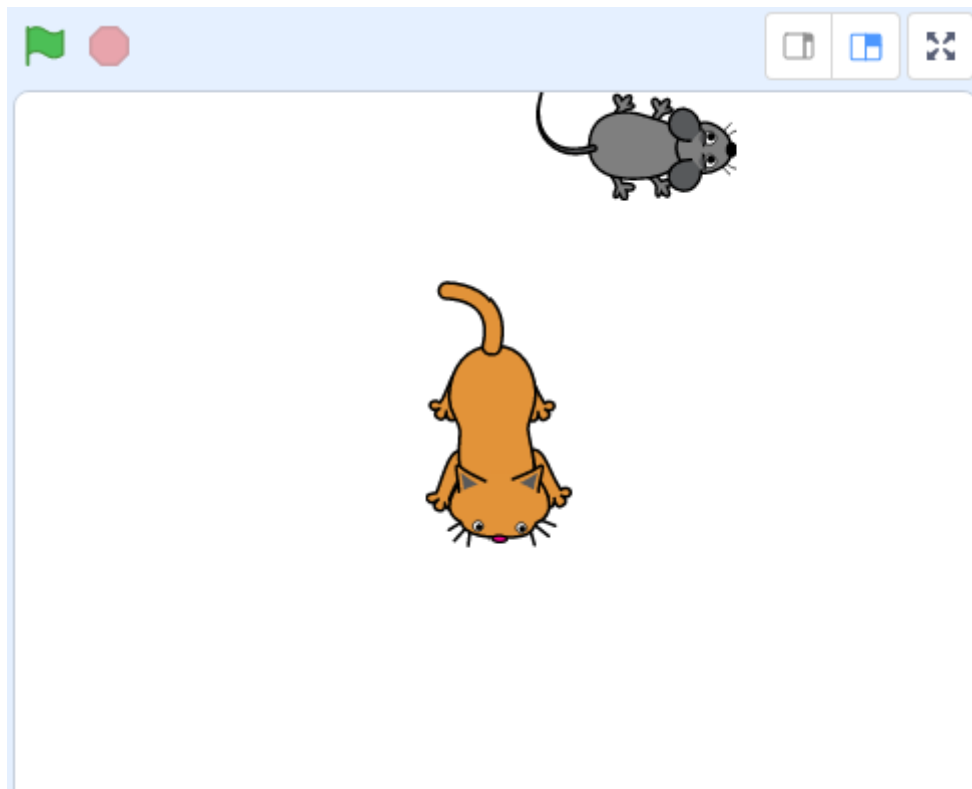


Cat and Mouse

(With full credit to CoderDojo)

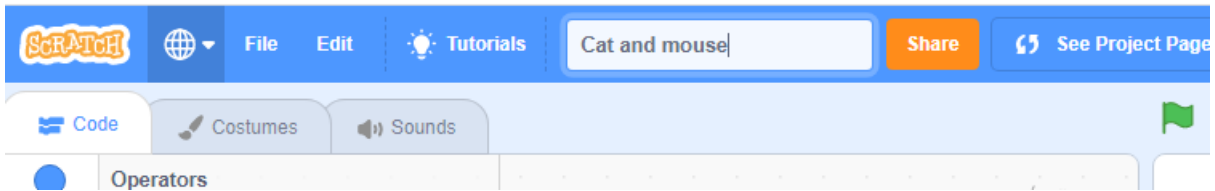
Introduction

Cat and Mouse is a one player game where you attempt to catch the mouse by controlling the cat

