

**CoderDojo Athenry**



**EXPLORERS**

**Code and Notes by Martha Fahy, 2018**

# 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](mailto:coderdojoathenry@gmail.com)

**Wifi: coderdojowireless**



# Weekly Reminders



- Fire exit doors/main doorways must be kept clear **AT ALL TIMES**

- In the case of an emergency , please proceed in a calm and orderly manner to the nearest **Exit** and go to your **Assembly Point**



Do **NOT** take anything with you

If you have a child in another room, do **NOT** go to them, a Mentor will look after them



- Please leave passageways between desk and keep **CLEAR** at all times



**THINK  
SAFETY  
FIRST!**

- If power cable goes across passageways – must be **TAPED DOWN** ask mentor for tape



- **ONLY NINJAS** need a table - parents, please only use a chair







- If **FIRST AID** is required please alert a Mentor

**There are a number of trained first responders  
on site every week**

€2



+



# *Help us cut down on Single Use Cups*



***Bring your own cup (must have lid)***

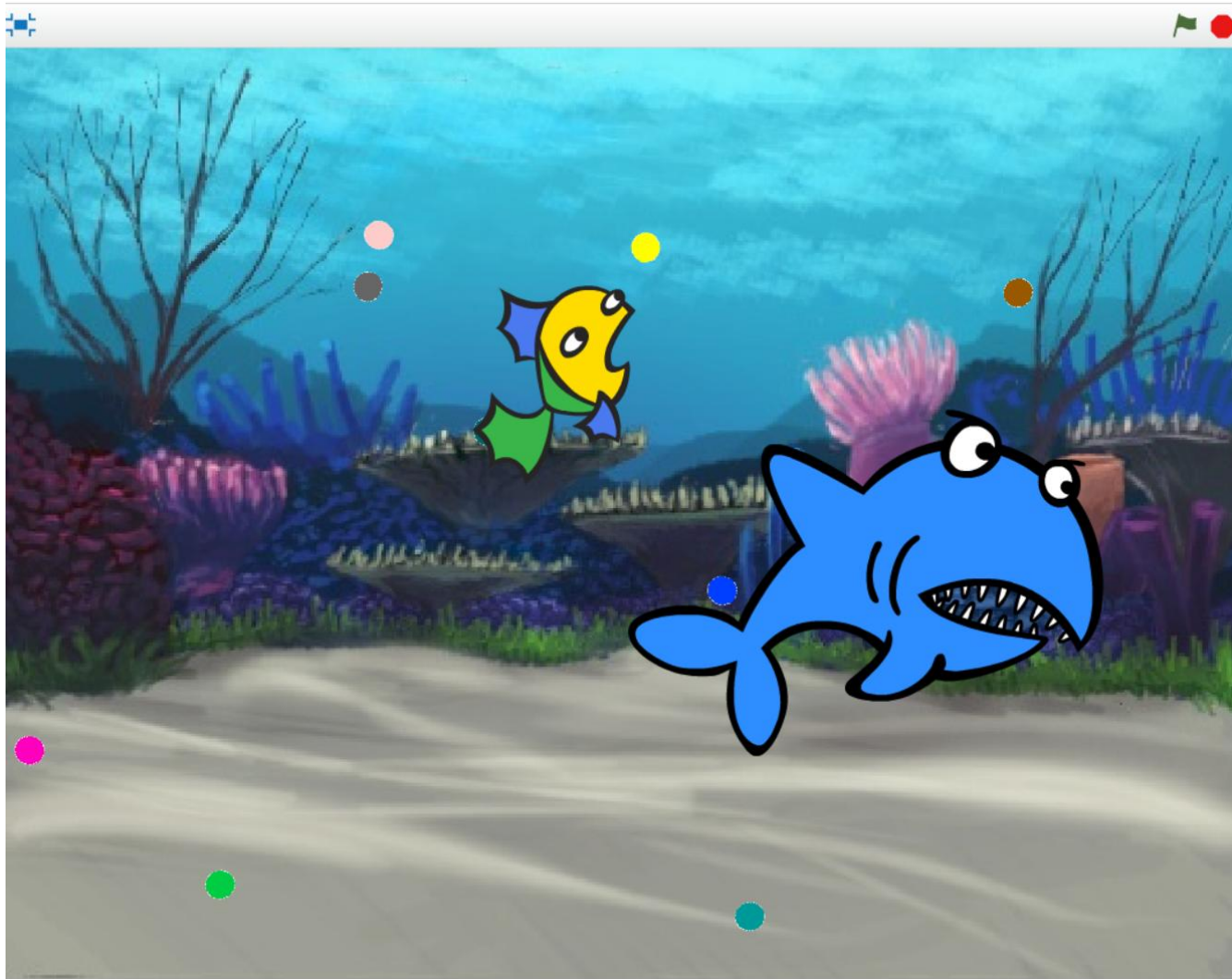
**€1.50**



**+**



# Today's Ninja Challenge: Write Your **First** Computer Game!



# How to Get Started

Make a plan



Start Simple..then add to it

# Create your *First Sprite* (Character)

What will it look like,  
..how will it behave



Write Code (instructions) to  
control it

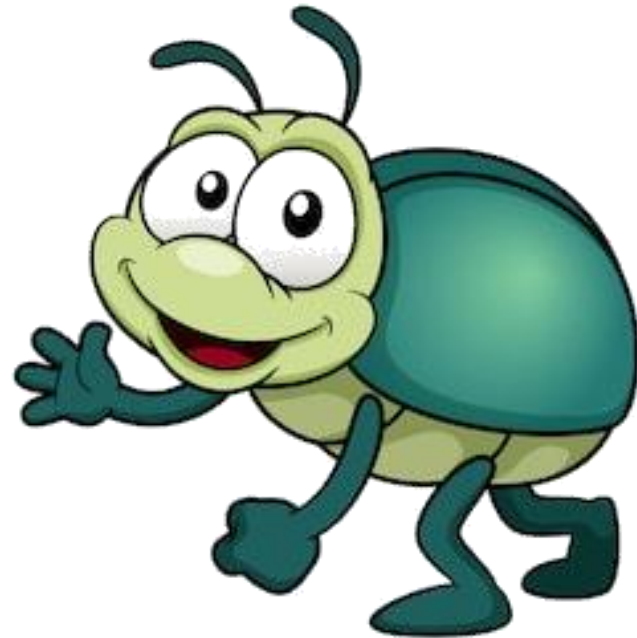


# Test it

Any bugs (mistakes/errors)

Fix them

And test again!





# Add to it

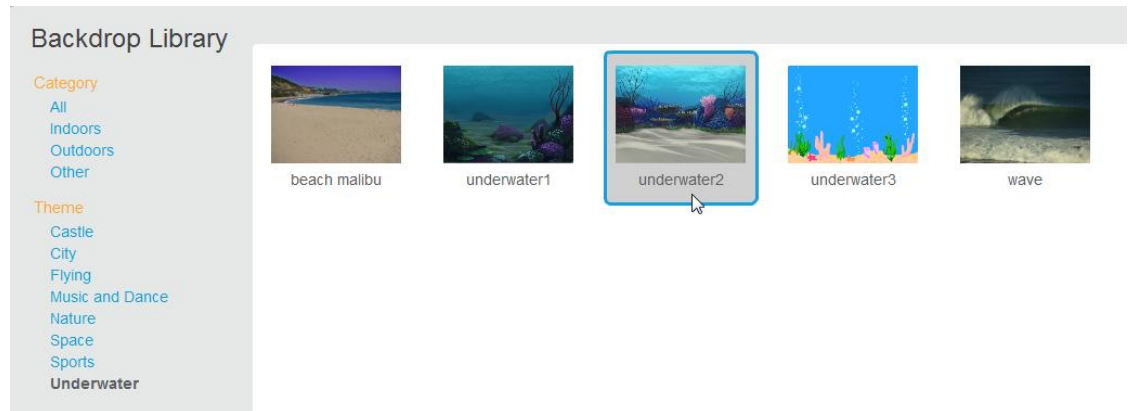
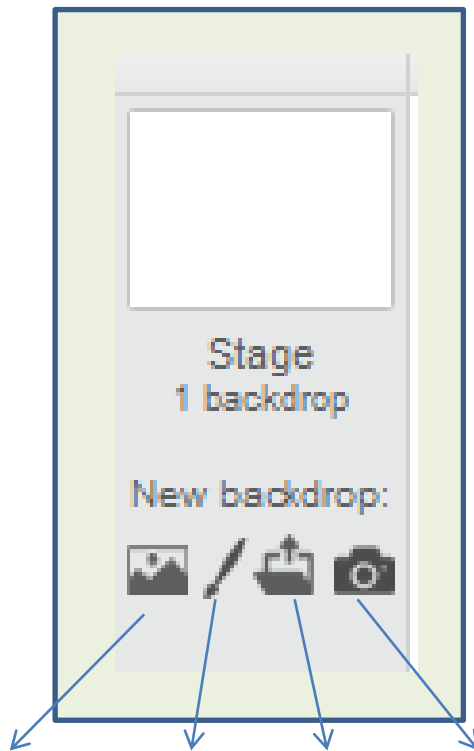
More characters

