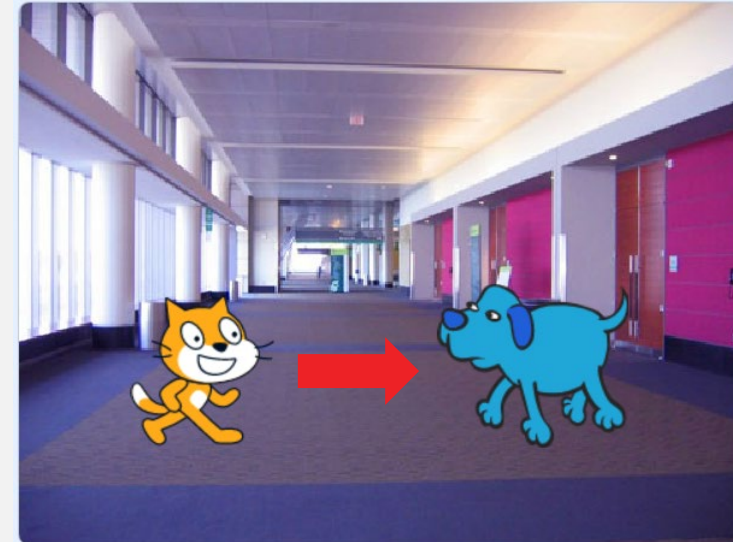
Add move out screen's animation to the Cat

Script:



Motion

Animation



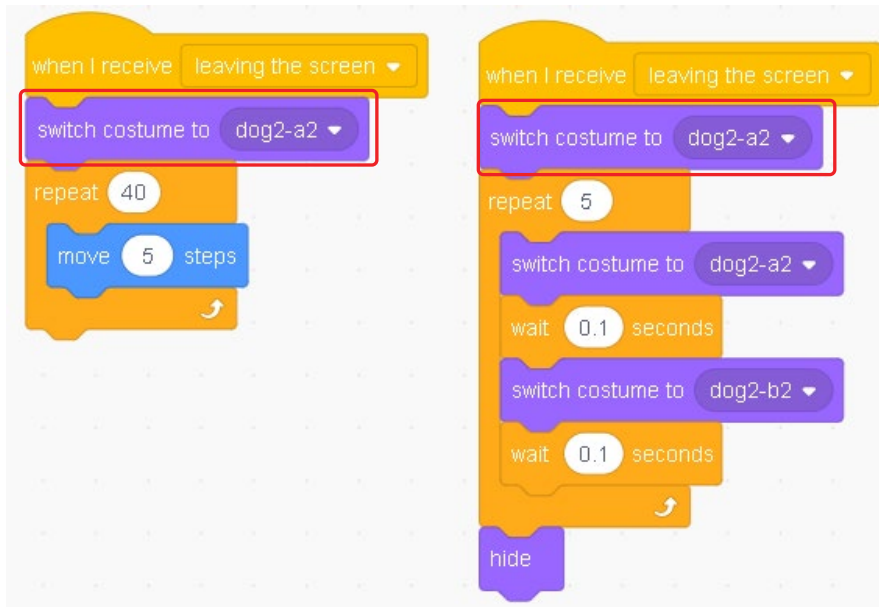
These are the motion and animation for the car to leave the screen.

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



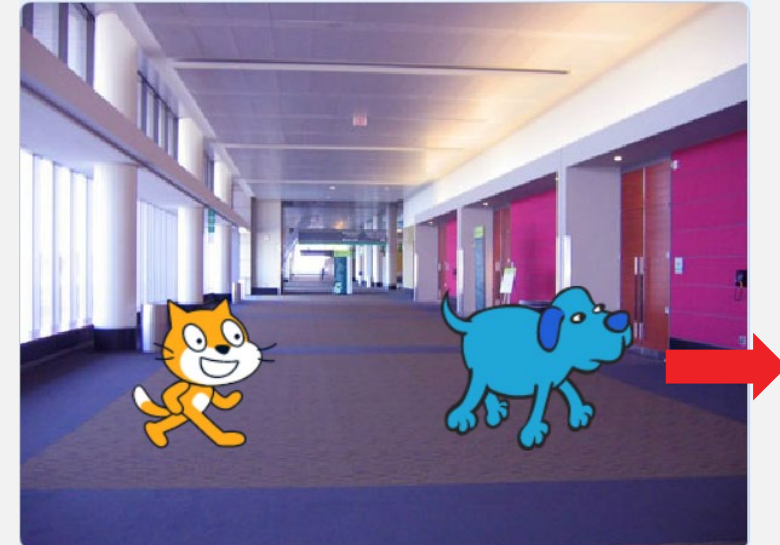
Add move out screen's animation to the Dog

Script:



Motion

Animation

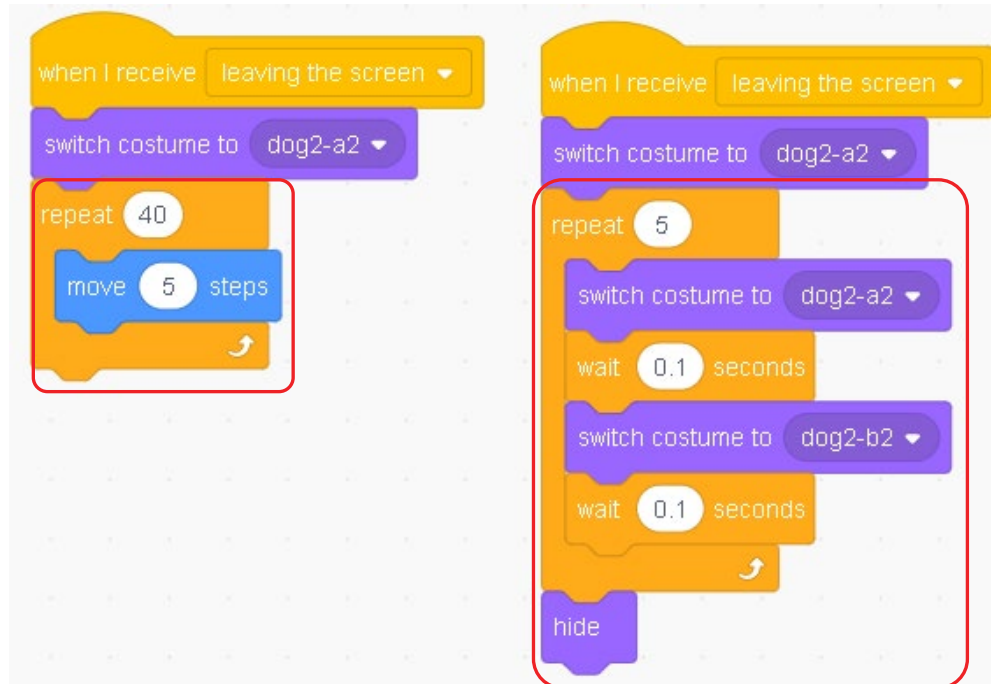


For my dog's script,
Once receiving "leaving the screen",
my dog will switch the costume to
dog2-a2 (facing right) before it
starts moving out from the screen.



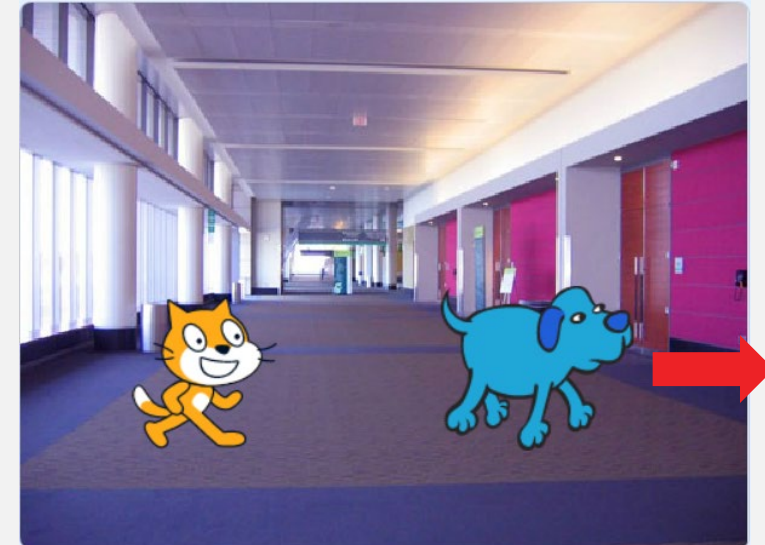
Add move out screen's animation to the Dog

Script:



Motion

Animation

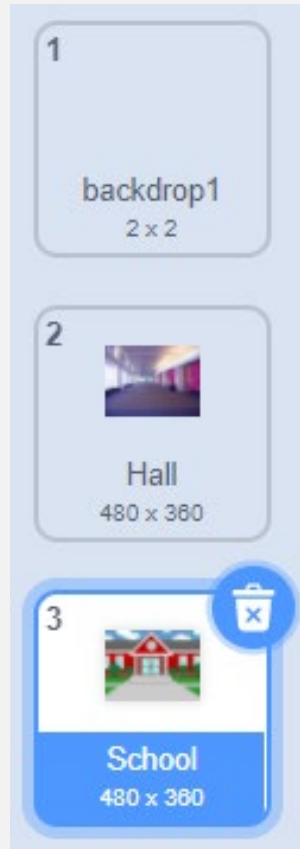


Then the dog will move out from the screen with walking animation.

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.



Switch backdrop to next scene



School

Now we want to do for the next scene, let's add "school" into the backdrop.

Switch backdrop to next scene

Script:



when I receive message4

wait 0.5 seconds

say Sure! Let's go! for 2 seconds

broadcast leaving the screen

repeat 80

move 5 steps

when I receive leaving the screen

repeat 15

next costume

wait 0.1 seconds

switch costume to costume1

hide

switch backdrop to School

Motion

Animation



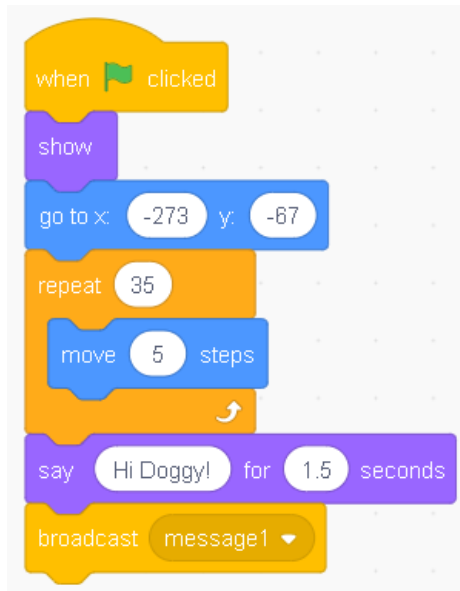
The end of this script is when the cat and dog both leave the scene.

Therefore, to call out next scene, we can add switch scene at the end of this script after cat hides itself.