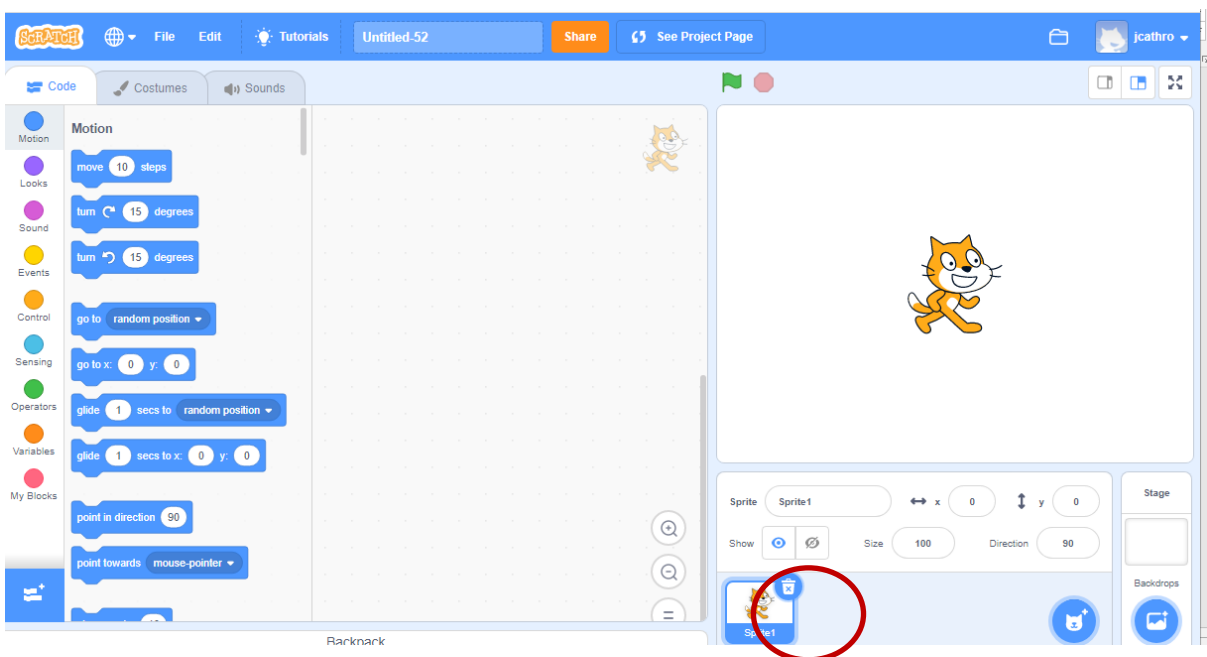


Step 1: Set up

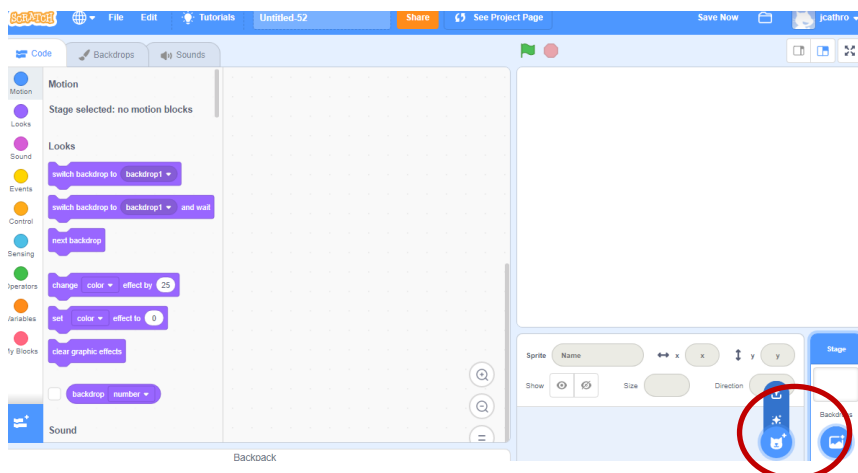
1. Start by creating a new project in Scratch. Make sure to give it a good name, such as Cat and Mouse.