More behaviours

And test again!

**There's More than One Way to  
Do it**

# Change the Background



# Create a Sprite



**New Sprite:**  
Select from  
existing designs

**Tip:**  
Default size is big  
relative to stage:  
this shrinks it



**Sprite Library**

Category

- All
- Animals
- Fantasy
- Letters
- People
- Things
- Transportation

Theme

- Castle
- City
- Flying
- Holiday
- Music and Dance
- Space
- Sports
- Underwater
- Walking

Fish3

Fox





Lion

Lionness

Parrot


Penguin1

**Sprites**

New sprite:    

Harold

x: -124 y: -123 direction: 90°

rotation style: 

can drag in player:

show:

**Name him:**

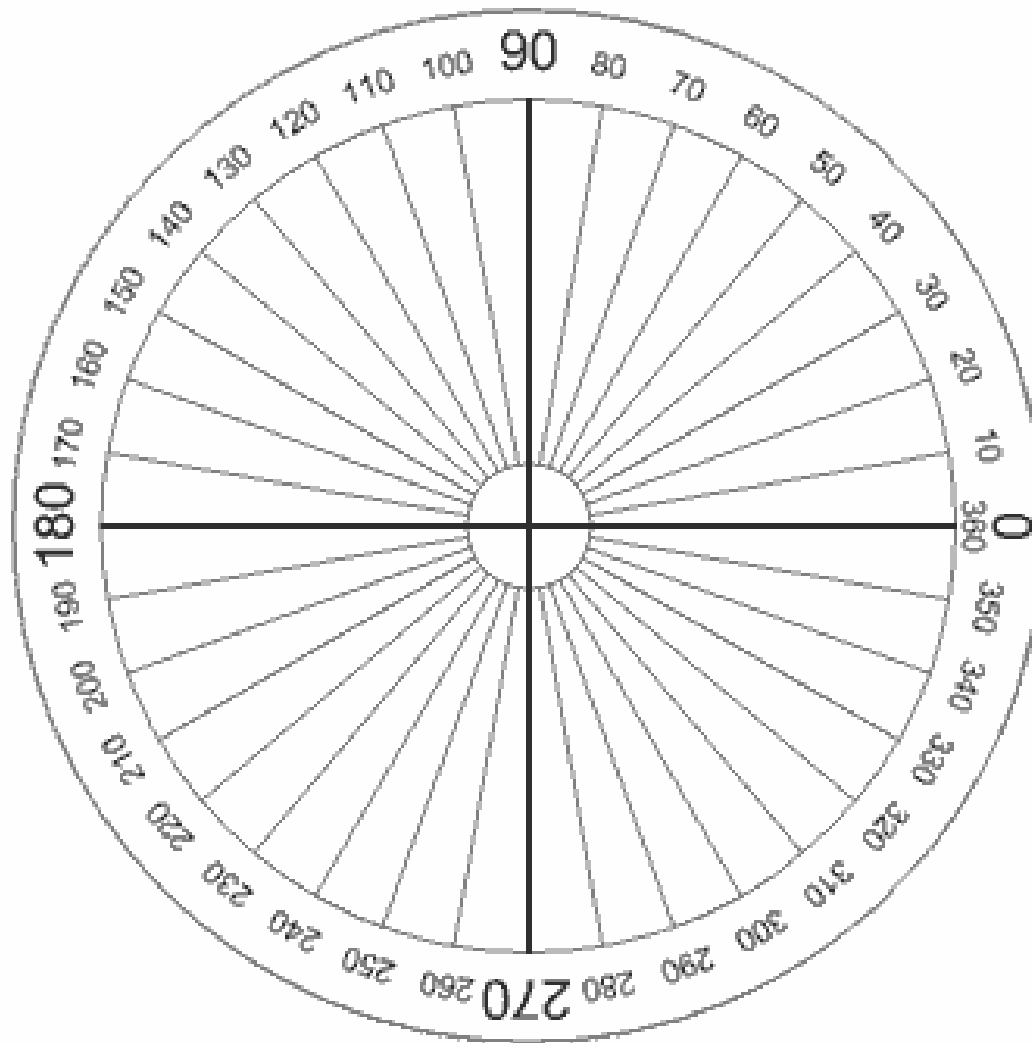
# Make it Move Under Your Control



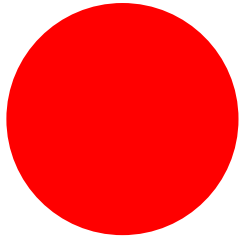
The image shows a Scratch script for a fish character. The script is set on a grey grid background. In the top right corner, there is a small fish icon and its coordinates: x: 230, y: 179. The script consists of the following blocks:

- when green flag clicked** (orange block)
- forever** loop (yellow block) containing:
  - point towards mouse-pointer** (blue block)
  - move 7 steps** (blue block)

# Degrees - Full Circle



# Create Another Sprite that Moves at Random



```
when clicked
  forever
    turn pick random 1 to 360 degrees
    move pick random 10 to 100 steps
    if on edge, bounce
    wait 0.2 secs
```

