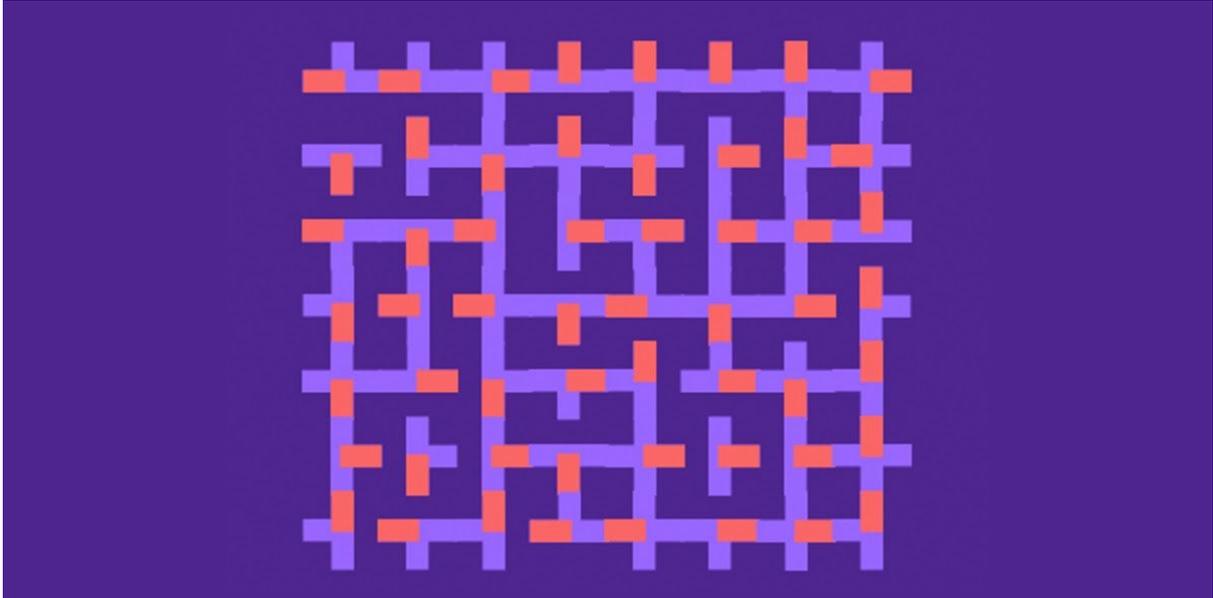


Phoenix



You will need:

Access to the [Scratch](#) website, from a computer or laptop.
(It might also work from an ipad or tablet)

This tutorial is best for people who have used Scratch a little bit before.

Setup:

If you haven't used Scratch before, click join scratch at the top and create an account. You might need your parent's email to do this, so ask for help. If you can't make an account, you can follow along, but you won't be able to save your work.

Once you've made an account follow the Phoenix Scratch studio [here](#). This is where you can find the template versions of all the workshops we create. Feel free to remix them and post the new things you create.

Wait, what is Scratch?

Scratch is a free, online, **block-based** code editor. You might have used it in school. If you've been to one of our family workshops, you've probably seen us using it there.

There are lots of different tutorials available for using Scratch. Here we are going to focus on showing you ways of using Scratch that link to the work we do at Phoenix. This will include things like animation and drawing.