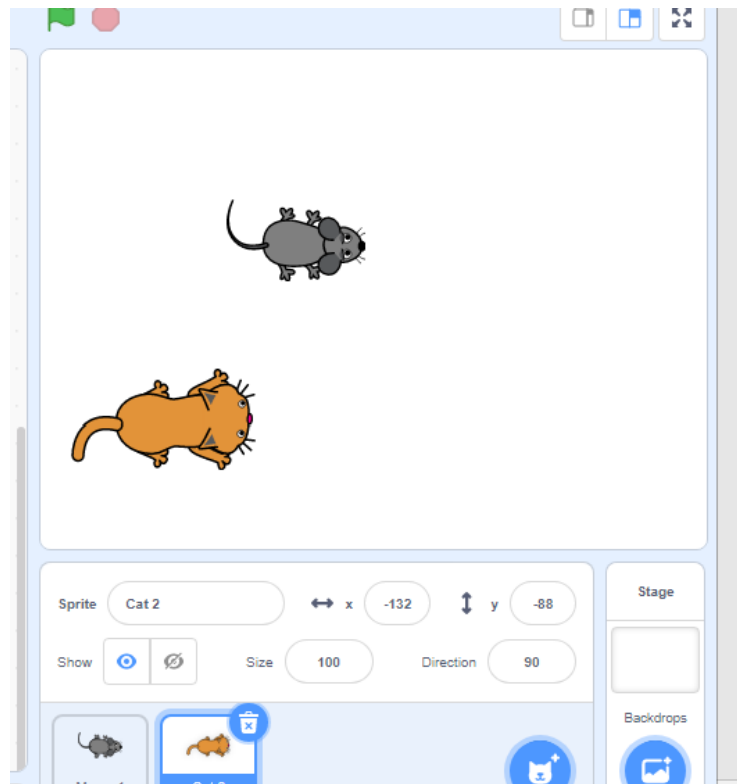
2. We then need to delete the cat sprite. We do this by clicking on the rubbish bin on the cat in the bottom of the screen



3. Select a new sprite



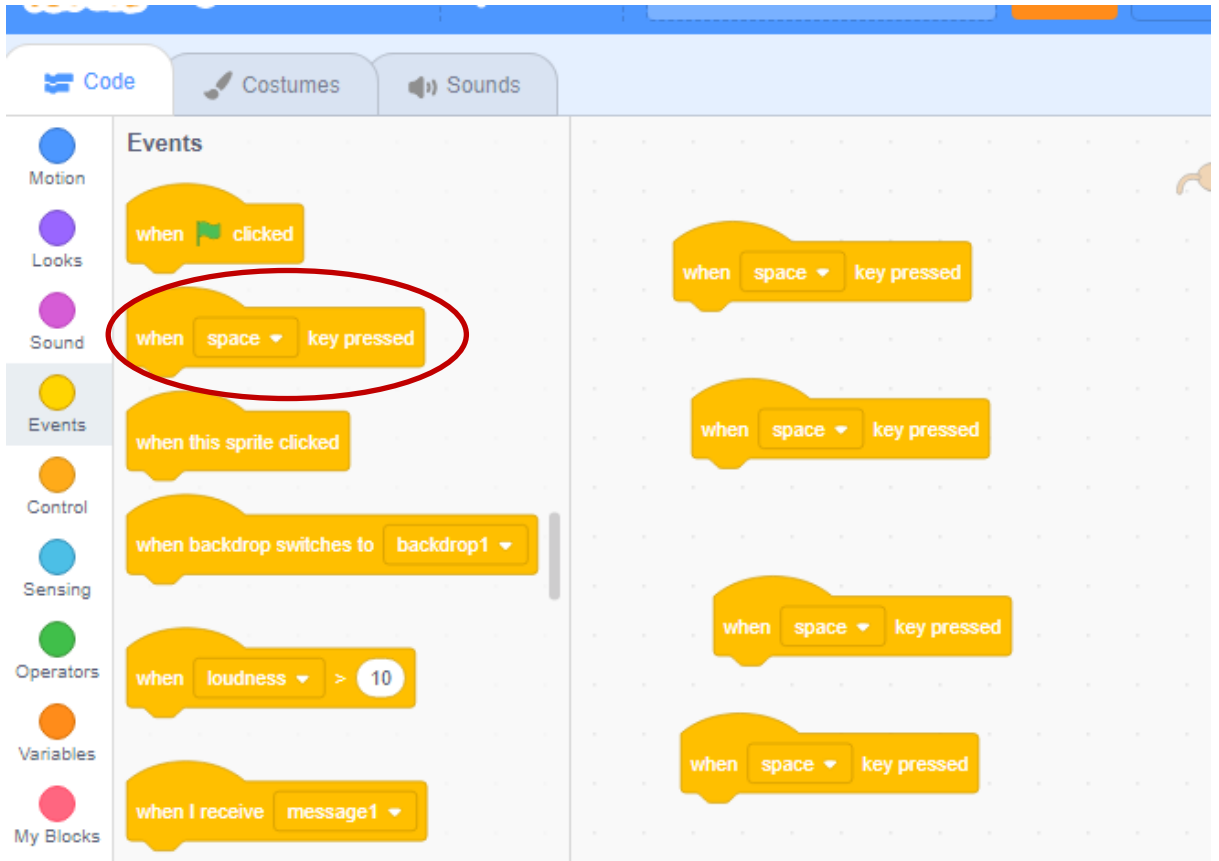
4. Select a mouse sprite
5. Select another sprite - Cat 2



