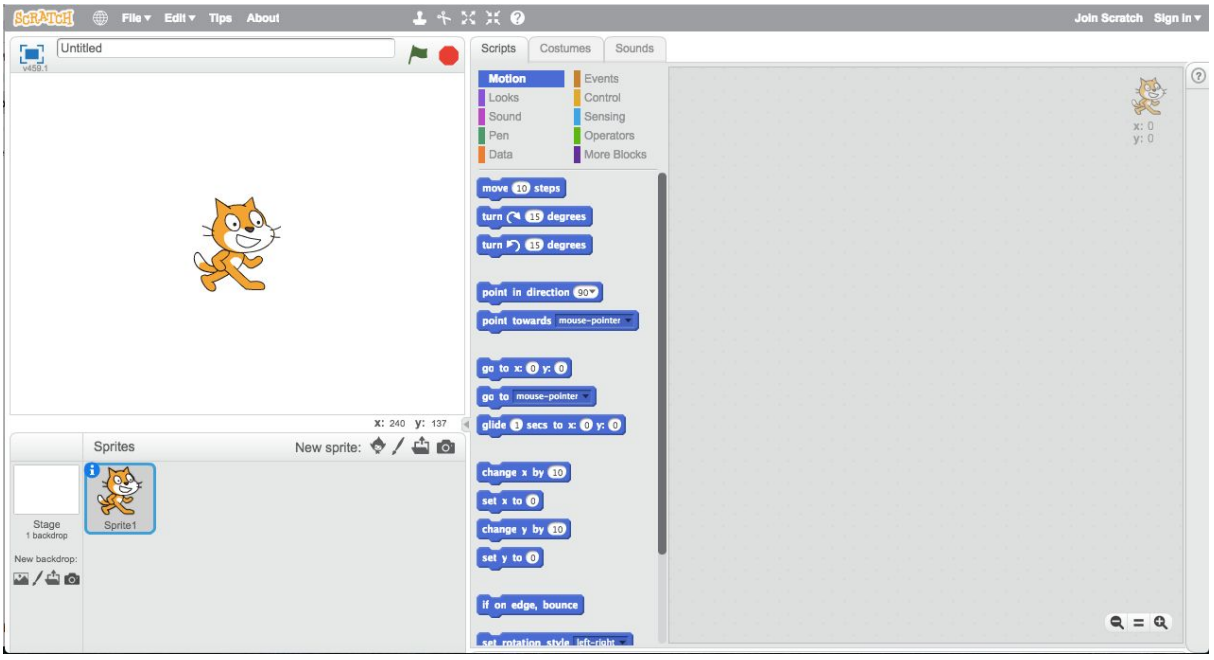
Scratch projects

Isaac Regional Council

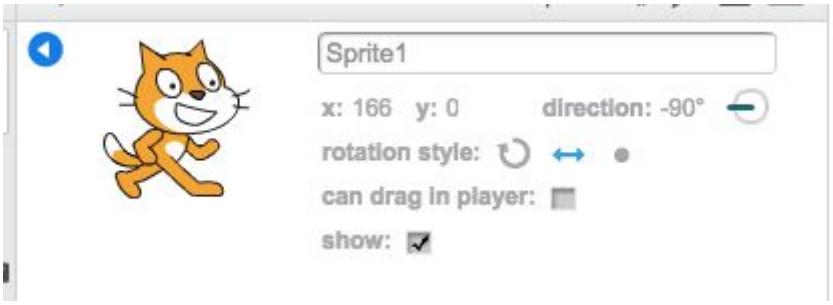
Workshop 1: Introduction to Scratch

https://scratch.mit.edu/projects/editor/
- get to know the Scratch interface
- basics of coding: sequencing, iteration, branching
- basic terminology: sprite, algorithm, debugging
- program a sprite (character or object) to move, display a speech bubble, play a sound, animate and make it look like it is walking

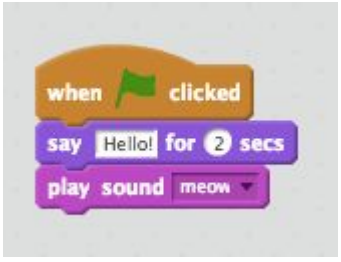


Code to make the cat look like it's walking:

Click on left-right arrow to keep the cat upright after bouncing of the edge.

