



Scratch Invaders 1



Register/login at <https://scratch.mit.edu>

Make the invaders shuffle left and right in a row.



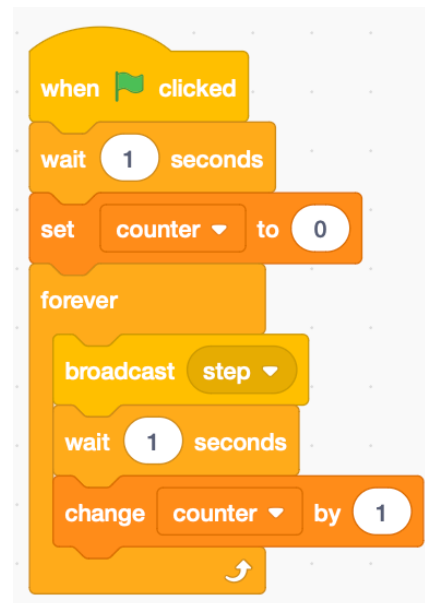
1) Download **squid**, **crab**, and **octopus** graphics from:

<https://codeclub67.github.io/images/invader.gif>

2) Create a new sprite by uploading the *invader* images.

To make all the invaders move together, they need a clock to keep them in time.

3) Add code to the **stage** that beats out the **steps**, and keeps count (make a **counter** variable, available to all).



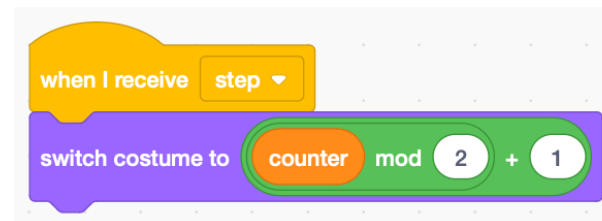
4) The squid costume is number 1.

Rename the sprite as squid.

5) Add code to the Invader sprite to **switch costumes** based on the counter.

Counter mod 2 is 0 or 1 for even and odd counts (the remainder after dividing by 2).

Add this to the squid costume number 1 (3 or 5 for crab and octopus).



6) Add code to make it **move**.

If your invader walks off-screen, get it back by changing x to zero.

7) Add code to detect the **edge** and **turn** the invader around 180°, and set the invader Direction to *reflect*.

*Instead of making more sprites, **clone** the original and then hide it.*

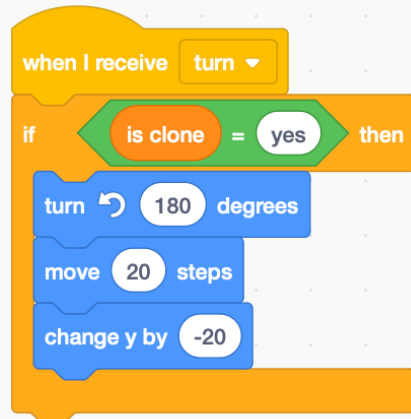
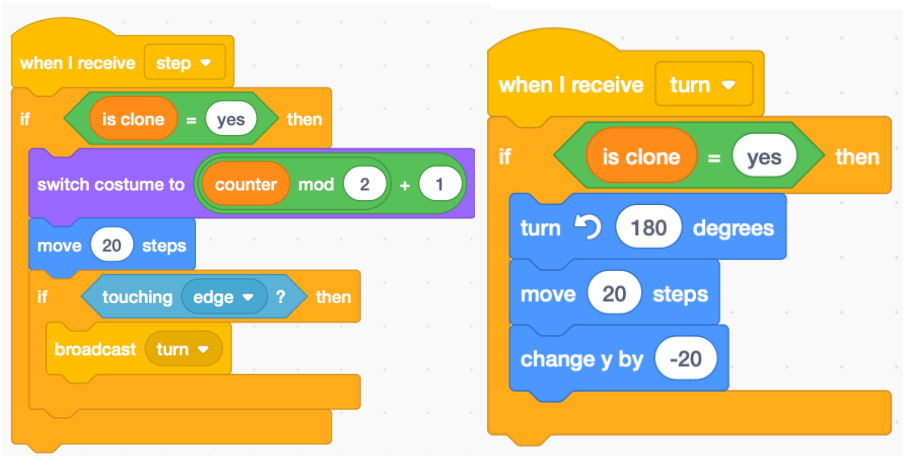
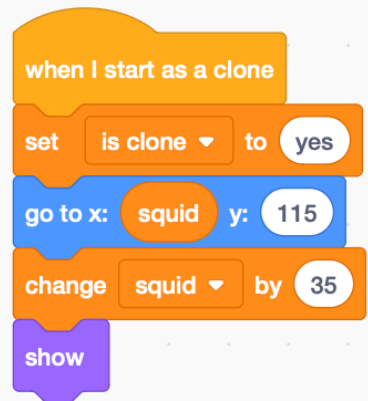
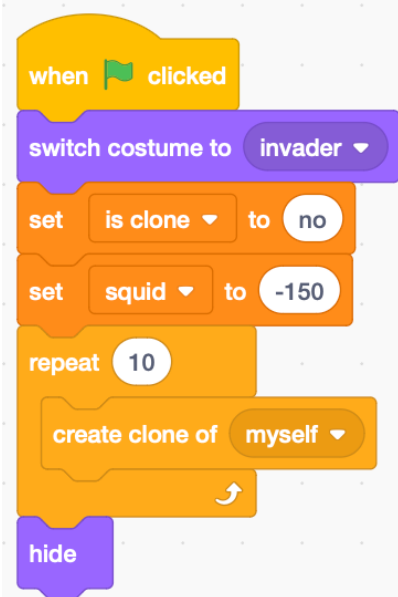
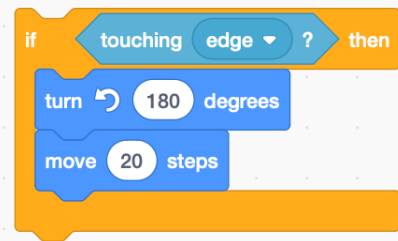
8) Create a **local** variable (this sprite only) to tell if a sprite **is clone** ('yes' for clones)

9) Create a **global** variable (for all sprites) **squid, crab, or octopus** to position them.

Try it! See how they pile up at the edge – now make them all turn at once.

10) Change the **step** code, as below, to **broadcast** a turn instruction instead.

11) Add code to **receive** the turn instruction



Try adding crab and octopuses on rows lower down.

Save your code.