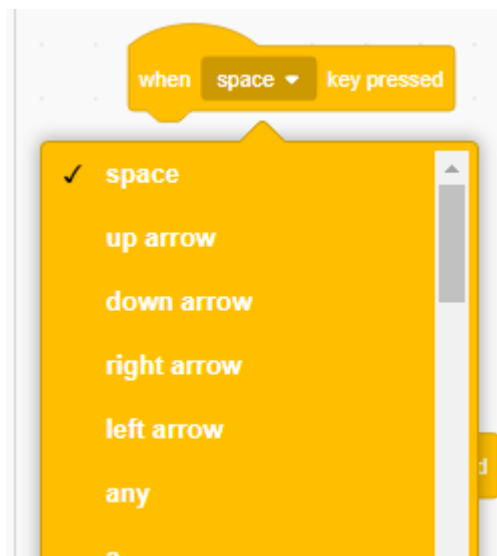
Step 2: Controlling the cat

This will allow us to move the cat to chase the mouse.

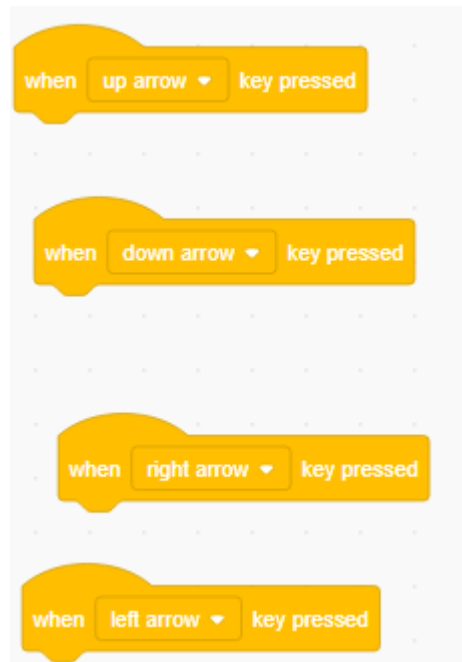
1. Click on "Events" and drag over to the large white space in the middle the "when space key pressed". Do this 4 times.



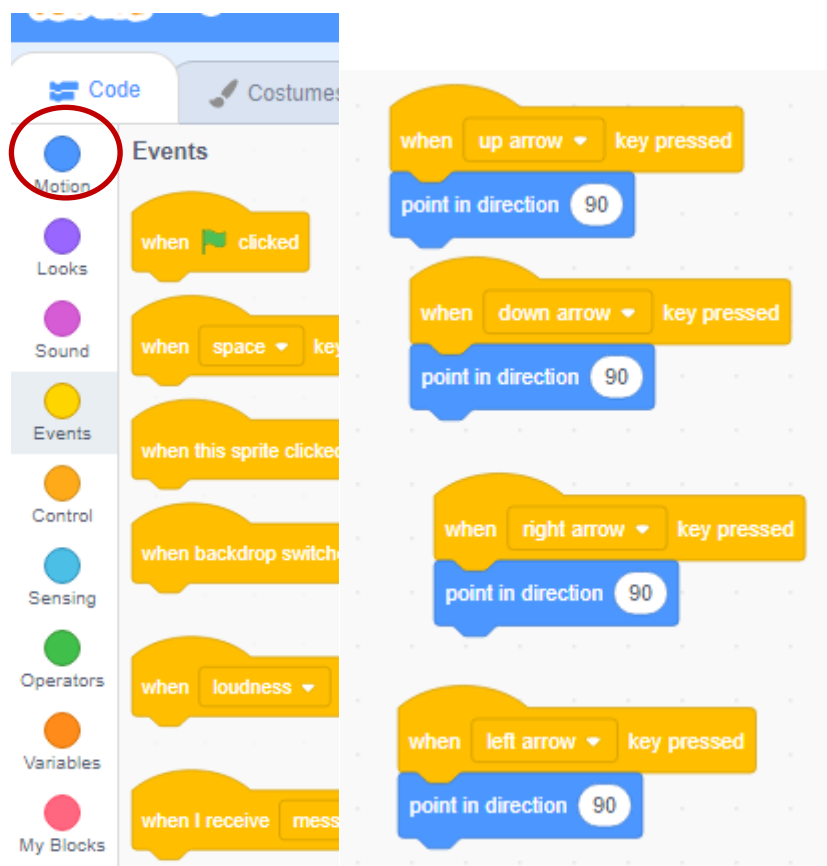
2. Select up from the drop down arrow on one of the "when space key pressed"



