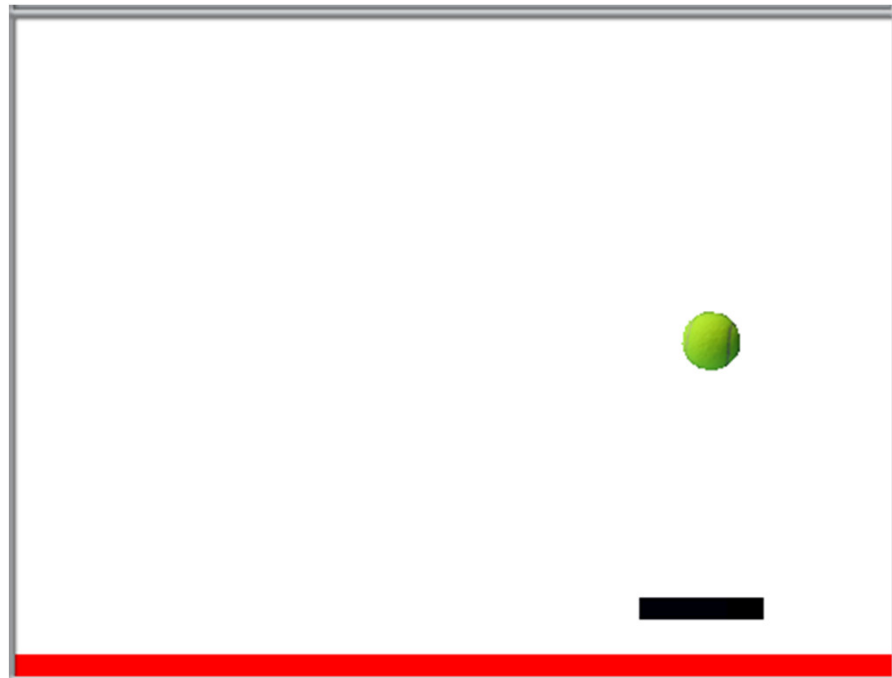


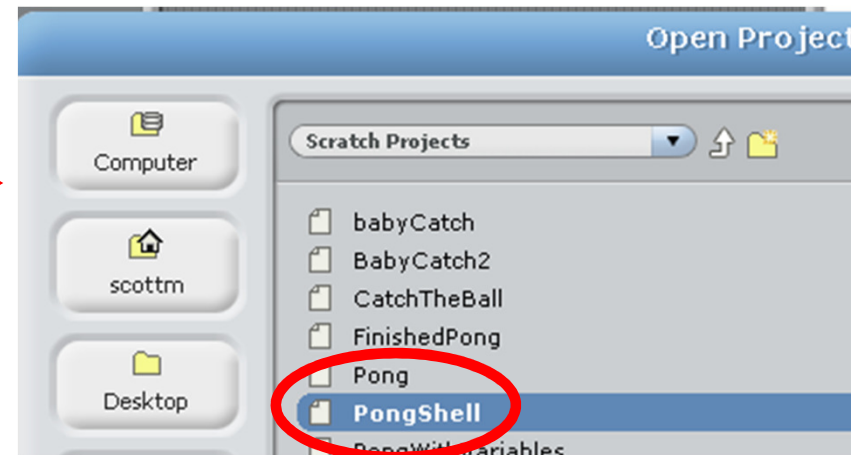
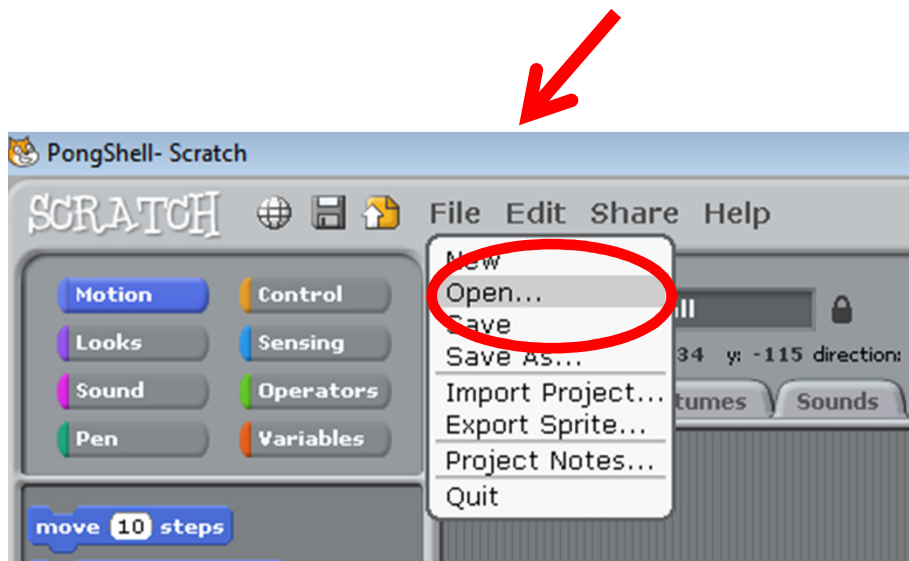
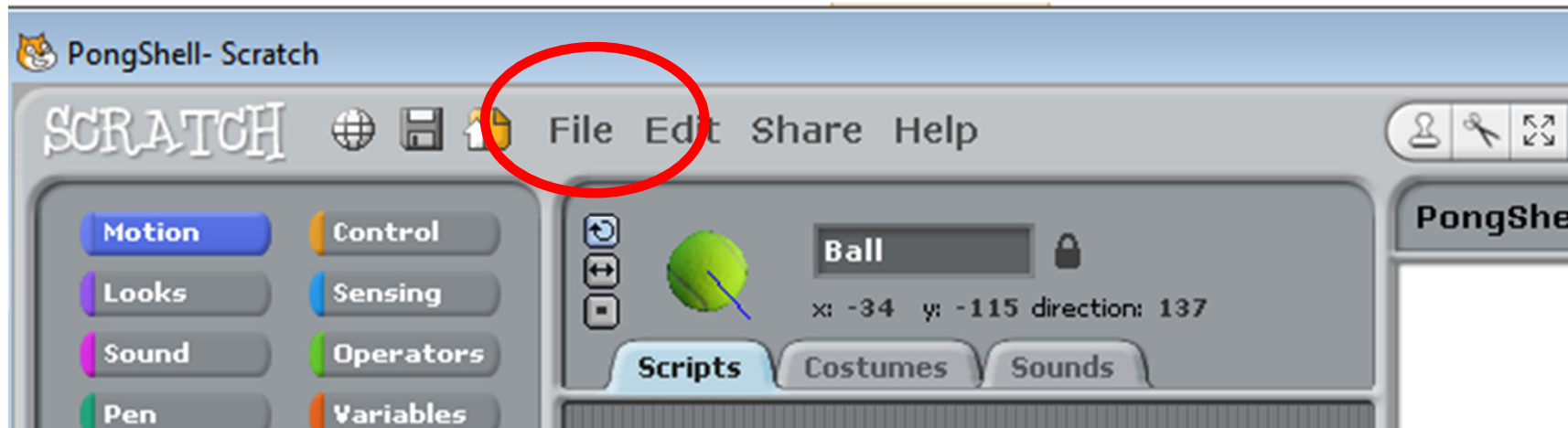
Pong with Scratch