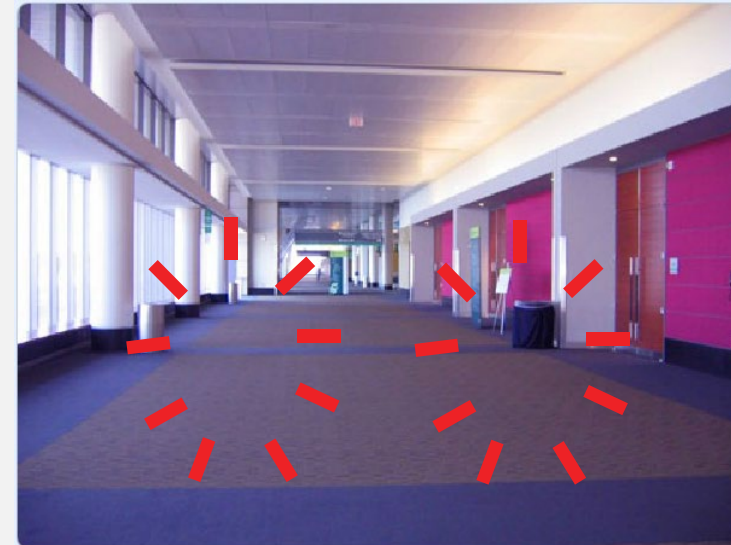


Adding Show Block & Setting Starting Position

Script:



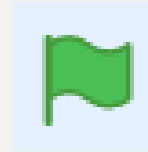
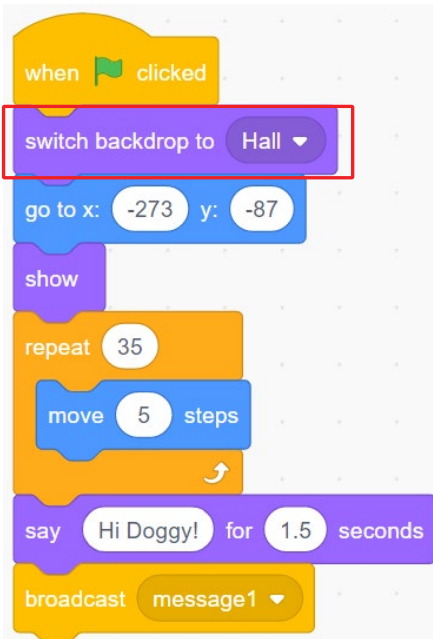
Script:



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”

Set Backdrop for Starting Scene

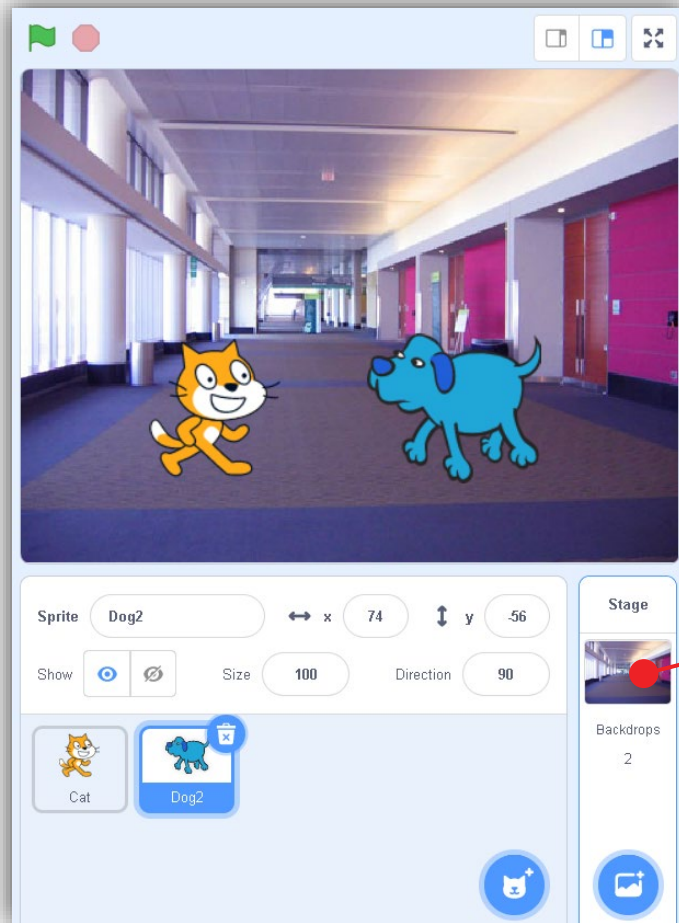
Script:



If we don't put a switch backdrop (Starting Backdrop) block, it won't go back to the first scene after you clicked the flag again. So this part is to set the starting scene for your story.



