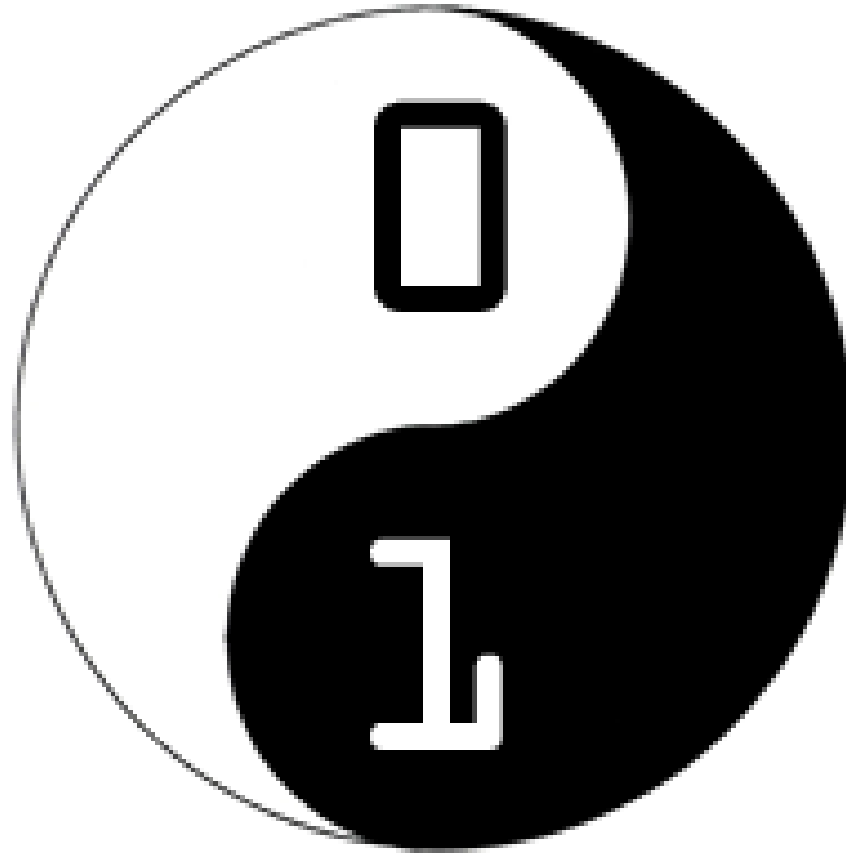


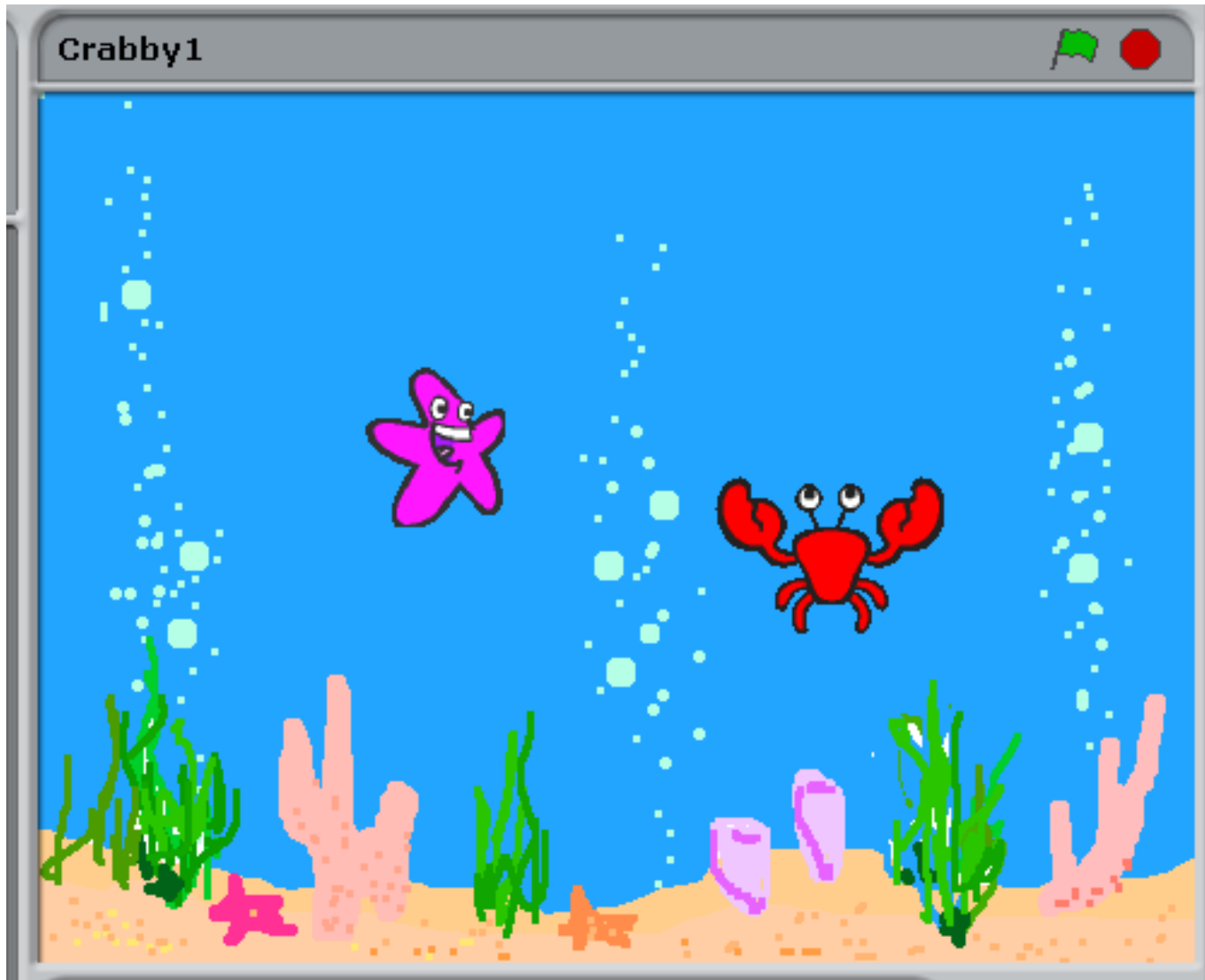
CoderDojo

Scratch Beginners



Code and notes by Michael Madden, 2012

Our First Game: Patrick v. Krabby



How to Get Started

Plan the Design

- Think first!
- Start simple: add more later

Create First Character

- Design it: appearance & behaviours
- Write script (Code) to control its behaviours

Test It

- Any bugs? (Not working as expected)
- Debug and Improve

Extend It


- More Characters, More Behaviours, More Testing!

How to Make Progress


Our Creative Coding Rule:
There's More Than One Way to Do It!



Try things out and iterate
Save copies: go back if it doesn't work




Talk to others, share ideas, learn from
their ideas, improve on their ideas!