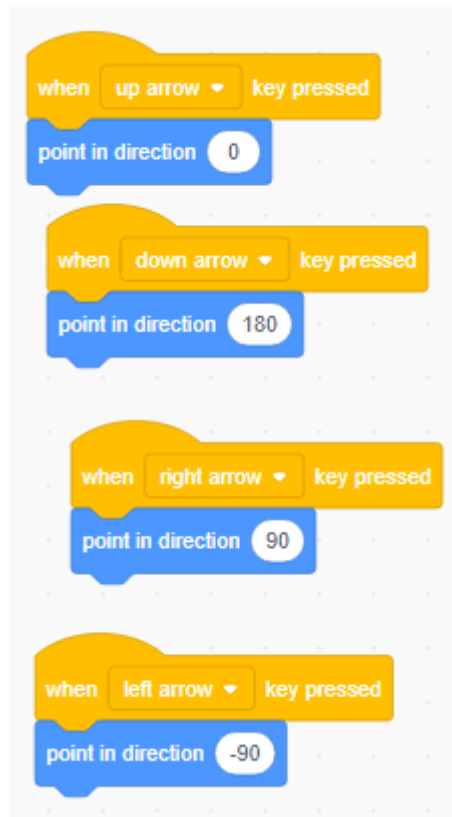
- Repeat for each of the blocks of code so that you now have an up arrow, down arrow, left arrow and right arrow



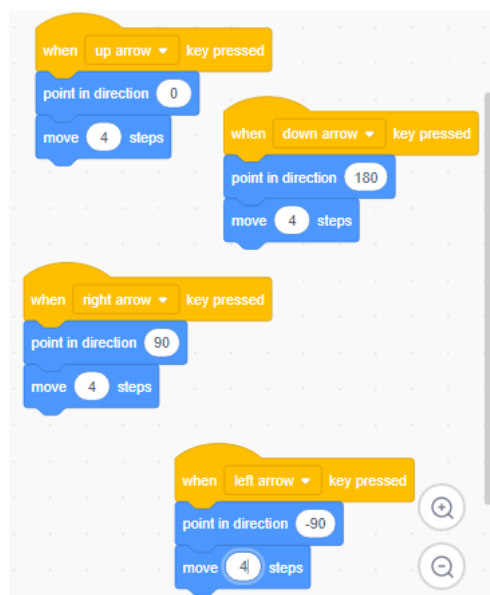
- Now we are going to click on "motion" and drag over and connect up "point in direction 90" to each of the arrow keys.



5. Update the numbers to match the image below. This means that when we push the up key the cat will turn to point to the top of the screen.



6. We will now add the "move 10 steps" block to each of our arrow keys. We will change the number from 10 to 4. This means our cat won't move so far when we press the key.