Add sound to the backdrop

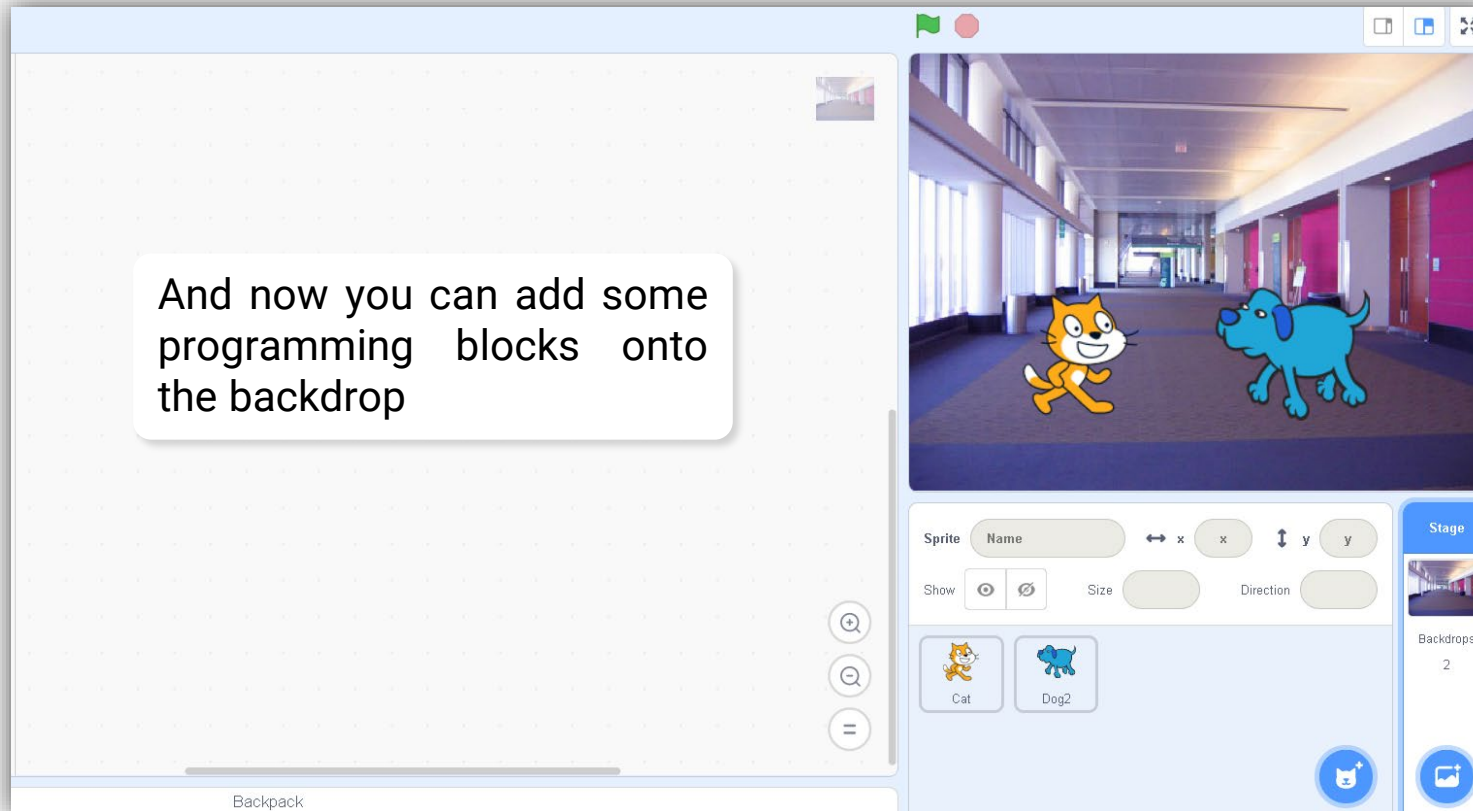


Select your Backdrop by clicking here.