Scratch is a Visual Programming Language

<http://scratch.mit.edu/>

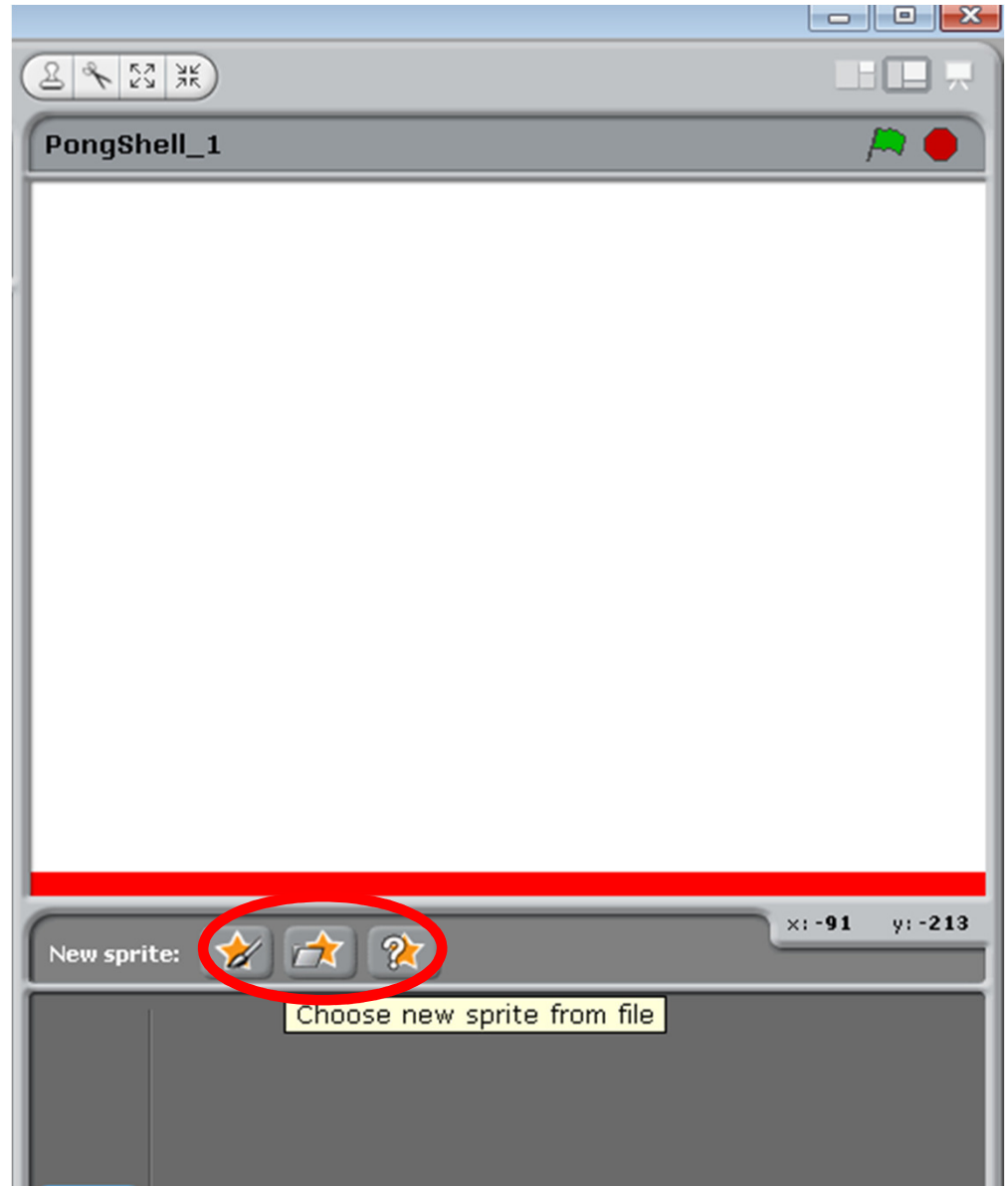


Open the PongShell

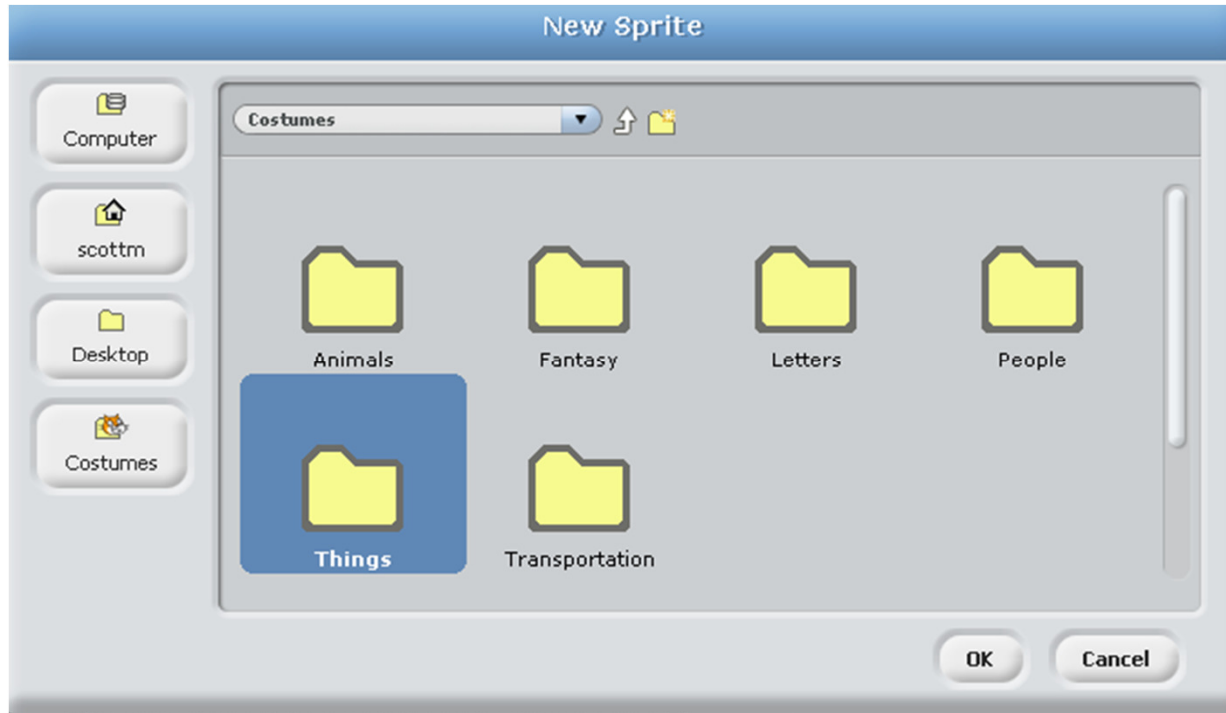


Add Sprites

