Step by Step Scratch Tutorial –

How to create a Space Shmup Game

Create a space shooting style survival videogame,
Bonus: add custom sprites and music.
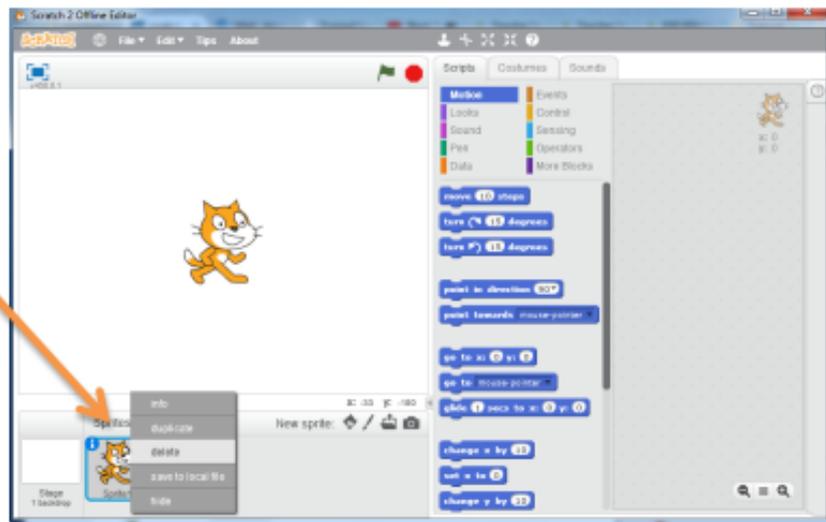
Programming difficulty: Medium

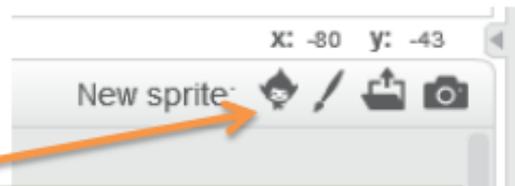## First: Create your Spaceship Sprite, or import from file.

1

Open Scratch and Delete the cat (right click, delete)

2

X: -80   y: -43

New sprite:

Click the new button (or click import from file if you made a custom spaceship)

3

Dinosaur3   Dog1   Dog2

Fish1   Fish2   Fish3

Ladybug2   Lion   Lionness

OK   Cancel

Choose a sprite to be your player Spaceship.

Then click OK.

Next: Program your Spaceship so it can move

4

Drag and drop this code from the scripts tab into your spaceship sprite workspace (the open grey area)
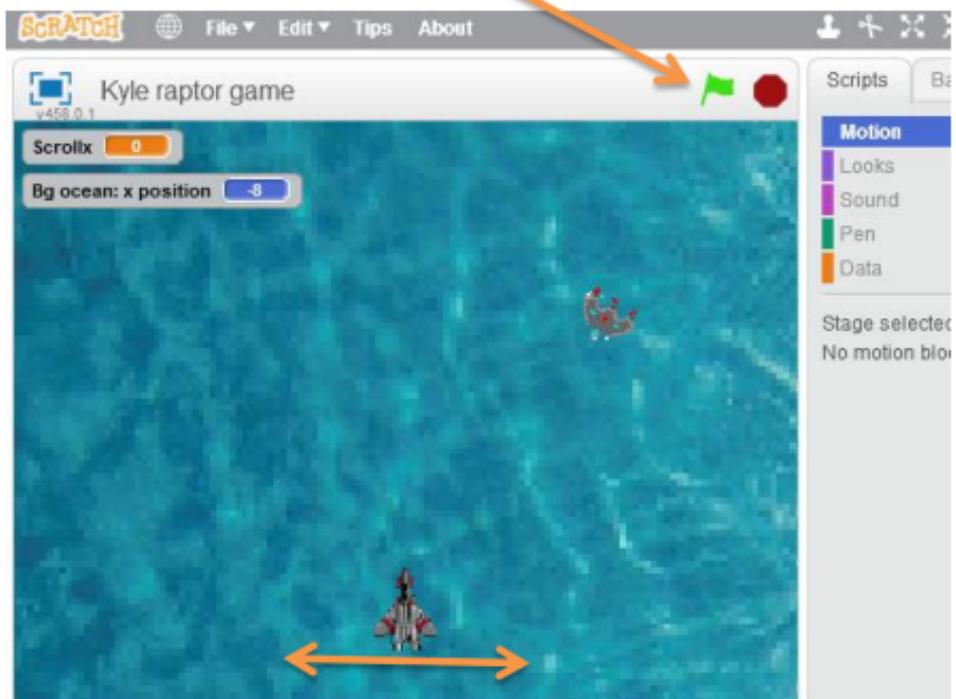
```
when [green flag] clicked
show
go to x: 0 y: -120
forever
    if < key [right arrow] pressed? > then
        change x by 7
    if < key [left arrow] pressed? > then
        change x by -7
    if < key [up arrow] pressed? > then
        change y by 7
    if < key [down arrow] pressed? > then
        change y by -7
```
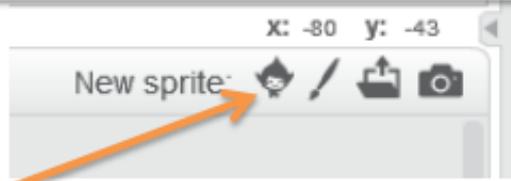
x: -154
y: -120