We will add play "sound" script to your backdrop

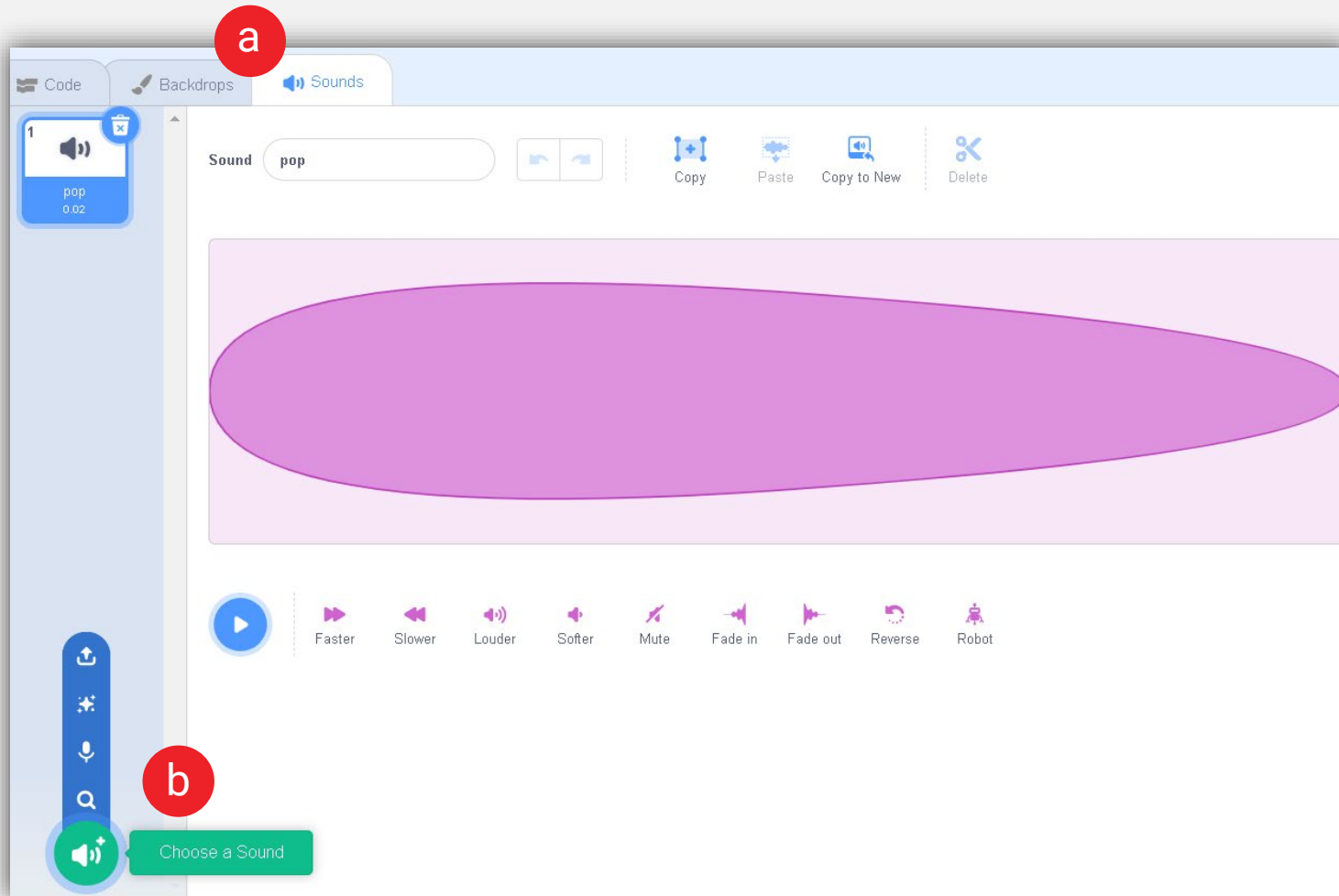


Add sound to the backdrop





Add Background Music

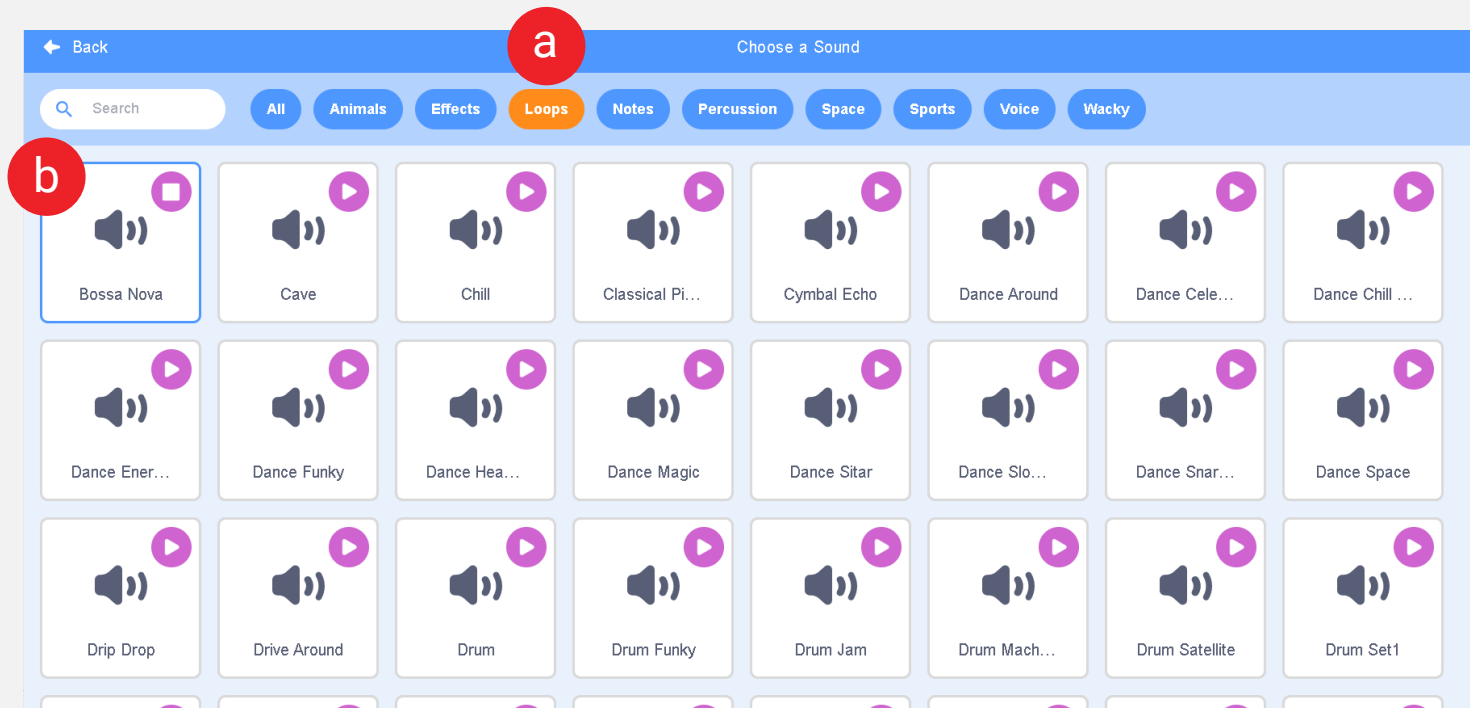


a
Switch to sound tab.

b
Then click “Choose a Sound”.