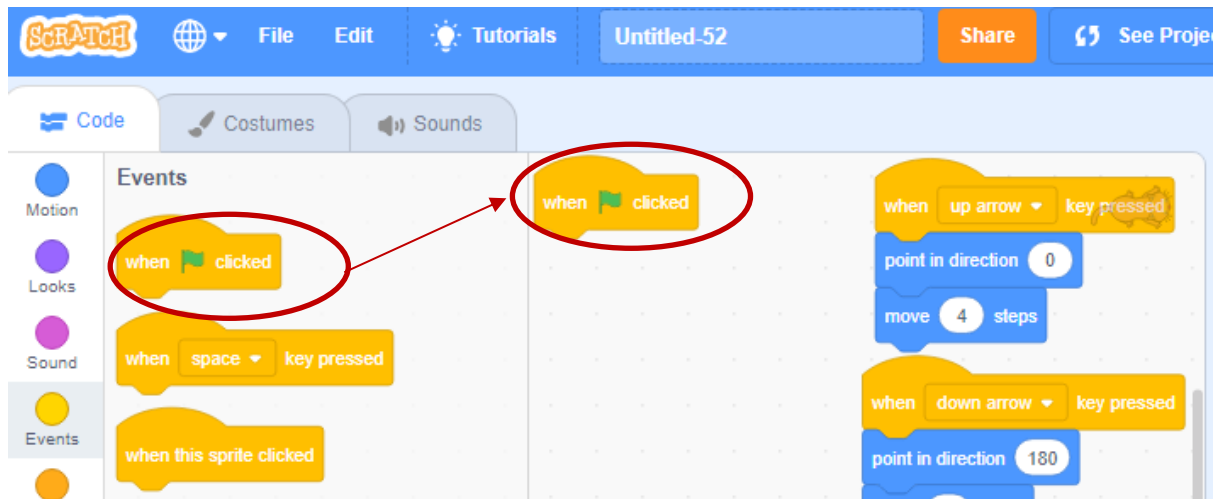


7. Click the green flag and press the arrow keys on your keyboard to test

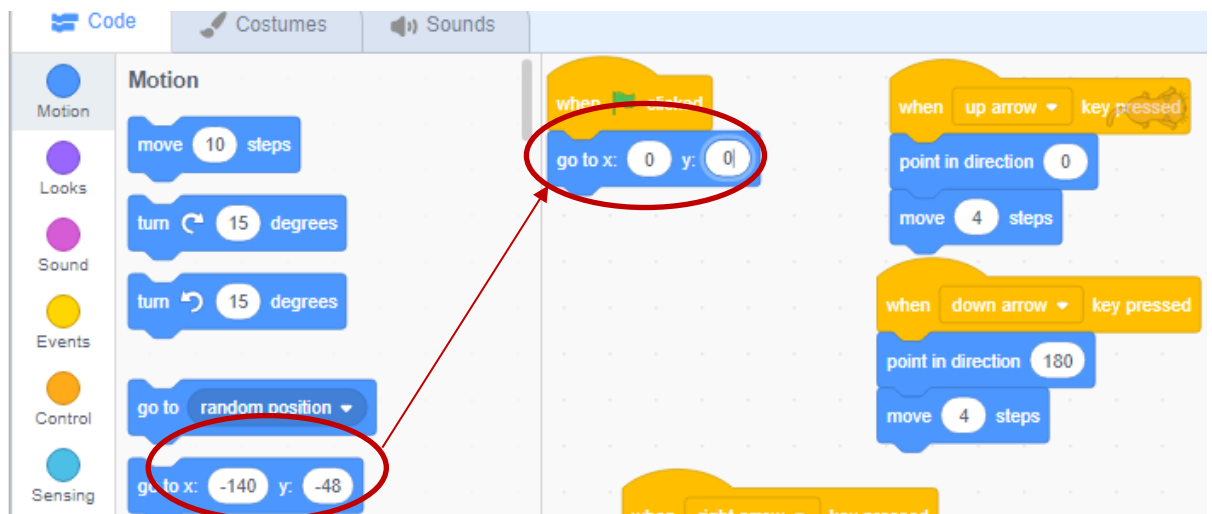
Step 3: Catching the mouse

To catch the mouse we need to prepare some code which will keep checking if we are touching the mouse.