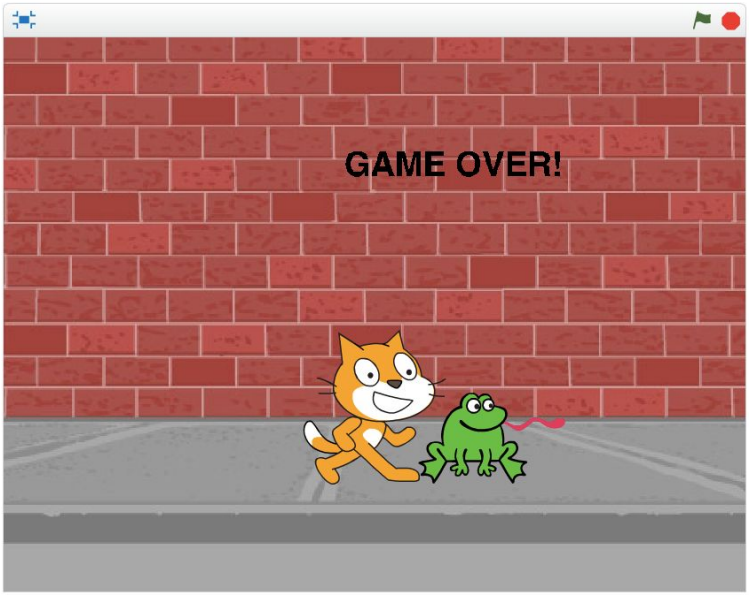


Code to make the cat display a speech bubble and then after 2 seconds, play a sound “meow”.

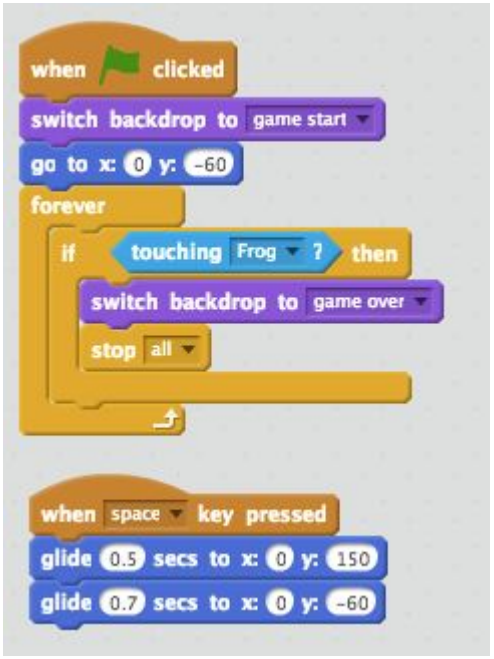


Workshop 2: Build your first game "Cat jumps over the frog"

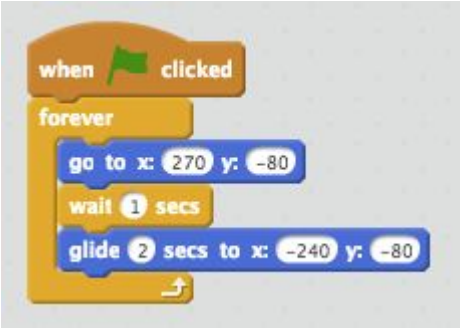
https://scratch.mit.edu/projects/96060964/
- program a user-controlled sprite
- program an automated sprite
- program a "Game over" screen



Cat's code:

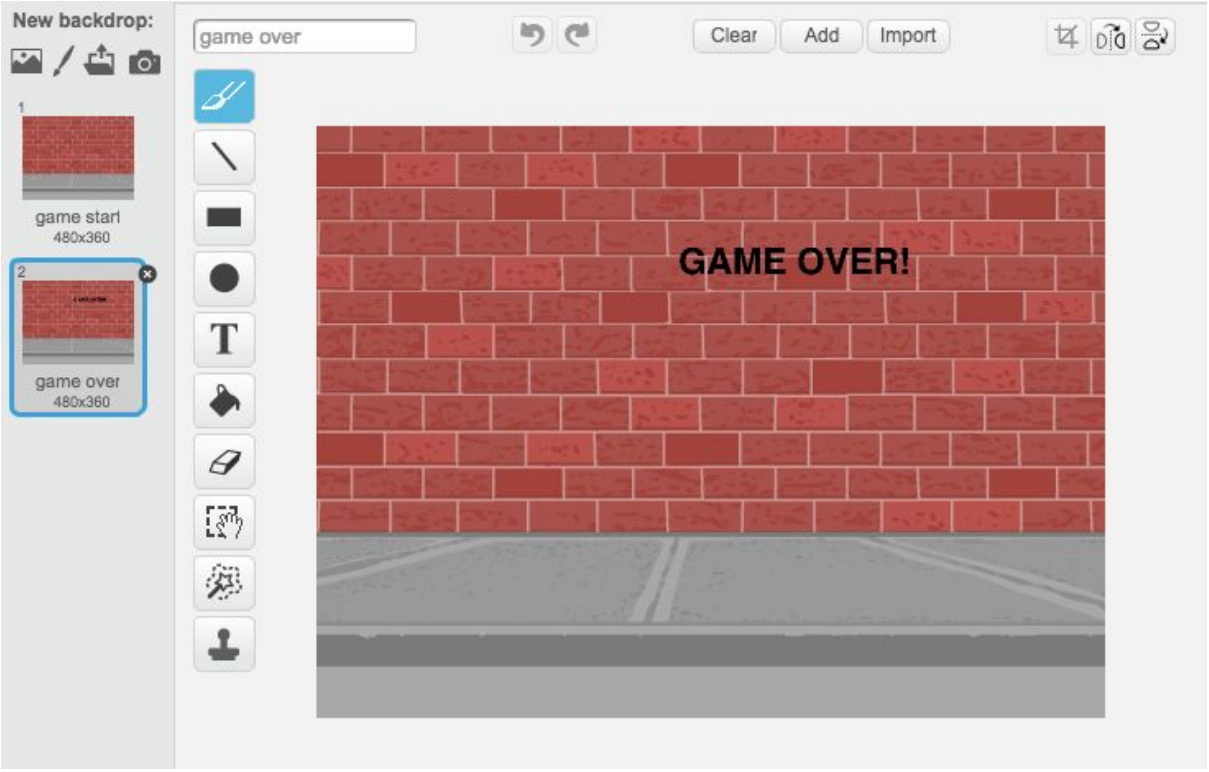


Frog's code:



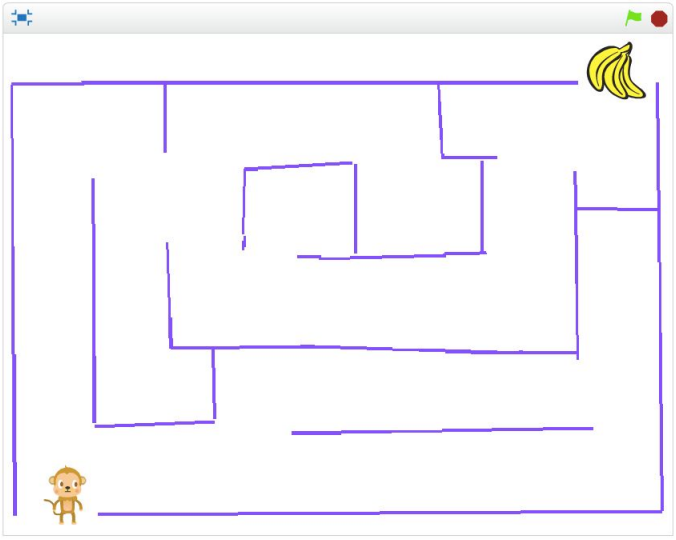
Two backdrops:

1) Game start
2) Game over

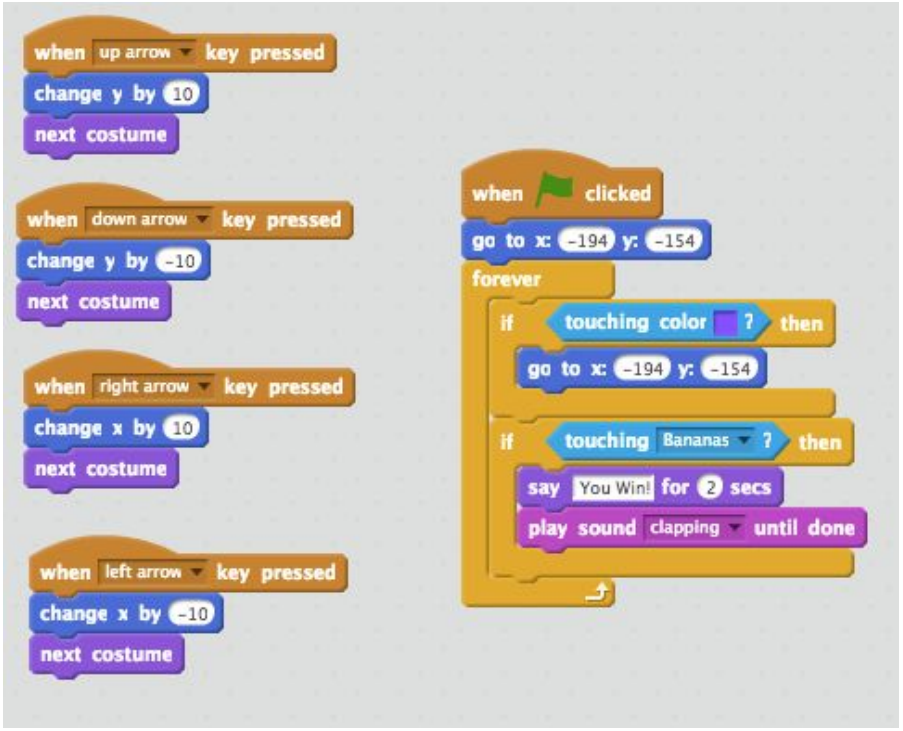


Workshop 3: Build a simple maze game

https://scratch.mit.edu/projects/176207088/
- draw your own maze background
- program your player sprite to recognise when it is touching a maze wall
- program the sprite to say, "You win" when it touches the target.



Monkey's code:

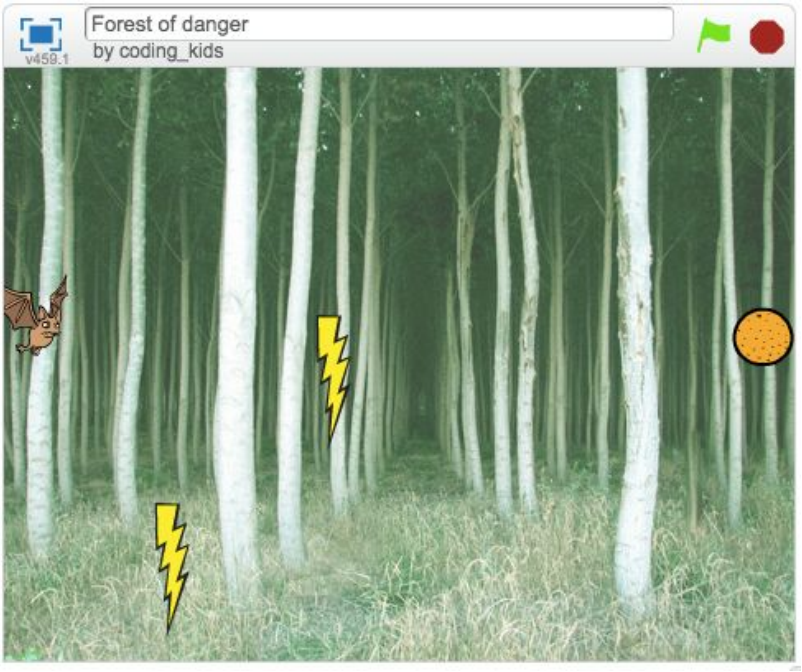


Banana has no code.