- Scratch program use *Sprites*
- Images we can move!
- Add a ball



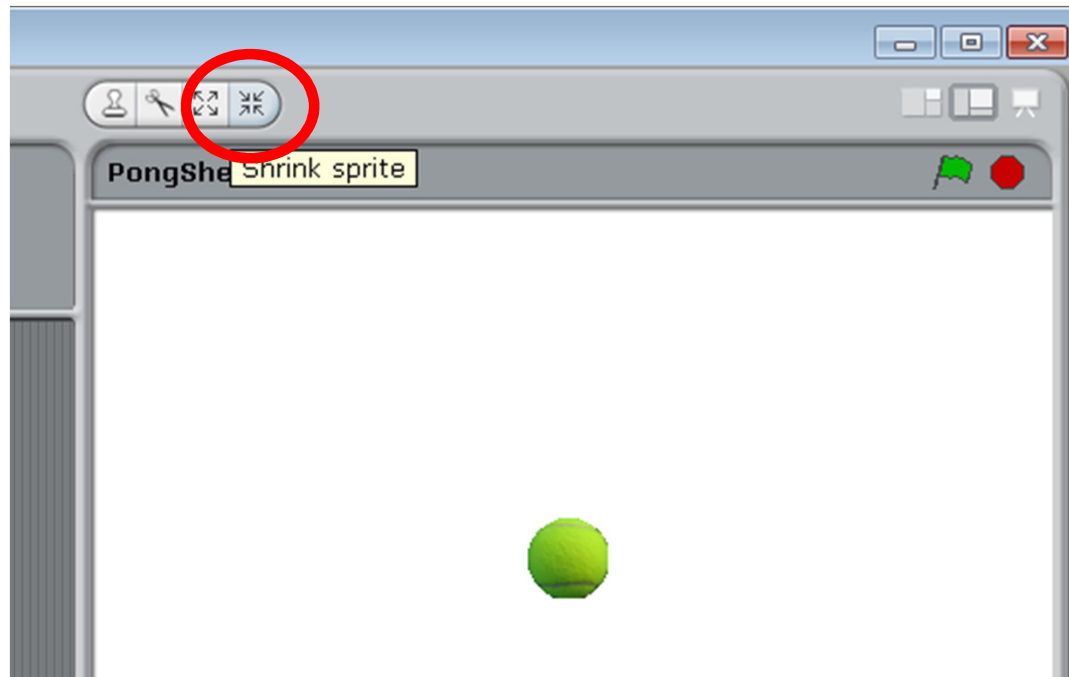
Choose Things



Select Object for Ball and click OK

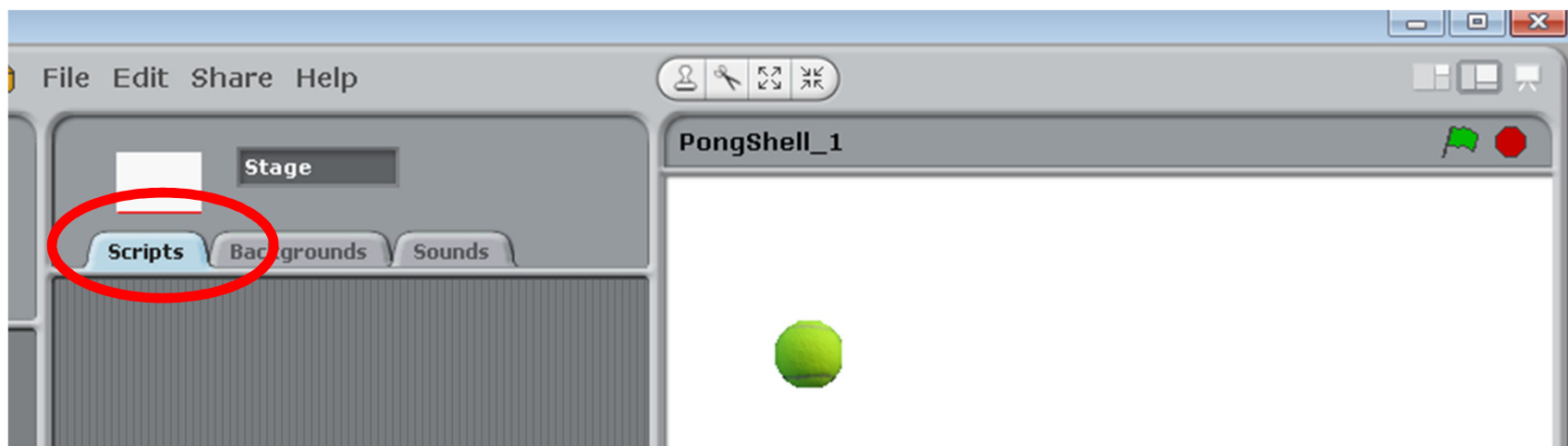