5

Click the green arrow to play-test your code, if the spaceship doesn't move left and right, double check your code.

Next: Create an enemy and make it move

6

Click the new sprite button
(or import a custom sprite)

x: -80 y: -43

New sprite:

7

Choose a sprite to be an enemy
spaceship then click OK

OK Cancel

8

Click on your enemy sprite
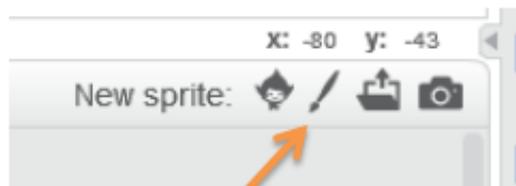so we can add code to it

9

Add this code to your enemy sprite

```
when [flag] clicked
forever
  hide
  go to x: pick random -230 to 230 y: 170
  wait 0.5 seconds
  show
  glide 1 secs to 1-2
```

```
when [flag] clicked
forever
  if touching Sprite1 ? then
    hide
```

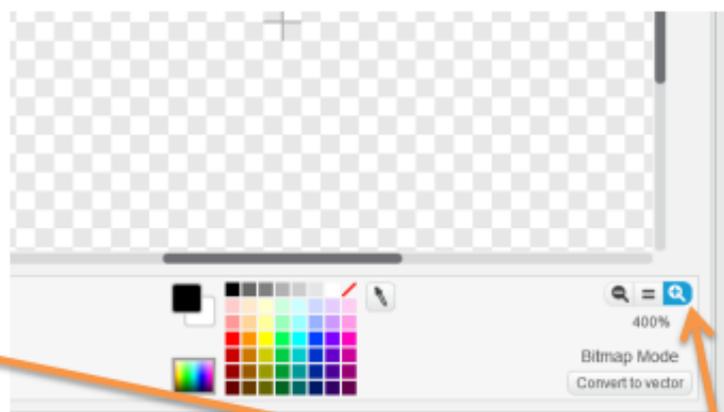This will be the laser beam

Next: Create a laser beam sprite

10

Click the Draw new sprite button

x: -80   y: -43

New sprite:

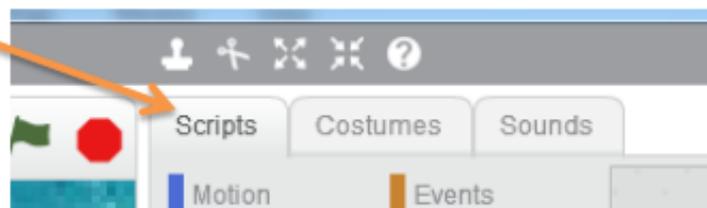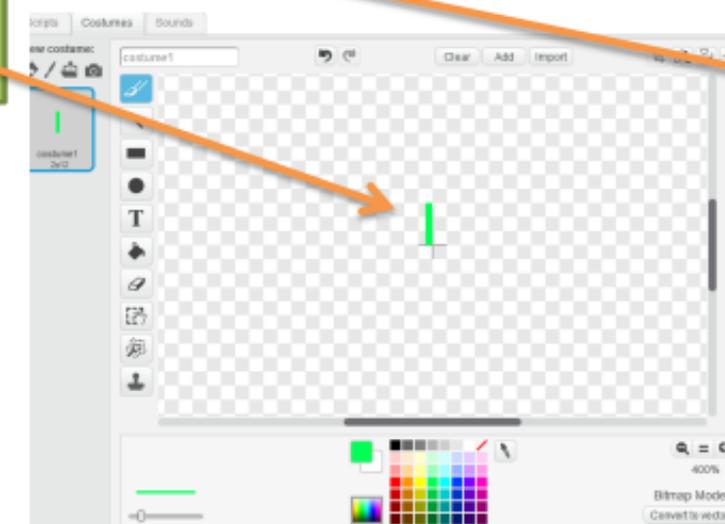**11**

Click magnifier + and zoom to 400%, then draw a laser beam. (a 2 by 12 brightly colored pixel line works well)

400%

Bitmap Mode

Convert to vector

Scripts   Costumes   Sounds

new costume: costume1

Clear   Add   Import

costume1
2x12

400%

Bitmap Mode

Convert to vector

12

Click on the scripts tab for the laser beam

Scripts   Costumes   Sounds

Motion   Events

Next: Make the laser shoot

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Add this code to your laser beam sprite.
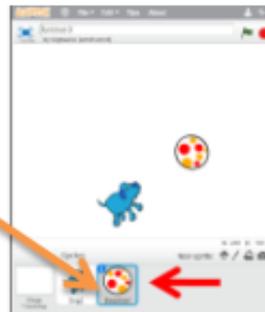
```
when I start as a clone
play sound drum bass2
show
repeat until < touching edge ? > or < >
    change y by 15
delete this clone
```

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Click on your enemy sprite so we can add code to it again

```
when [flag] clicked
hide
forever
    if < key space pressed? > then
        go to Spaceship
        create clone of myself
        wait 0.1 secs
```
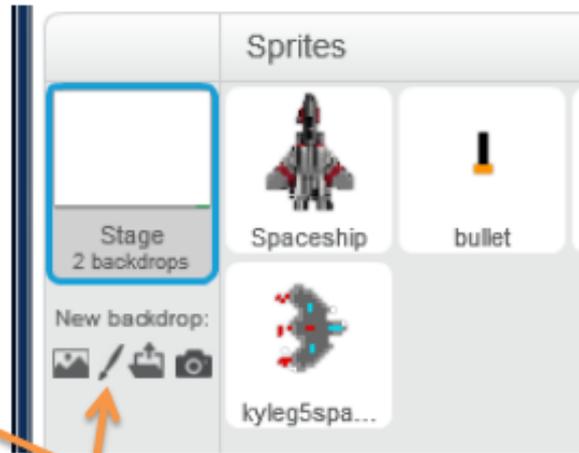
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Next: Make a game over screen

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Click on the "paint new backdrop" button.

Sprites

Stage
2 backdrops

Spaceship

bullet

kyleg5spa...

New backdrop:

17

Paint a Game over screen

backdrop2

Clear   Add   Import

Game Over !