# What happens when your **Fish** eats the **Fish Food**





# What happens when your Fish eats the Fish Food

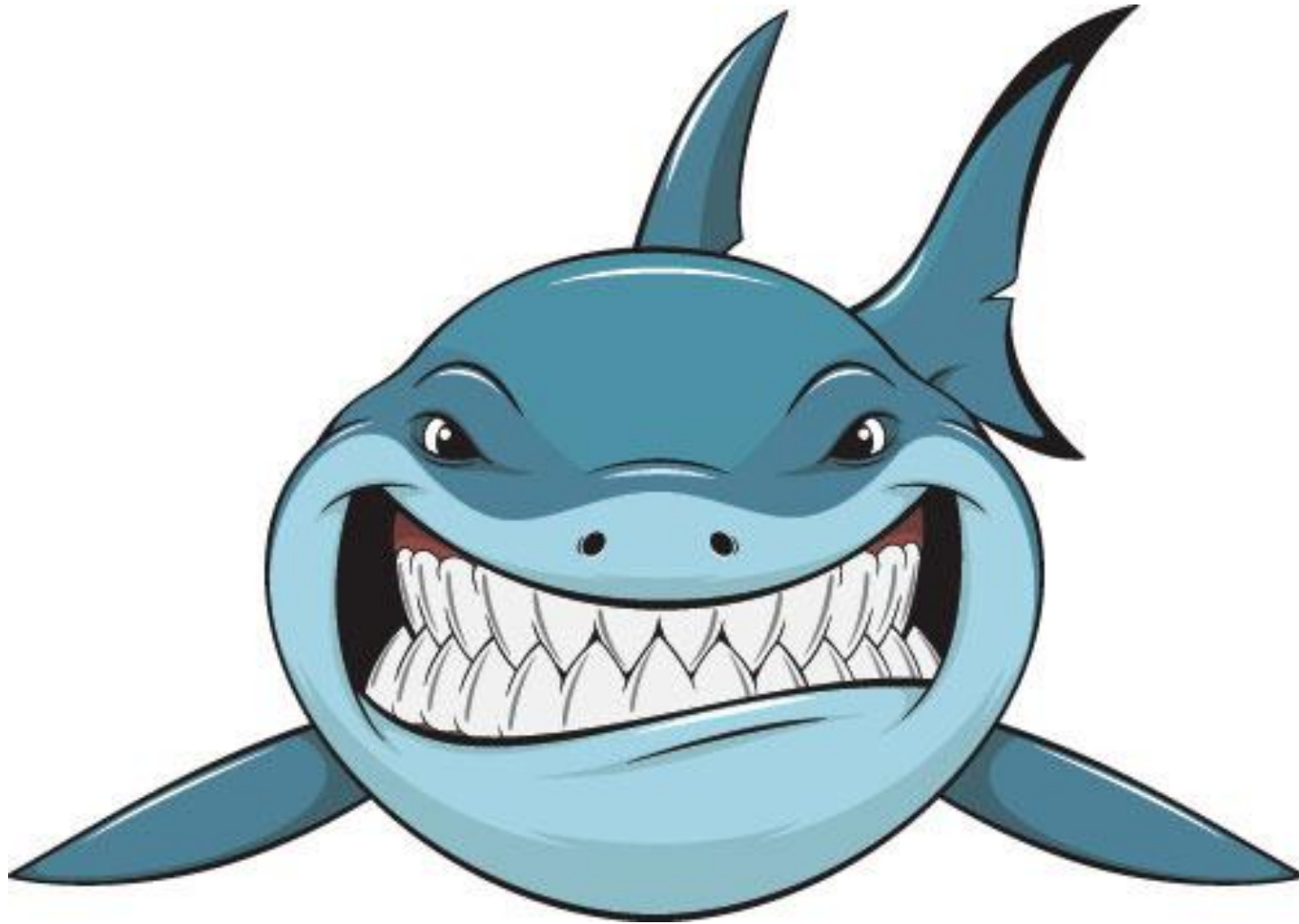
Important



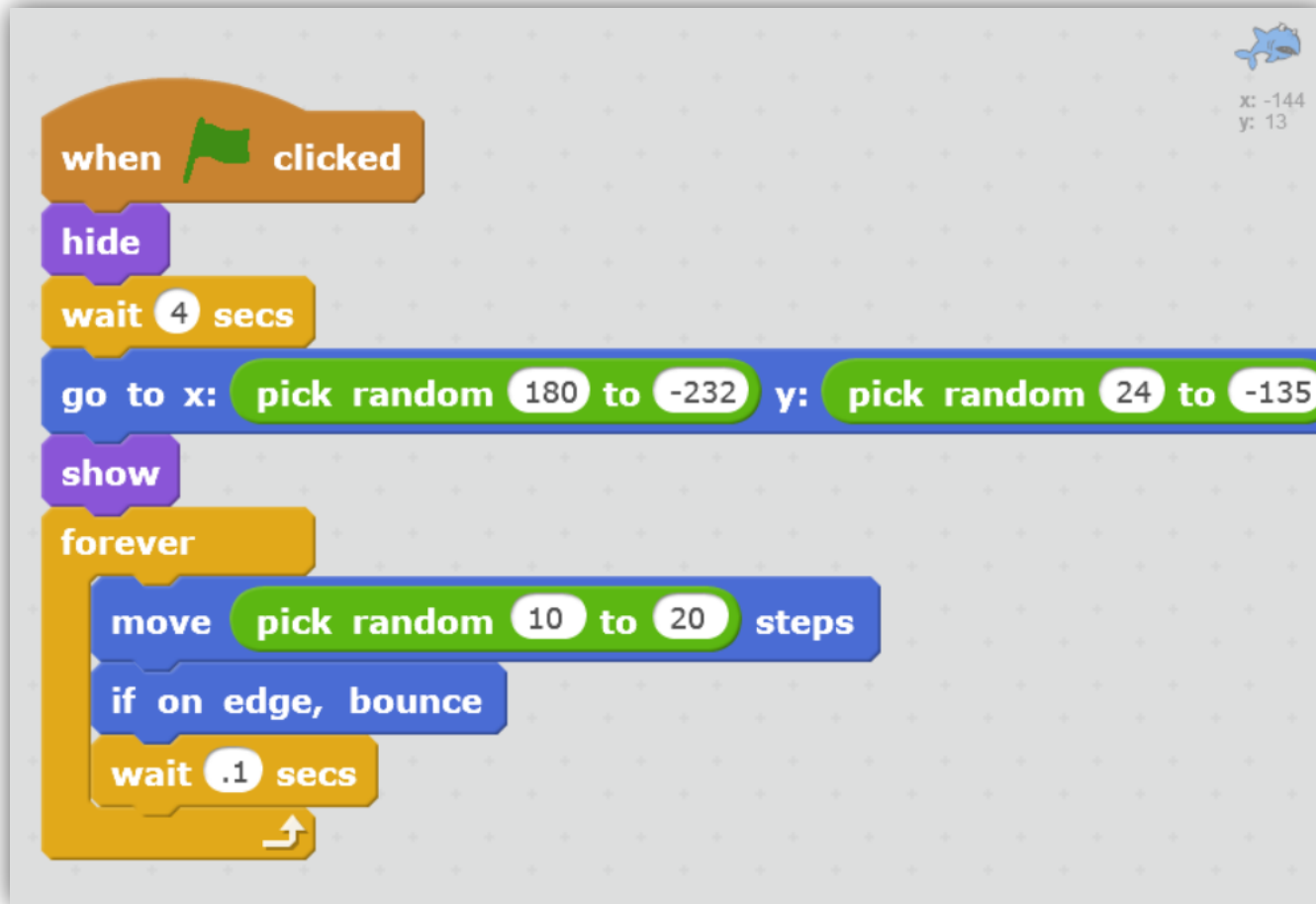
```
when clicked
  show
  forever
    turn pick random 1 to 360 degrees
    move pick random 10 to 20 steps
    if on edge, bounce
    wait .07 secs
    if touching Fish2 ? then
      hide
      wait 3 secs
      show
```

The code is a Scratch script for a fish. It starts with a 'when clicked' event block, followed by a 'show' block. A 'forever' loop contains several blocks: 'turn pick random 1 to 360 degrees', 'move pick random 10 to 20 steps', 'if on edge, bounce', 'wait .07 secs', and 'if touching Fish2 ? then'. The 'if touching Fish2 ? then' block is circled in red and contains 'hide', 'wait 3 secs', and 'show' blocks. A red arrow points from the word 'Important' to the 'show' block in the 'if touching Fish2 ? then' block. In the top right corner, there is a pink circle with coordinates 'x: -206' and 'y: 40'.

**Who might eat the Fish?**



# Who might eat the Fish?



The image shows a Scratch script for a fish character. The script is set to trigger when the green flag is clicked. It begins by hiding the fish, waiting for 4 seconds, and then moving to a random position on the stage. The x-coordinate is chosen randomly between 180 and -232, and the y-coordinate is chosen randomly between 24 and -135. After showing the fish, it enters a 'forever' loop where it moves a random number of steps between 10 and 20, bounces off the edges if necessary, and waits for 0.1 seconds before repeating the process.

```
when green flag clicked
hide
wait 4 secs
go to x: pick random 180 to -232 y: pick random 24 to -135
show
forever
  move pick random 10 to 20 steps
  if on edge, bounce
  wait .1 secs
```

In the top right corner, there is a small blue fish icon with the coordinates `x: -144` and `y: 13`.