Examine other people's code on the
Scratch website & upload your code

Steps To Make Our Game

Create Patrick: what will he look like?
Code to control him with arrow keys



Change the Stage:
Choose a background



Create Krabby
Code to make him move randomly



Make things happen when
Krabby touches Patrick



Add variable for **Lives**
End game when Patrick has 0 lives

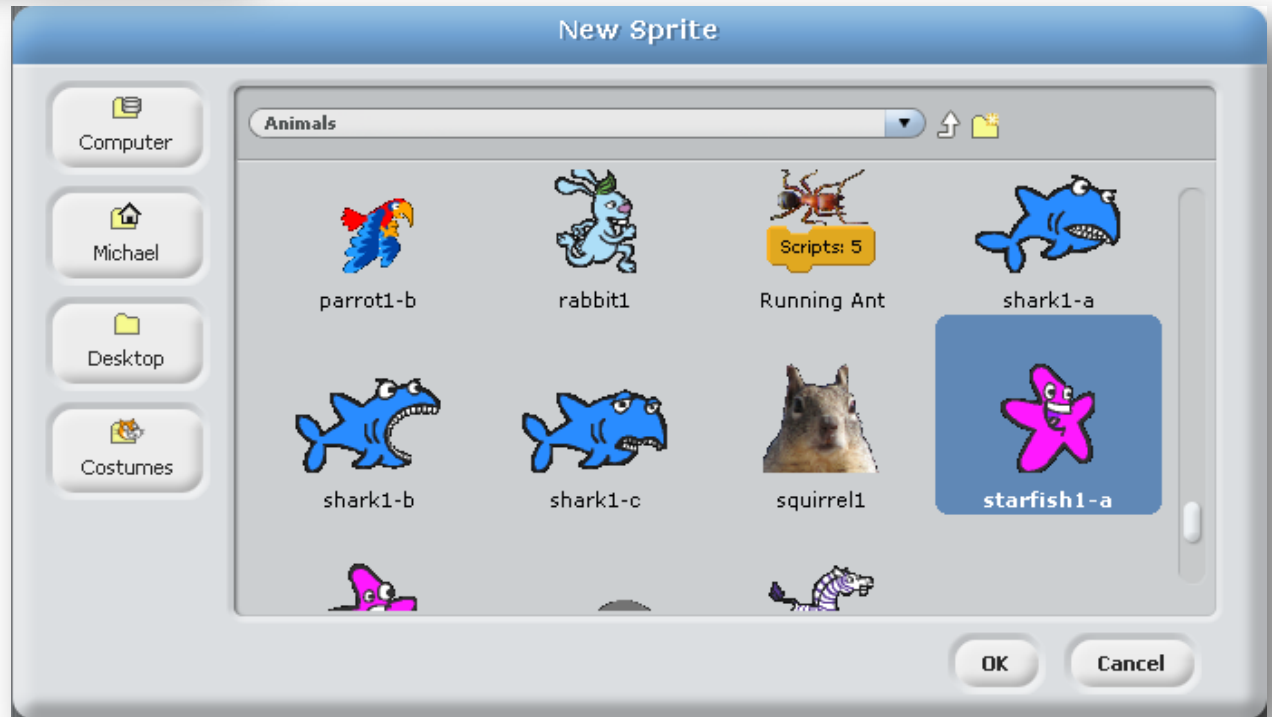
Interactive demo of these steps in Scratch ...

Final version: <http://scratch.mit.edu/projects/cdathenry/2485560>

Create a Sprite



New Sprite:
Select from
existing designs



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



Name him:



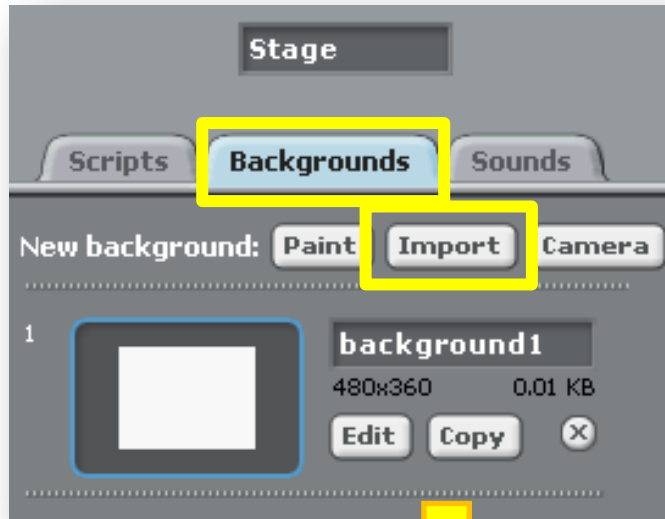
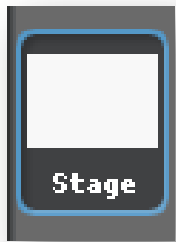
Make it Move Under Your Control



Now figure out how to make it respond to the other arrow keys ...



