CoderDojo Athenry
"Above all, be cool"

Every week:
- ✓ Sign in at the door

If you are new:
- ✓ Fill in Registration Form
- ✓ Ask a Mentor how to get started

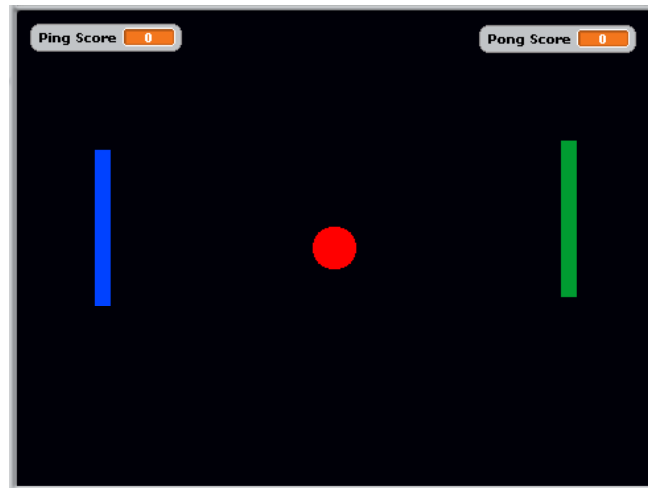**Make sure you are on the Athenry Parents/Kids Google Group**: email coderdojoathenry@gmail.com
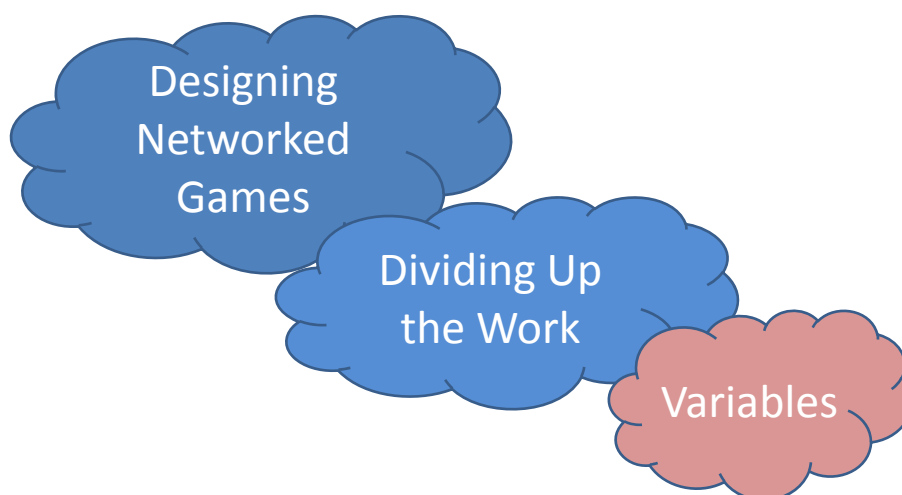
CoderDojo Athenry
Scratch Intermediate

Code and notes by Michael Madden & Oliver Thompson, 2013

Today's Ninja Challenge:
Make a Two-Player Pong Game!

Today's Big Ideas

Designing Networked Games
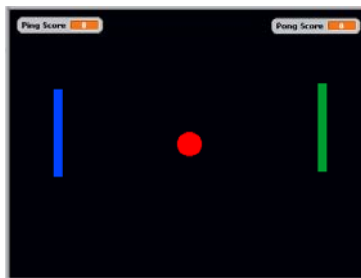
Dividing Up the Work

Variables

Design of Pong: Your
Two-Player Networked Game

Classic game of Ping Pong.

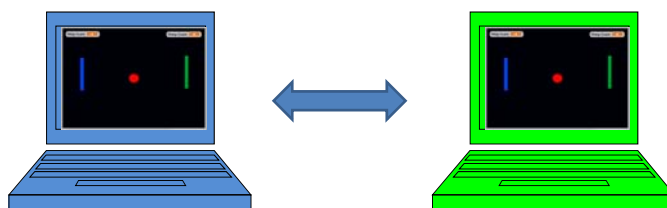One computer controls the left bat,
the other controls the right bat.

It uses three sprites and a stage.

Both Computers see the same the bats and
ball in the same place, through information
passed across the network.