**What happens the Fish?**

# At the End ...

Upload your project to the Scratch Website

Access it  
from home



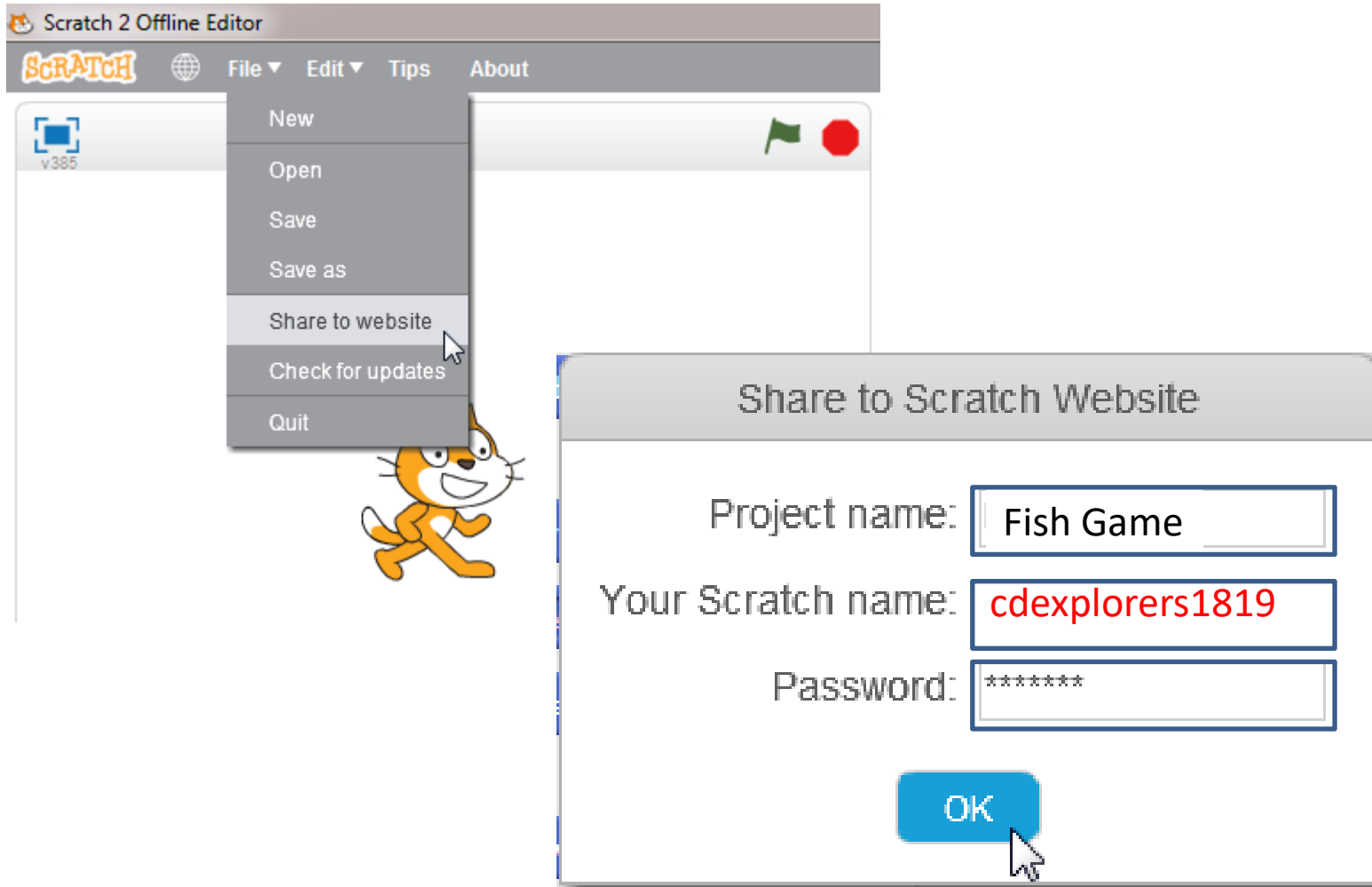
Improve it



Show your  
friends!



# Uploading to Scratch Website



# Keep In Touch!

[coderdojoathenry@gmail.com](mailto:coderdojoathenry@gmail.com)

[@coderdojoathenr](#)

[zen.coderdojo.com/dojo/53](http://zen.coderdojo.com/dojo/53)