Moving Tiles Project

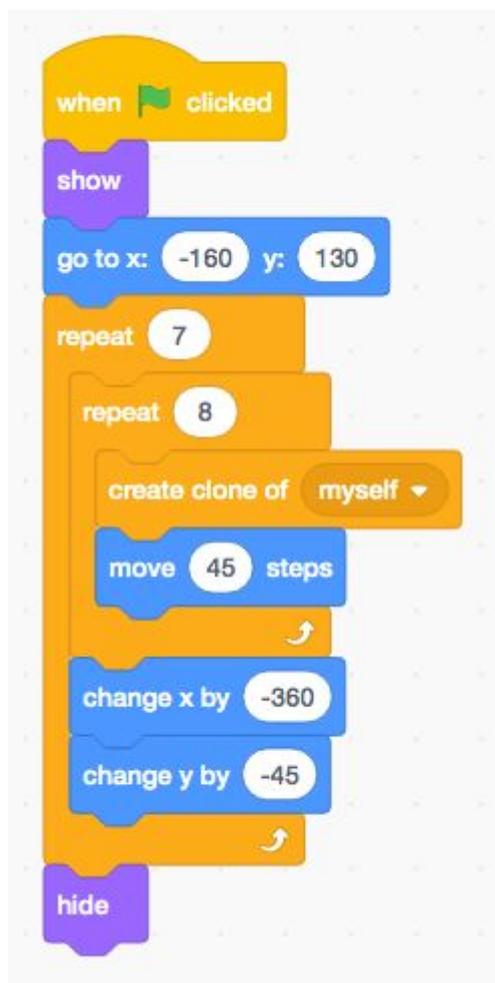
This project creates a grid of moving tiles. They are animated based on whether or not they touch a particular colour. The result is an interesting moving image.

Below is the finished project. Open it up and start remixing:

<https://scratch.mit.edu/projects/394463601/>

Step 1

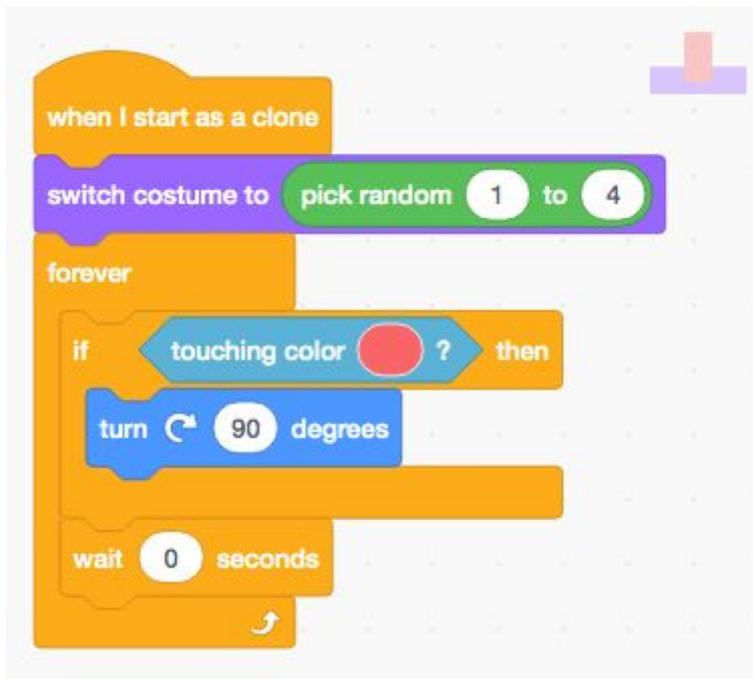
As you can see, this project has a very simple setup. We are using only one sprite, that we have called Tile.



First of all the tile creates a grid of clones. We used a similar technique for our Motion Canvas project. If you change the shape or style of the Tile costumes later on, you might need to adjust these values.

Step 2

So now let's have a look at what is causing our clones to move.

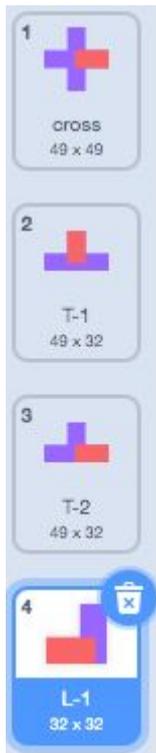


The clone only moves if it is touching a red part of another sprite.

When it is first created, it chooses a random costume.

Step 3

Open up the costumes and have a look at the different ones we have created.



As you can see we have four variations. They all look quite similar.

Have a go at adjusting these and seeing what kind of results you get.

For the system to work, remember to keep at least one edge displaying the red block.

Also remember, that it is any part of the sprite that will cause the tile to spin.

Step 4

So now we've walked through the basics of our Moving Tiles project. How can you customise it and develop your own version?

- Can you make some new costumes?
- Can you add sounds?
- Can you make the tiles move in a different way?

Remember to share your project to the Phoenix Scratch studio!

Hopefully you found this exercise interesting! We can't wait to see what you create.

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