Add Background Music

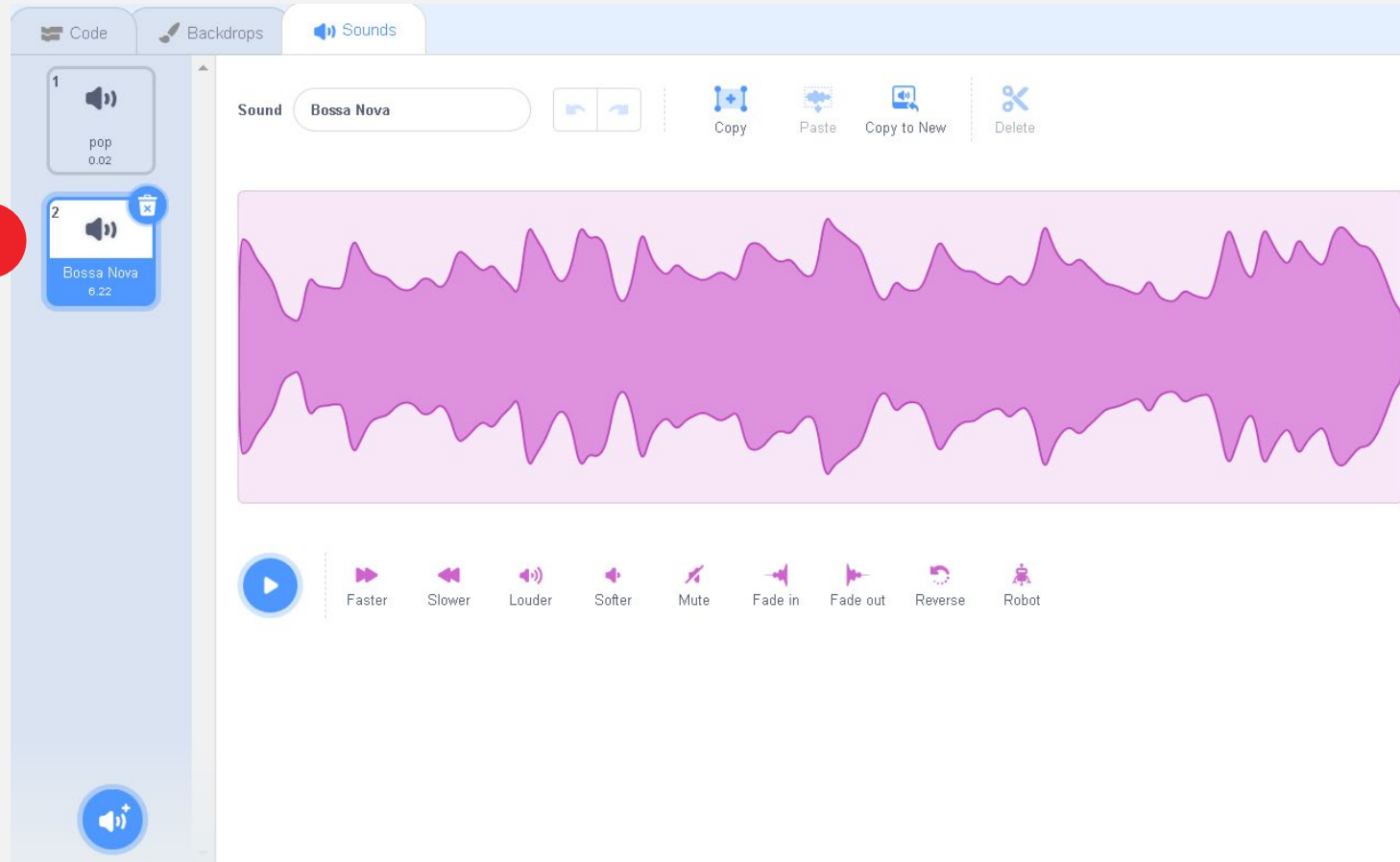


a
Go to “loop” tab.