Shrink Ball

- Click Shrink Sprite Button and click on sprite many times to make it smaller



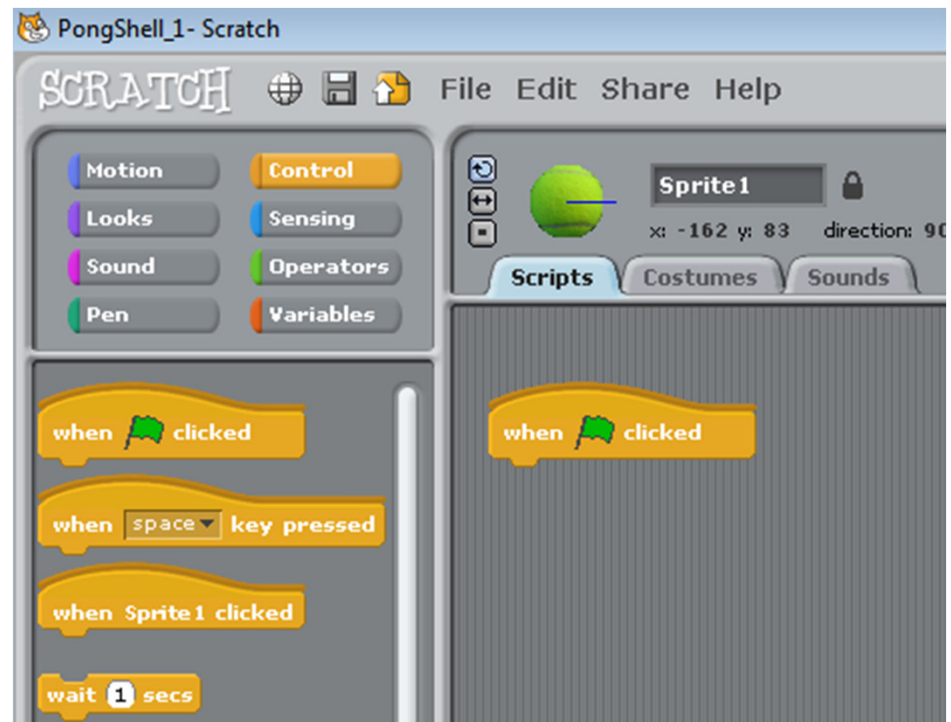
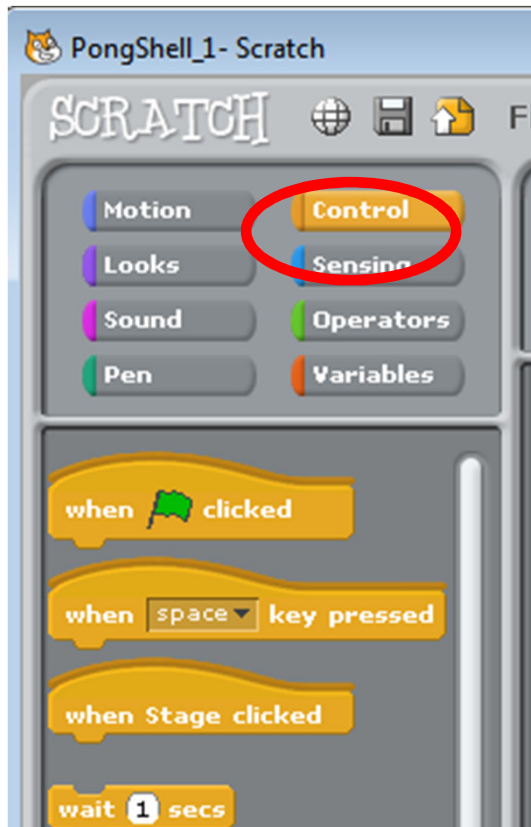
Make Ball Move