1. Click on the "events" blocks and drag across "When green flag clicked"

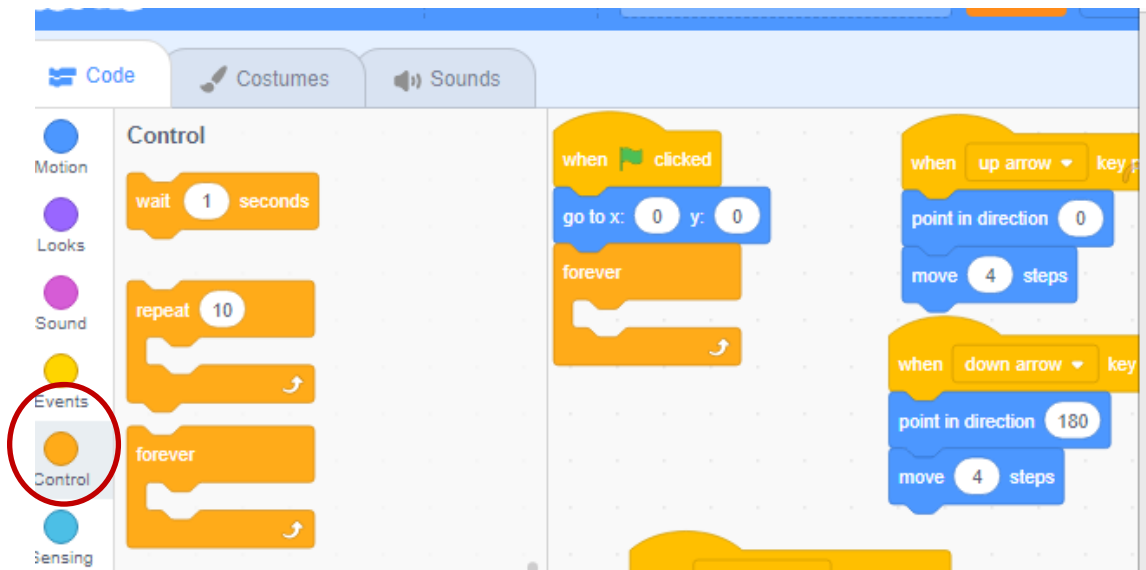


2. Click on "motion" and drag across the go to x and y. This block should connect to the when green flag clicked block.

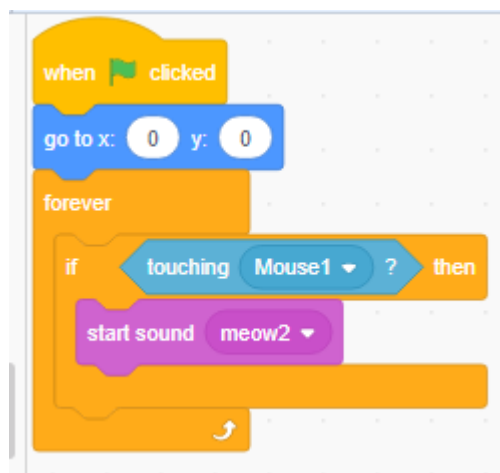


3. By changing the numbers to zero and zero, we are making our cat start in the middle of the screen each time we play the game.

- Next click control and drag across the forever block.



- Now we need to check if the cat is touching the mouse... and do something if that is true.

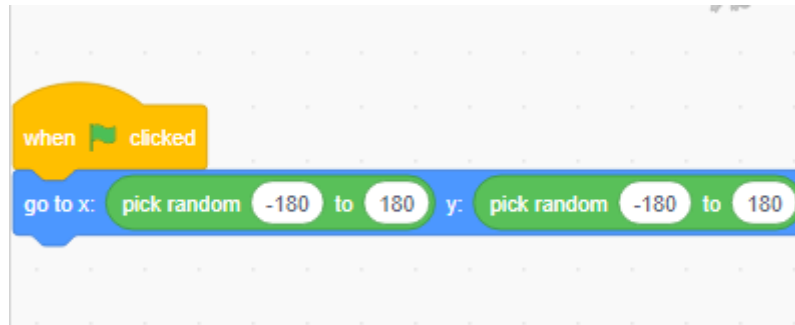


- The touching block is found under sensing. It might say "touching mousepointer". The start sound might not have meow2 in it, click on sounds to find the sound you want.
- Test your programme. Click the green flag and use your keyboard arrow keys. You should be able to guide your cat to the mouse and it should meow when it touches the mouse.

Step 4: Moving the mouse

At the moment our game is way too easy. So let's make our mouse start in a different place each time we click the green flag.

1. Click on the mouse sprite at the bottom of the screen and add the following code:



2. Test your code

Step 5: Make it better

- Can you make this a two player game? Have someone control the mouse using a,s,w,d?
- Can you add a score so that each time to catch the mouse you gain points?
- Can you make the mouse disappear each time the cat catches him?