Need Two Programs: Work in Pairs

One person writes a program called PING,
other writes a program called PONG

PING:
Controls left bat,
Senses movement of right bat,
Controls movement of ball

PONG:
Controls right bat,
Senses movement of left bat,
Senses movement of ball

Step 1: Create Stage and Sprites For PING & PONG Together

So that PING and PONG programs will look same as each other:
Do this together on 1 PC,
Save it as PING,
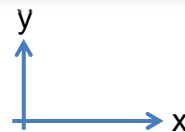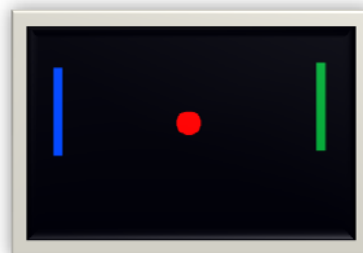Copy to other PC and save it as PONG.

Get creative in your design!

Soccer theme?
Other ideas?
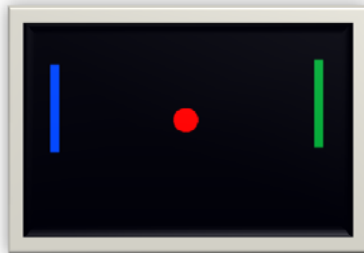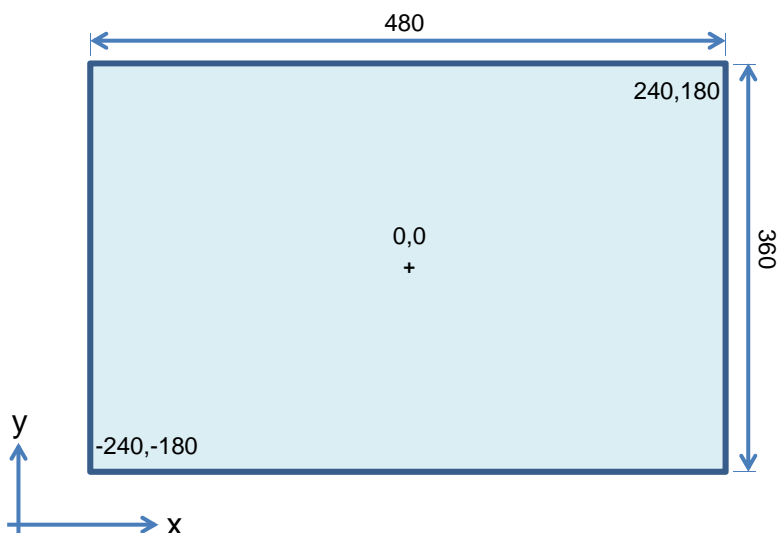
Step 2: Make The Bats Move

Decide: will you use the up/down arrows or the mouse?

In both PING and PONG, write some code to move your own bat.

We have done this in other games, except this time you **only** change the Y positions, the X positions are **fixed**.

y

x

Reminder: The Scratch Stage

Step 3: Use Variables to Sense Each Other's Bat Positions in the Mesh

In PING, make a variable **Ping Y** for left bat's Y position.

PING: code for left bat.
Keep setting value of **Ping Y** to the left bat's Y position.

PING: code for right bat.
Keep setting rigth bat's Y position to the sensed value of **Pong Y**.
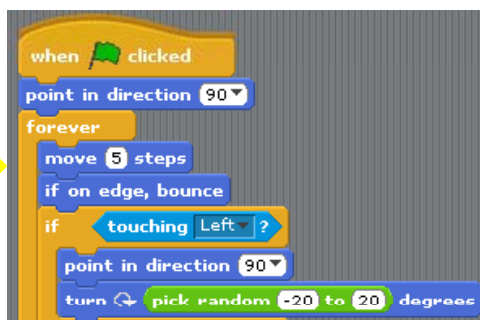

Similar code in PONG with variable **Pong Y**.

Step 4: Get the Ball Rolling …

PING will control the ball, PONG will just track its position

PING: code for ball.
This is one way to do it.
There are other ways!

This is incomplete:
need code for touching
Right bat also.

PONG: How are you going to track the ball's position?
What idea can we re-use?
Note: needs code in both PING and PONG.

Pong For Master Ninjas: Scoring

You get 1 point if the other player
fails to hit the ball.
The ball is moved back to centre.

How are you going to detect this?

How will you keep scores?

When will the game end?

Next Steps …

Design your own networked 2-player game!

Modify Pong…

Pick one of your old games and modify it…

Come up with a completely new one!

At the End …

Upload your project to the Scratch Website
user: **cdathenry**   password: _____

Access it
from home

Improve it

Show your
friends!