Change the Background



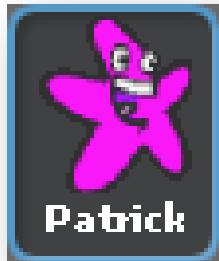
Choose one to
suit your own
game's theme

Create Another Sprite that Moves at Random

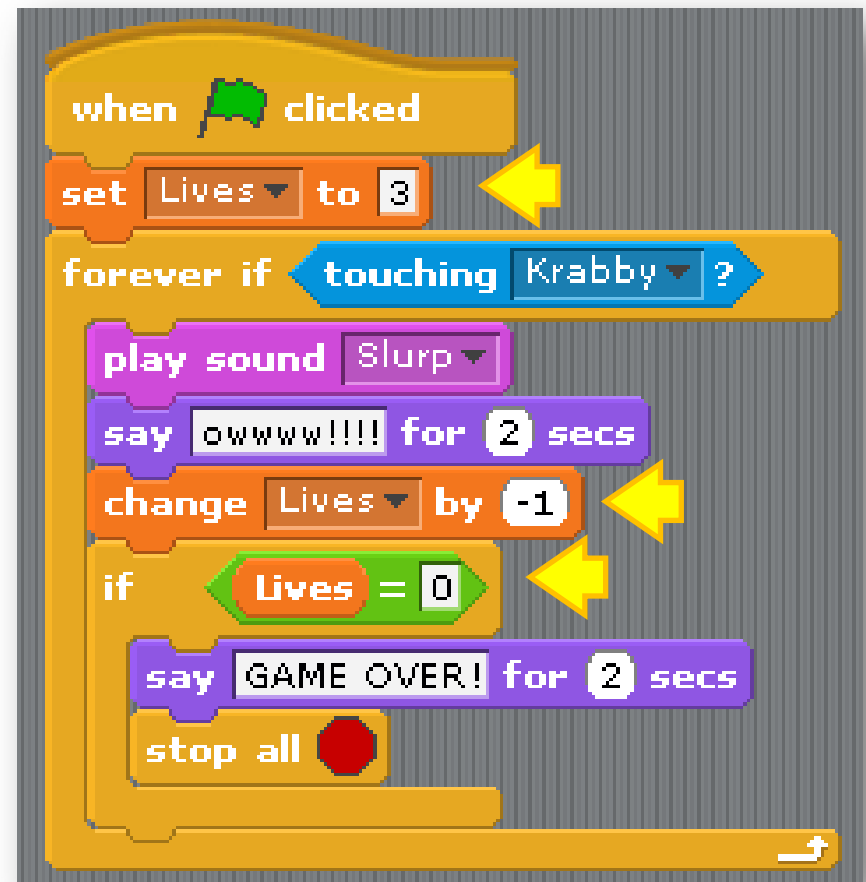


```
when clicked
  forever
    turn pick random 0 to 360 degrees
    move pick random 10 to 50 steps
    if on edge, bounce
    wait 0.2 secs
```

Make Things Happen When They Touch



Keep Track of Lives



More Things to Try ...

1. Make a second bad guy that you have to keep away from, and that moves in a different way.
Hint: Duplicate first bad guy, then import a different costume for it, and change its script so that it moves in a different way. For example, you could make him point in a random direction (in range 1-360) when the flag is clicked, and after that just keep moving some steps, and bounce if on the edge. You might have to update the code for lives, too.
2. Add some treasure that will give you extra lives.
Hint: Add a sprite that looks like treasure. Don't add code to make it move, but do add code so that if the good guy touches it, it changes LIFE by 1 and plays a happy noise. After you have tested it and made sure it works, duplicate it.