- Get Ball to move by telling it to
- Computer programs have commands
- In Scratch these all called *scripts*
- Click on ball and make sure scripts tab is selected



Add A Script

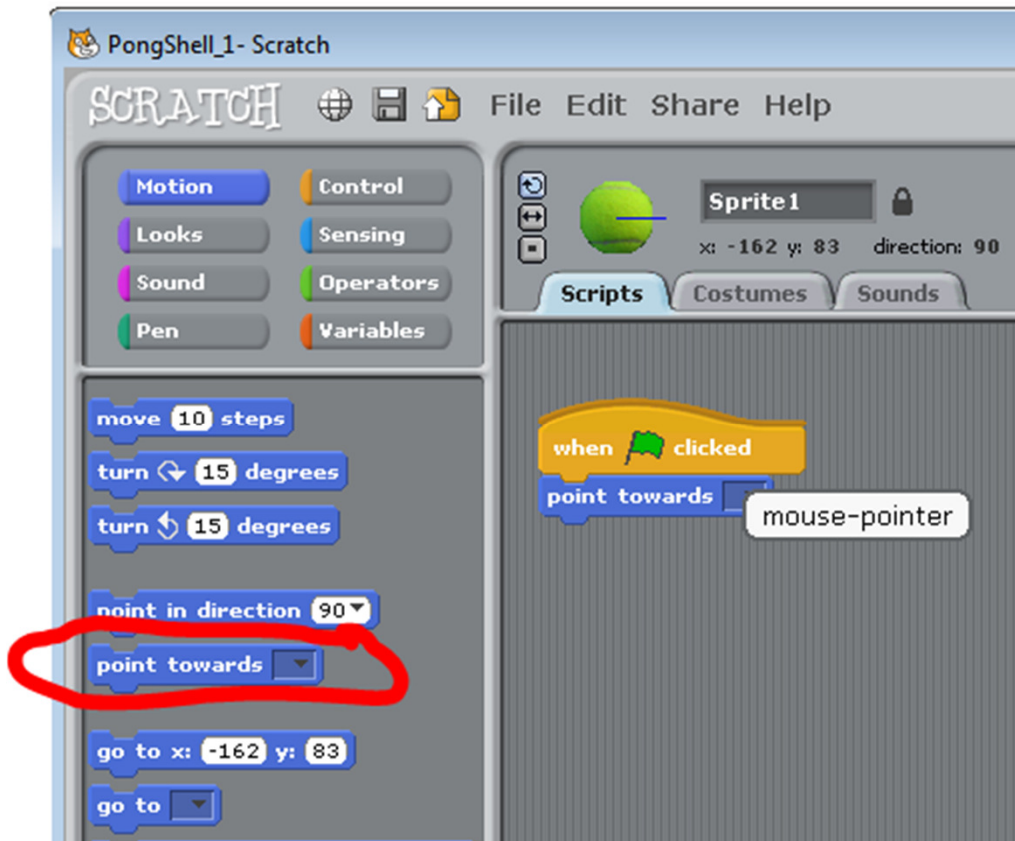
- Select the Control Script
- Drag a when green flag clicker control to script area



Add Commands to Script

Drag and connect a point towards motion action.