T

Bitmap Mode
Convert to vector
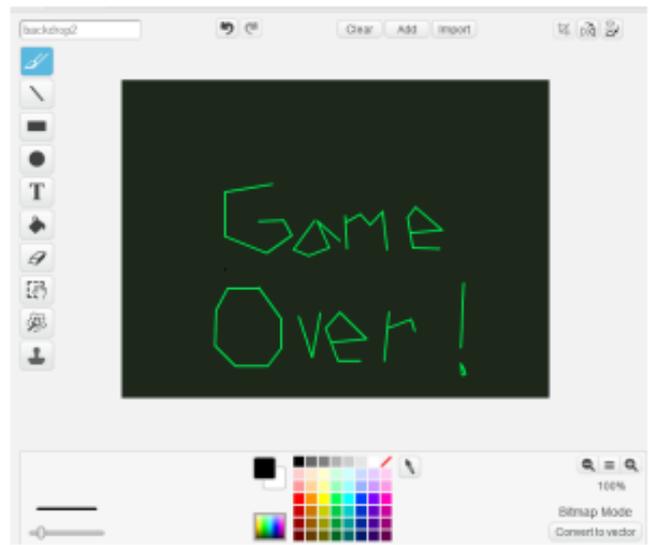
18

Click on scripts for your backdrop and add this code:

Scripts	Backdrops	Sounds

Motion	Events
Looks	Control
Sound	Sensing
Pen	Operators
Data	More Blocks

Stage selected:
No motion blocks

Pro Tip: You will have to click the dropdown menu and click "create new message" then write Game Over

```
when I receive Game Over
switch backdrop to backdrop2
```
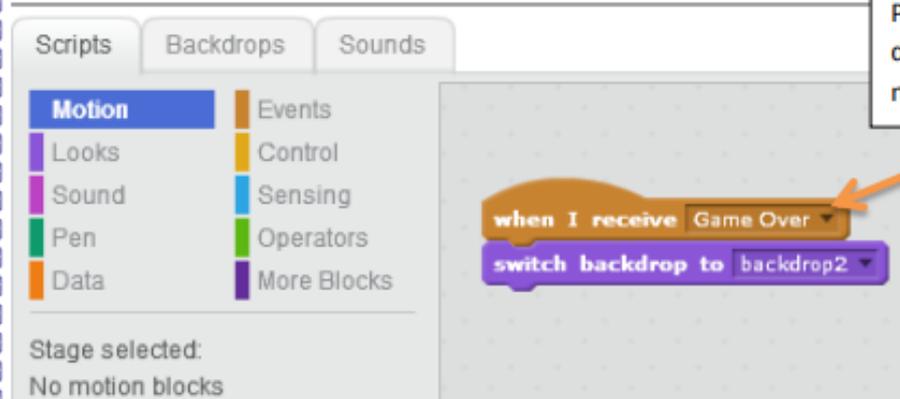
Finally: Make the game over screen show up when an enemy ship collides with the player.

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Click on your enemy ship sprite, and then on scripts.

Sprites

Stage
2 backdrops

Spaceship

bullet

New backdrop:

kyleg5spa...

Scripts   Costumes   Sounds

Motion   Events

20

Add this code to your enemy sprite:

```
when [flag] clicked
forever
    if  touching  1-2 ▼  ?  then
        broadcast  GAME OVER
        hide
        wait  0.1  seconds
        stop  all ▼
```

```
when I receive  GAME OVER
hide
stop  all ▼
```
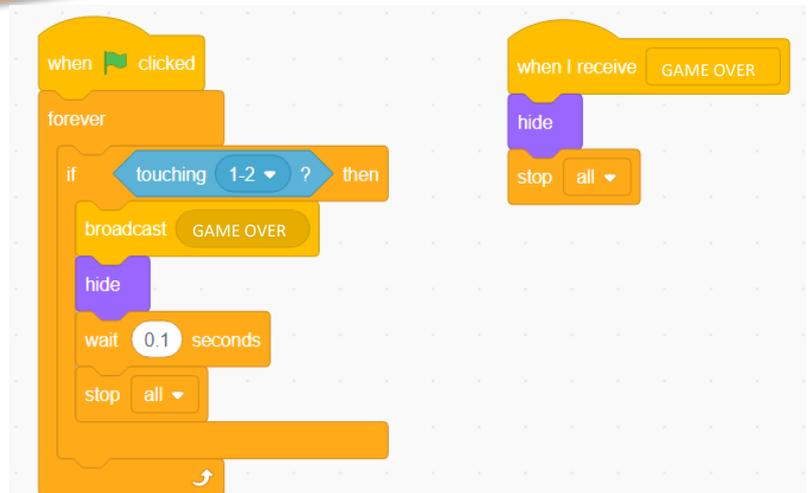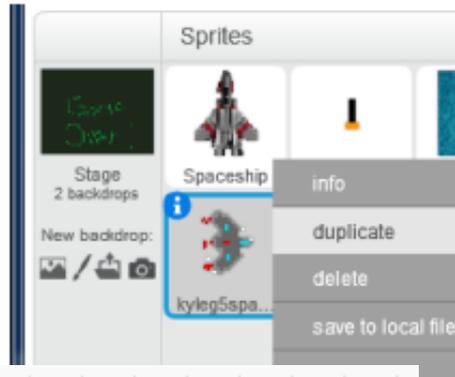
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Test your code and de-bug any errors.
After that you should have a working game!