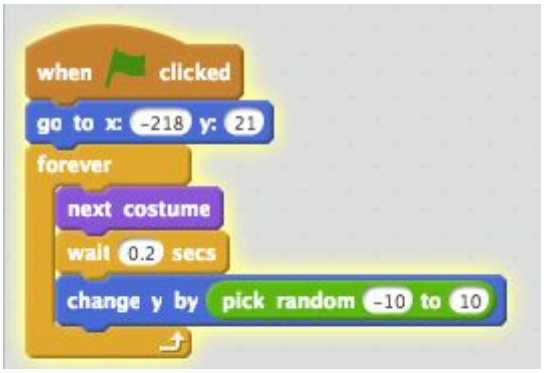
Maze is a backdrop and has no code.

Workshop 4: Build the Forest of Danger game

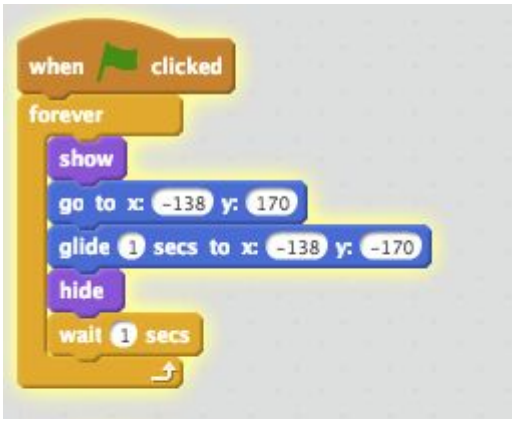
https://scratch.mit.edu/projects/112230999/
- explore XY coordinates in more detail, control sprites along the vertical axis
- duplicate sprites to do less work
- program two game endings: "Game over" & "You win"

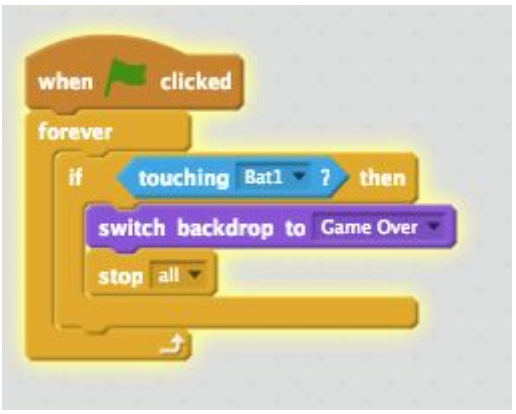


Bat's code:

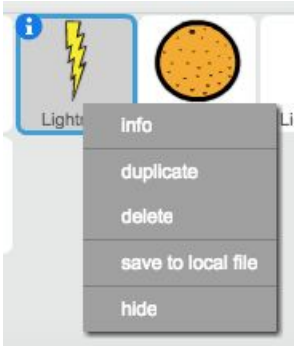


Lightning bolt code:
Create just one lightning bolt sprite.





First test and debug your code. Then duplicate the lightning bolt sprite. Right (mouse) click the lightning bolt sprite, then click “duplicate”. Duplicating a sprite with errors will only duplicate the errors in code.