Pick mouse-pointer



Make Ball Move



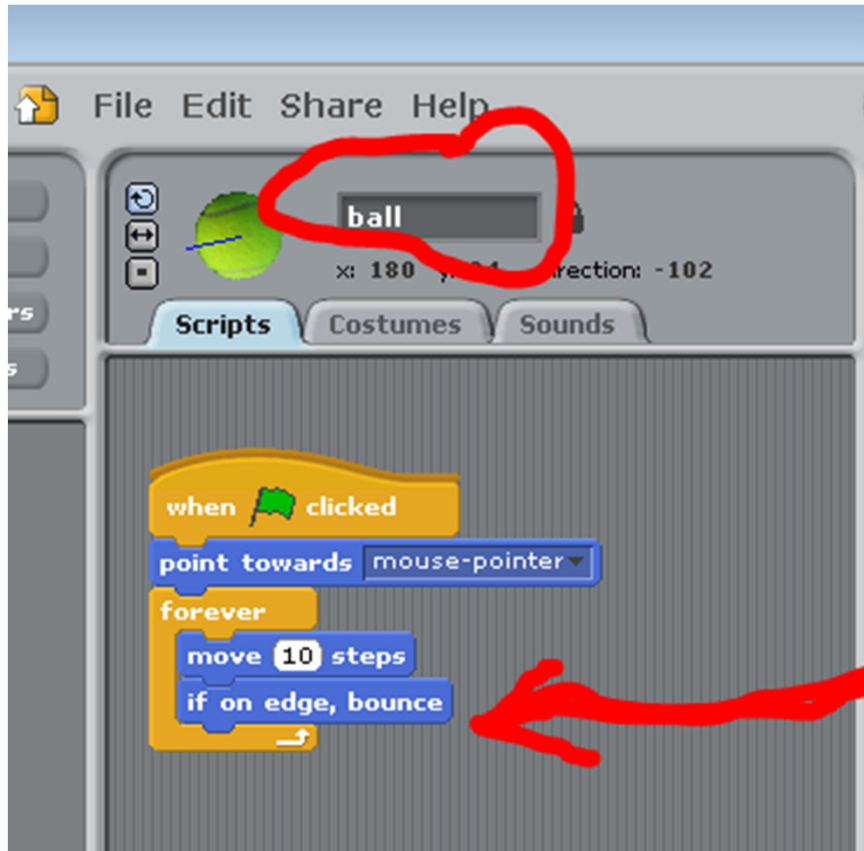
Add forever command
from Control

Add move forward
10 steps from
motion

Click green flag in upper
right corner to start!

What happens?