Extra: Add more enemy sprites and a custom soundtrack to make your game more awesome.
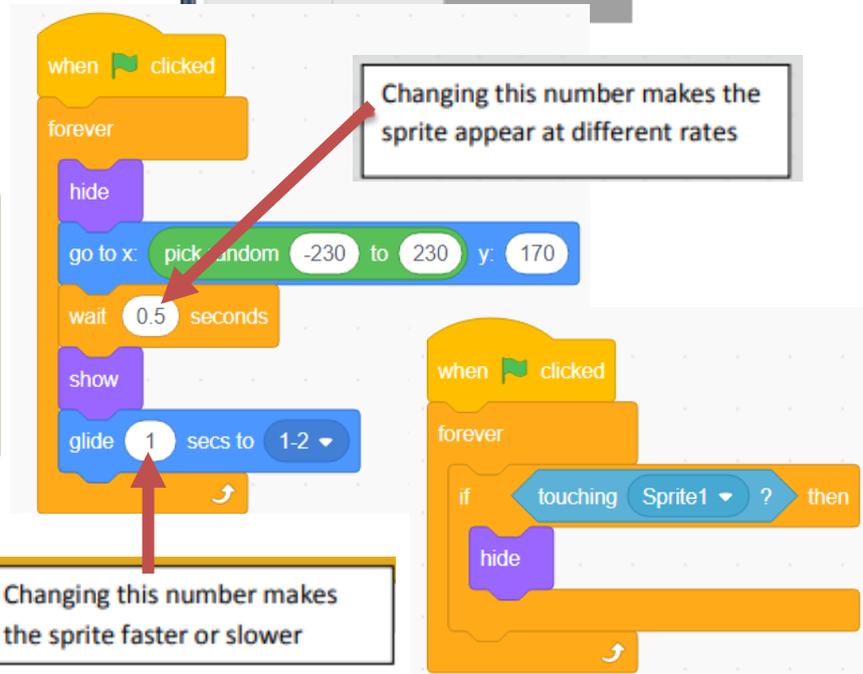
22

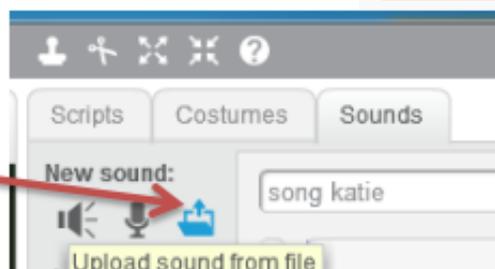**Duplicate your enemy sprite a few times (right click, duplicate)**

Sprites

Stage
2 backdrops
New backdrop:

Spaceship
kyleg5spa...

info
duplicate
delete
save to local file

23

Click on scripts for your new enemy sprite and change its code so it behaves differently.

when 🏳 clicked
forever
hide
go to x: pick random -230 to 230 y: 170
wait 0.5 seconds
show
glide 1 secs to 1-2 ▾

Changing this number makes the sprite appear at different rates

when 🏳 clicked
forever
if touching Sprite1 ▾ ? then
hide

Changing this number makes the sprite faster or slower

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Click on your spaceship sprite and then on sounds, then click upload sound from file

Scripts   Costumes   Sounds

New sound: song katie

Upload sound from file

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Upload a song you made using Beepbox and add this code to your spaceship scripts.

when 🏳 clicked
play sound song katie ▾

when I receive Game Over ▾
stop all sounds
hide