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



Add Background Music

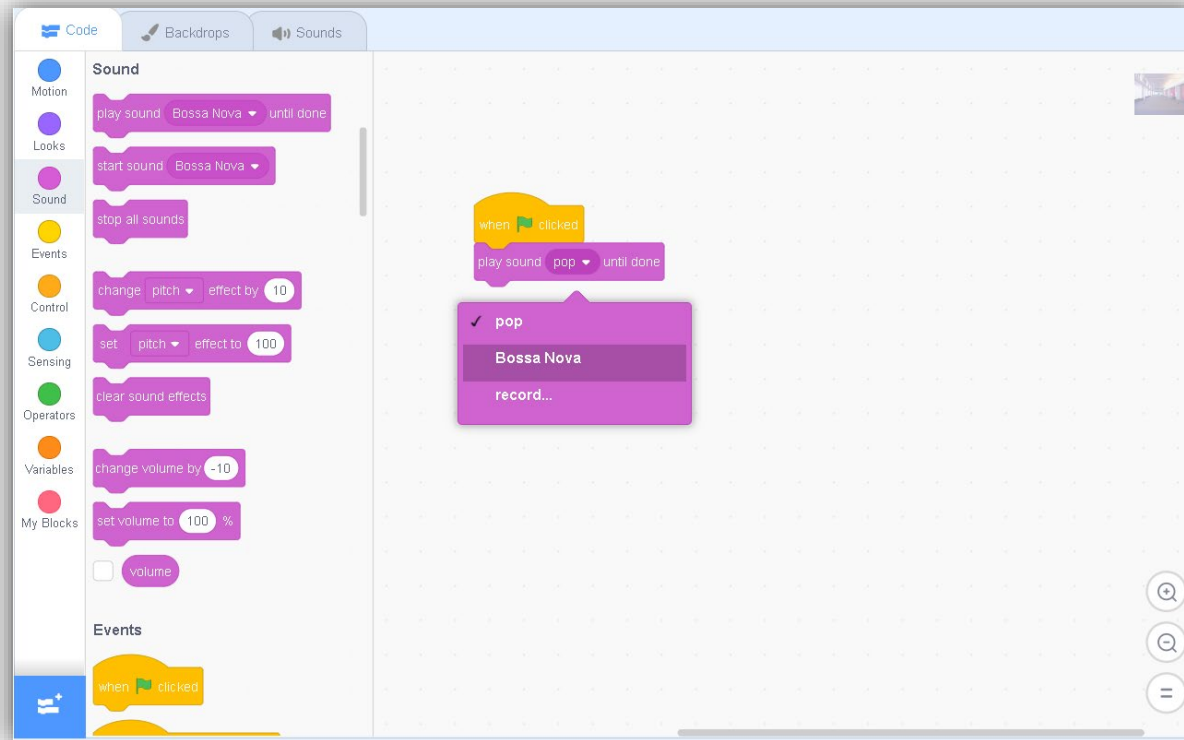


a

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



Add sound to the backdrop

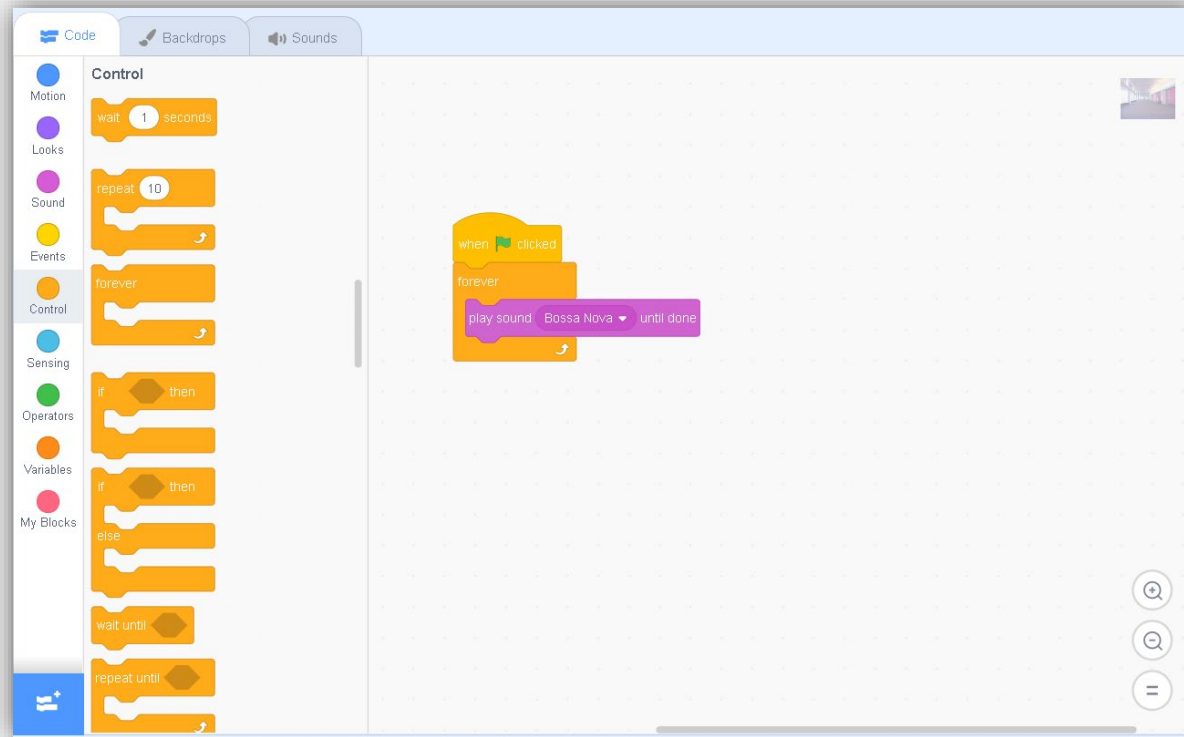


Drag out events block
“when flag clicked” followed
by “play sound until done”.