Make Ball Bounce



From motion add
if on edge, bounce

Stop program
with stop sign

Rename sprite ball in

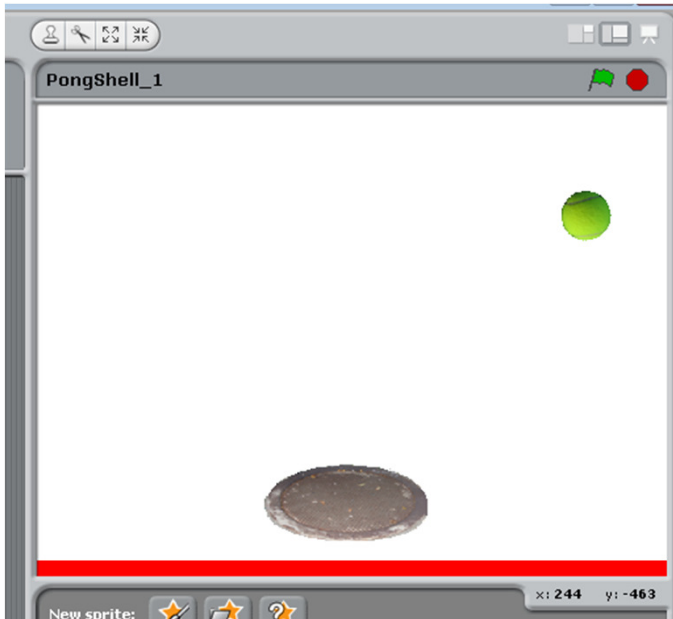
Add a Paddle

Add or draw another sprite for the paddle

I picked a manhole cover

Resize and rename sprite to paddle

Move paddle to bottom of stage



Make Paddle Move



Click Paddle

Go to Scripts

Add when Green Flag Clicked

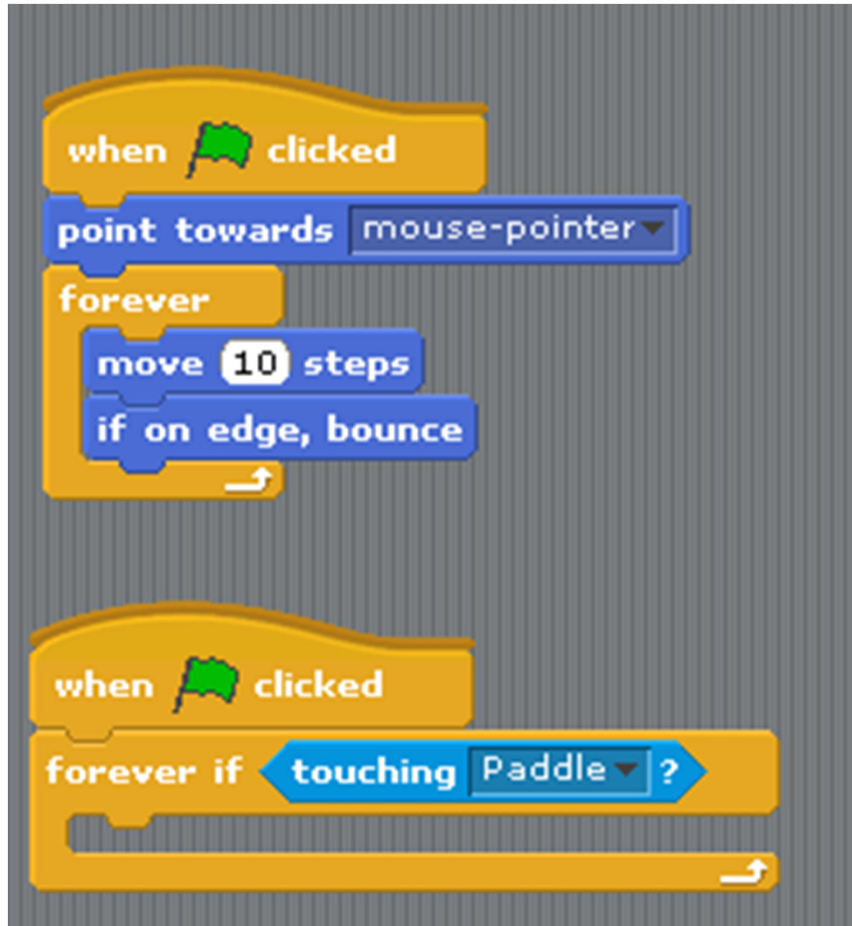
Add Forever

Add set x to (motion)

Replace 0 with mouse x from
Sensing

Click the Green Flag to Test
What happens?

Bounce Off Paddle



Click the Ball Spring and add a script

When Green Flag Clicked
forever if (control)
fill in condition with