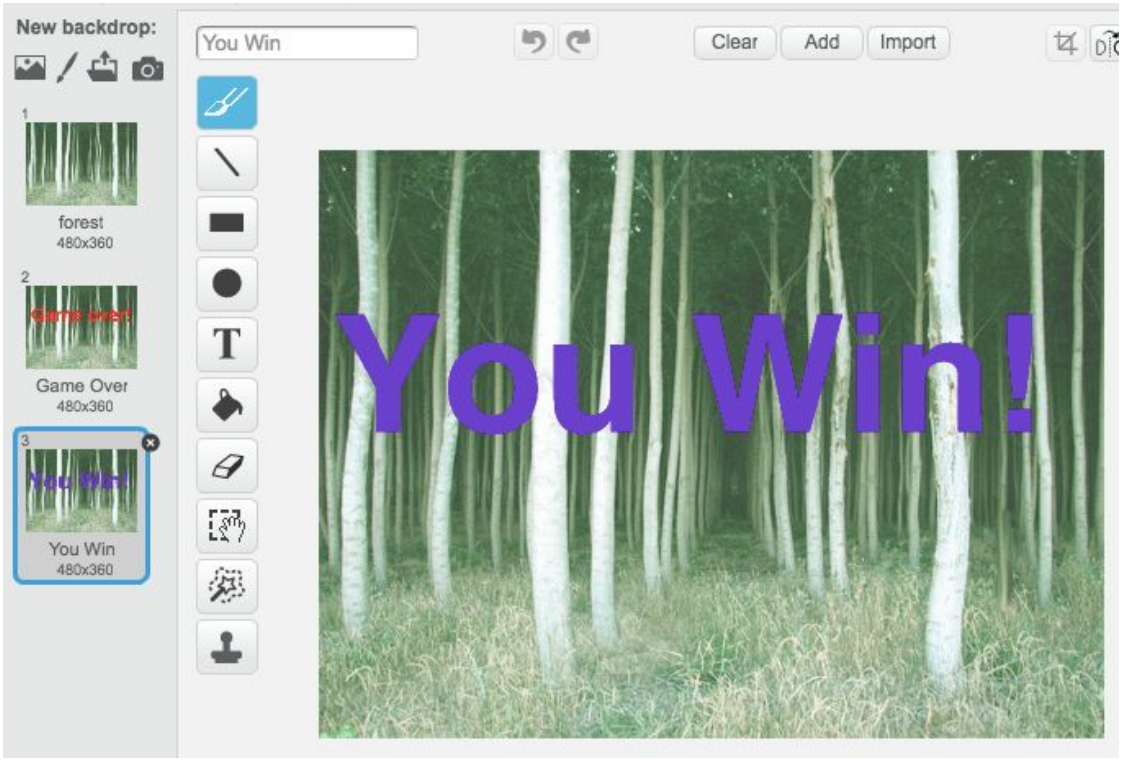
The duplicated lightning bolts will have the same XY coordinates as the original lightning bolt sprite. This means that if you click on the green flag, the duplicates will lie directly underneath the original and you will only be able to see the original lightning bolt sprite.

Change the x coordinates in order to move the duplicated lightning bolt sprites to the left or the right of the original. The original lightning bolt sprite has an x coordinate of -138. Give the 2nd lightning bolt sprite a different x coordinate, e.g. -40. Give the 3rd lightning bolt sprite a different x coordinate, e.g. 62.

Orange has no code.

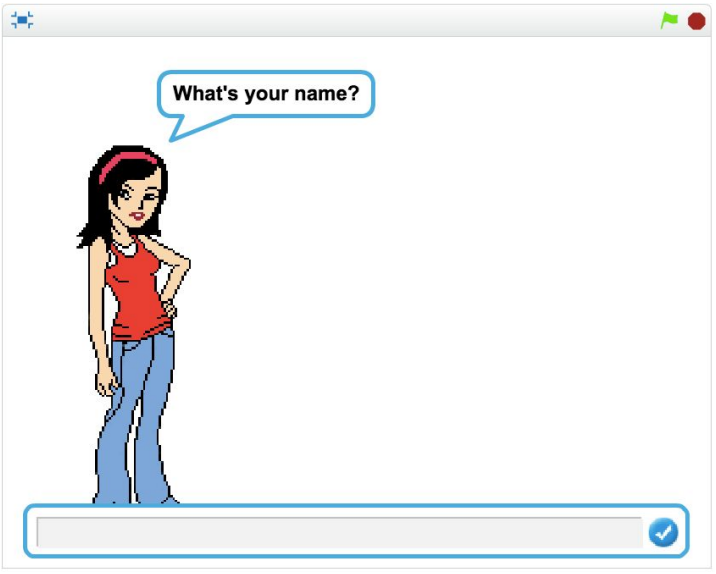
Create 3 backdrops:

1) Forest (Game start)
2) Game over
3) You win

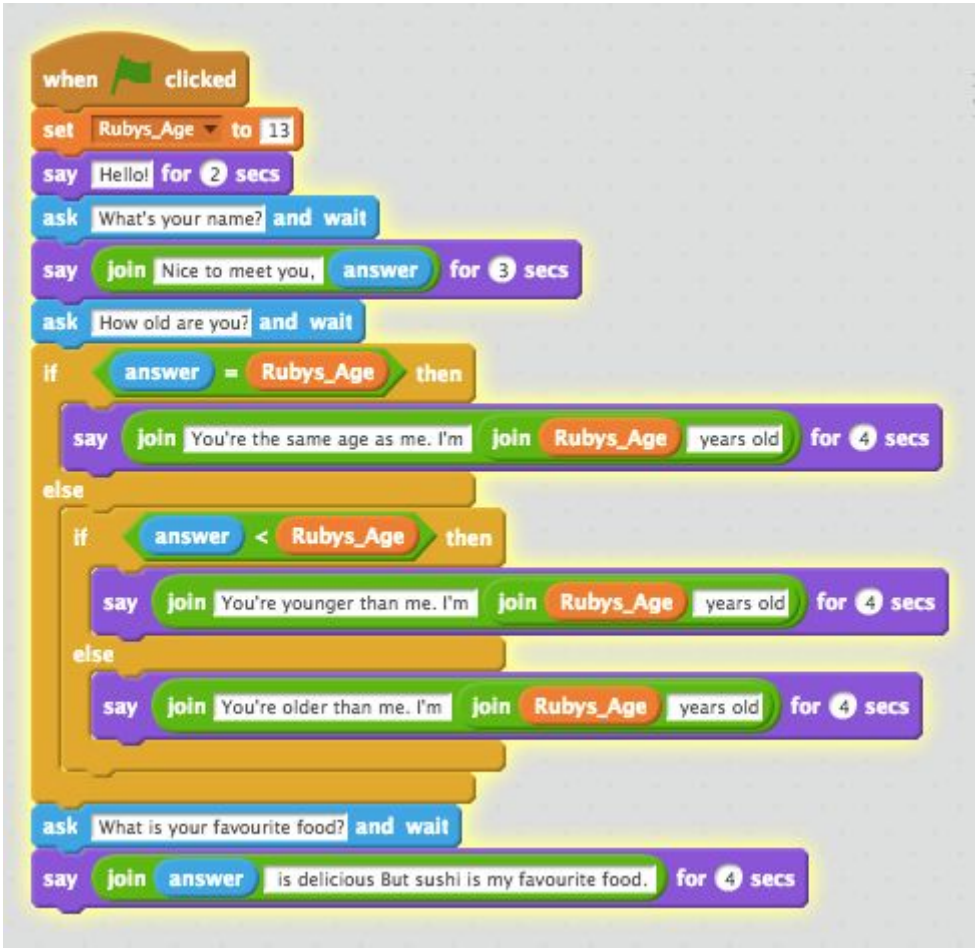


Workshop 5: Create an AI friend

https://scratch.mit.edu/projects/110158950/
- explore different data types: numbers, text
- use text as data
- use variables to store data for later use
- program a sprite to ask questions and respond to the player's responses



Ruby's code:


when clicked
set Rubys_Age to 13
say Hello! for 2 secs
ask What's your name? and wait
say join Nice to meet you, answer for 3 secs
ask How old are you? and wait
if answer = Rubys_Age then
say join You're the same age as me. I'm join Rubys_Age years old for 4 secs
else
if answer < Rubys_Age then
say join You're younger than me. I'm join Rubys_Age years old for 4 secs
else
say join You're older than me. I'm join Rubys_Age years old for 4 secs
ask What is your favourite food? and wait
say join answer is delicious But sushi is my favourite food. for 4 secs