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



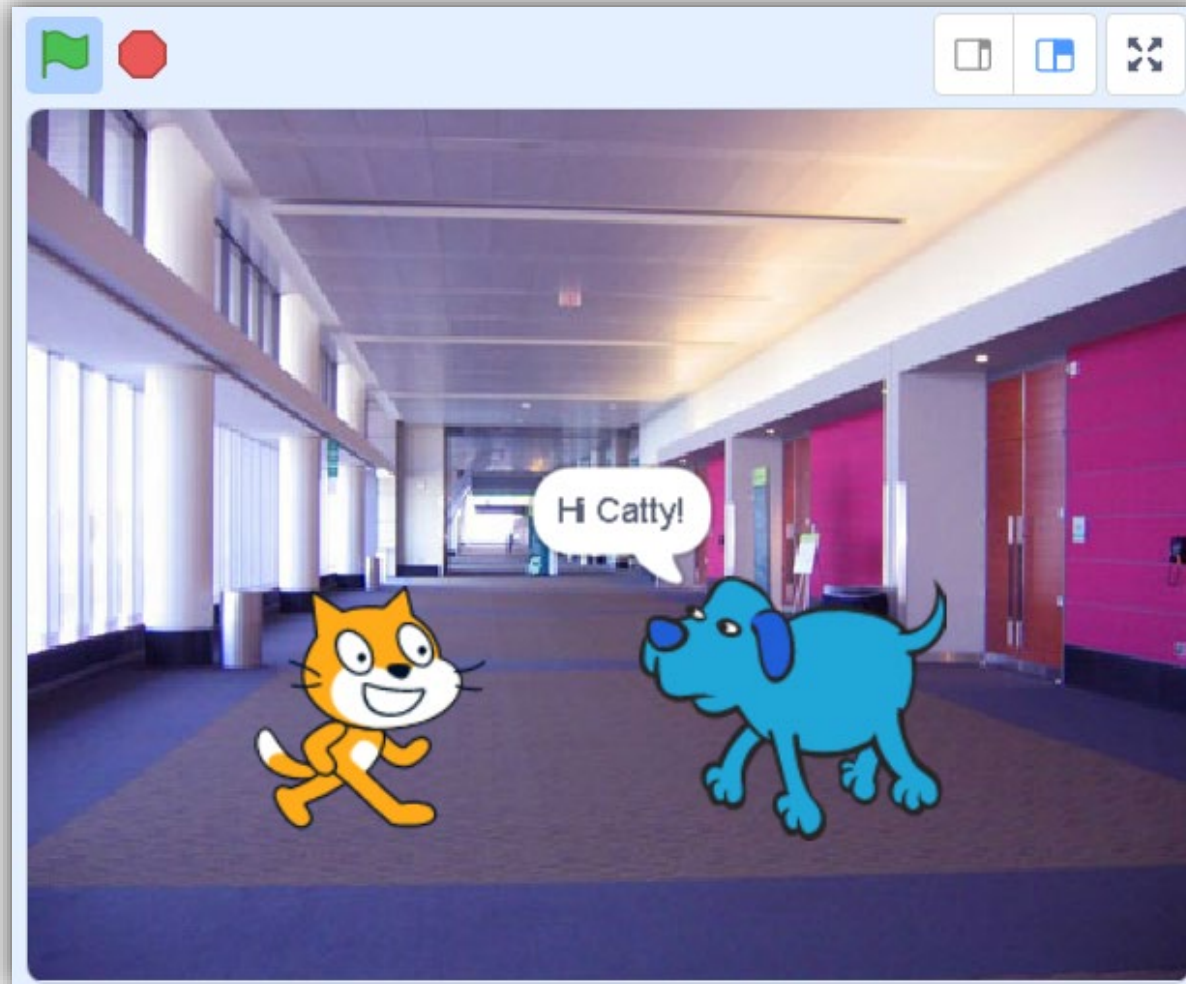
Add sound to the backdrop



Since “Bossa Nova” only last for 6 seconds.

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

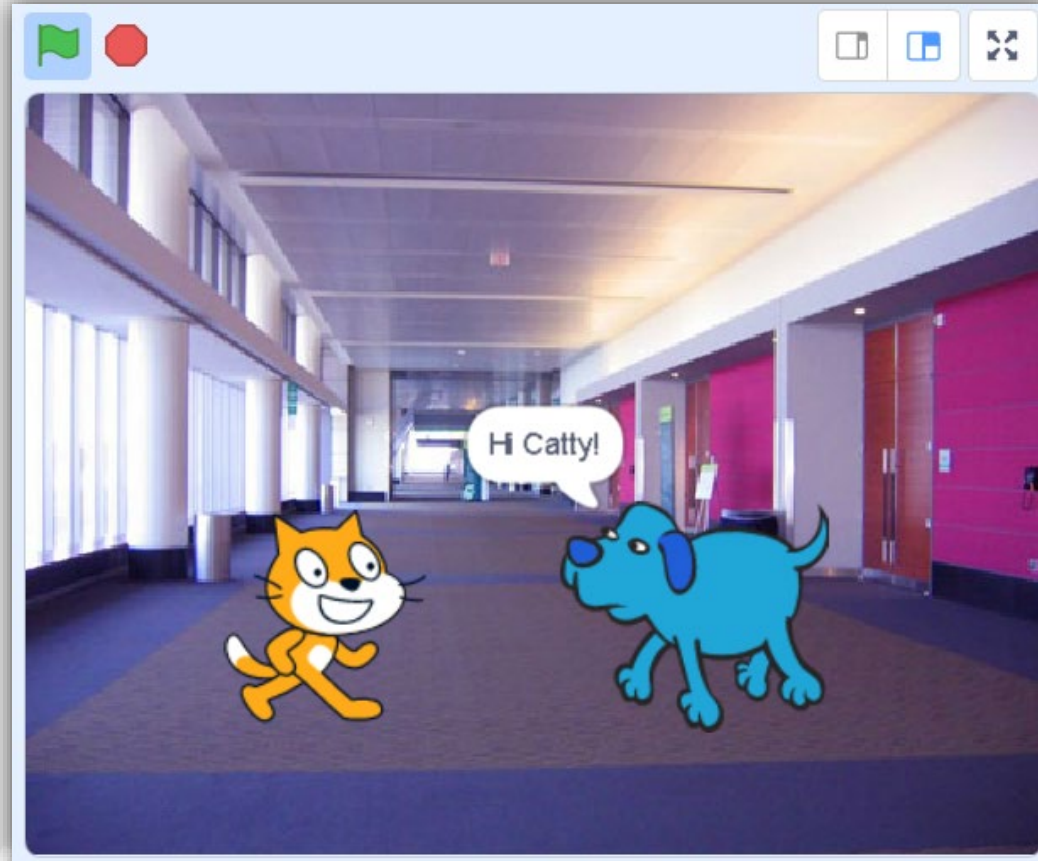
Now you can Click Go to watch your Story





ASSIGNMENT *for*

Topic 1.4



T1.4 – 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.



T1.4 – Mission 2

Continue from Mission 1, make another story from the new scene (scene 2).

Scene 1 to Scene 2 must add transition, meaning that your cat and dog must come back in to the new scene either from left or right.



T1.4 – Mission 3

Continue from mission 2, add scene 3 to your story.

Scene 2 to Scene 3 must have transition for cat and dog leaving scene to left or right and come in to scene 3.



Summary

1. Backdrop means the background of the stage; you can add the background by clicking Add Backdrop at the bottom left of scratch.
2. Set up the character starting position and position before scene starts
3. Use the concept of parallel programming to make your sprite move with animation.
4. You can use broadcast function to ask another sprite to leave the scene.
5. When your sprite is going to hide in the end, you will have to put a show at the start to make sure it will reappear again when you click the flag.



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 :)