touching (sensing)
pick touching paddle

Bounce Off Paddle

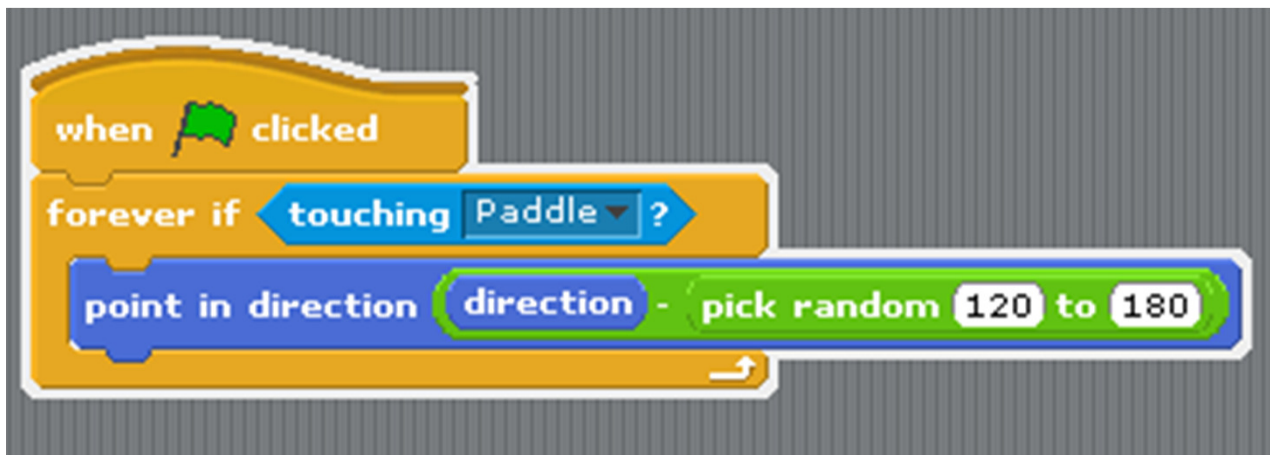
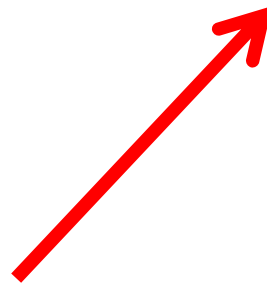
fill in forever if with
point in direction (motion)

replace 90 with
0 - 0 (operators)

replace first blank with
direction (motion) of ball

replace second blank with
pick a random number
(operators)

type in 120 and 180



Game Over

Click Ball sprite

Build another script

When Green Flag Clicked
forever if
touching color (sensing)
click color for eye dropper
and click orange

add say "Game Over" for
2 seconds (looks)

stop all (control)



More!

- Try Changing Speed
- Other things to hit
- Multiple balls
- Multiple lives