Task

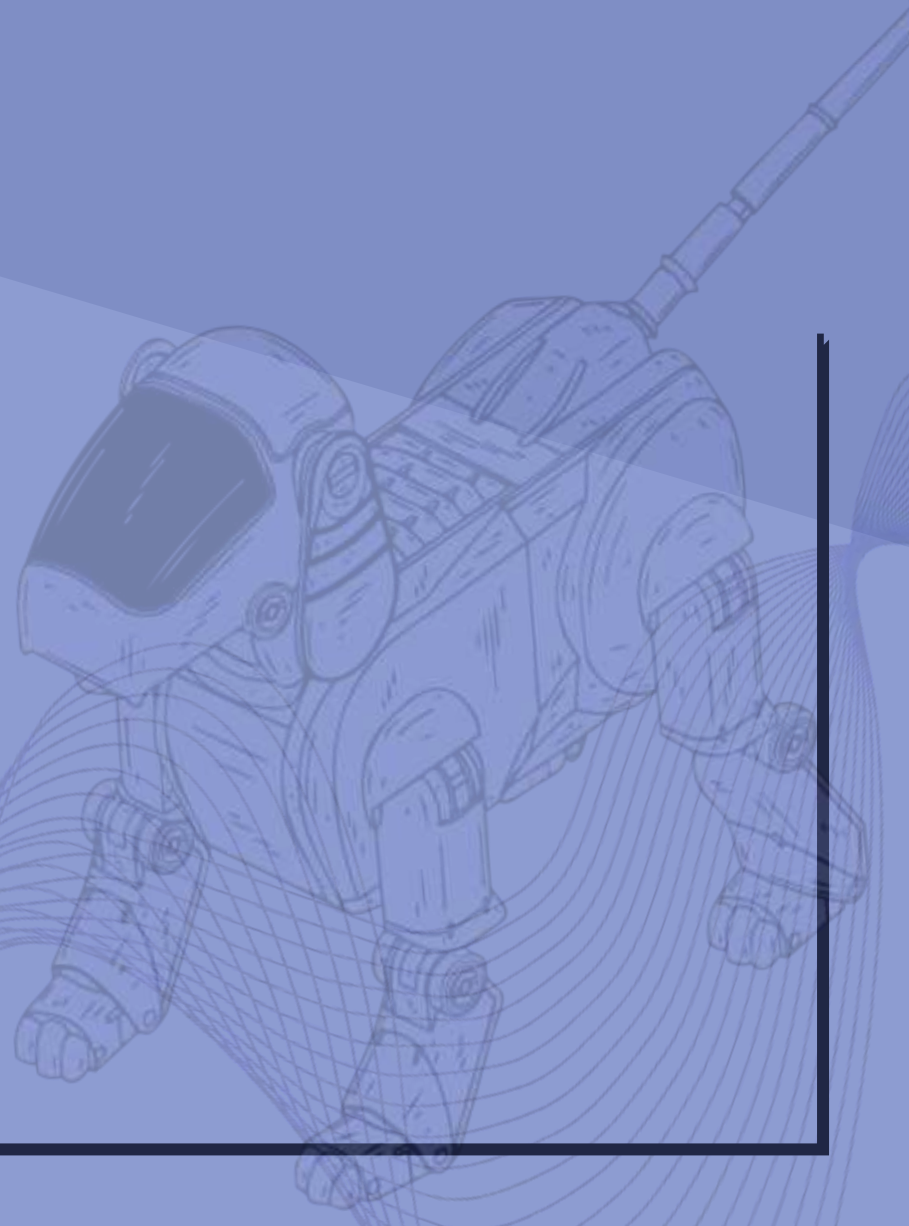
- Games can be a great way of raising awareness about important issues and helping others to preserve the world that we live in!

- You have been tasked with making a **Jungle Racer Game, a two-player racer game**!

Process

Your code should

- Have two-player sprites that can be moved around the screen
- A scrolling screen
- The ability for players to collect gems
- A timer and other mechanics that allows for players to compete!



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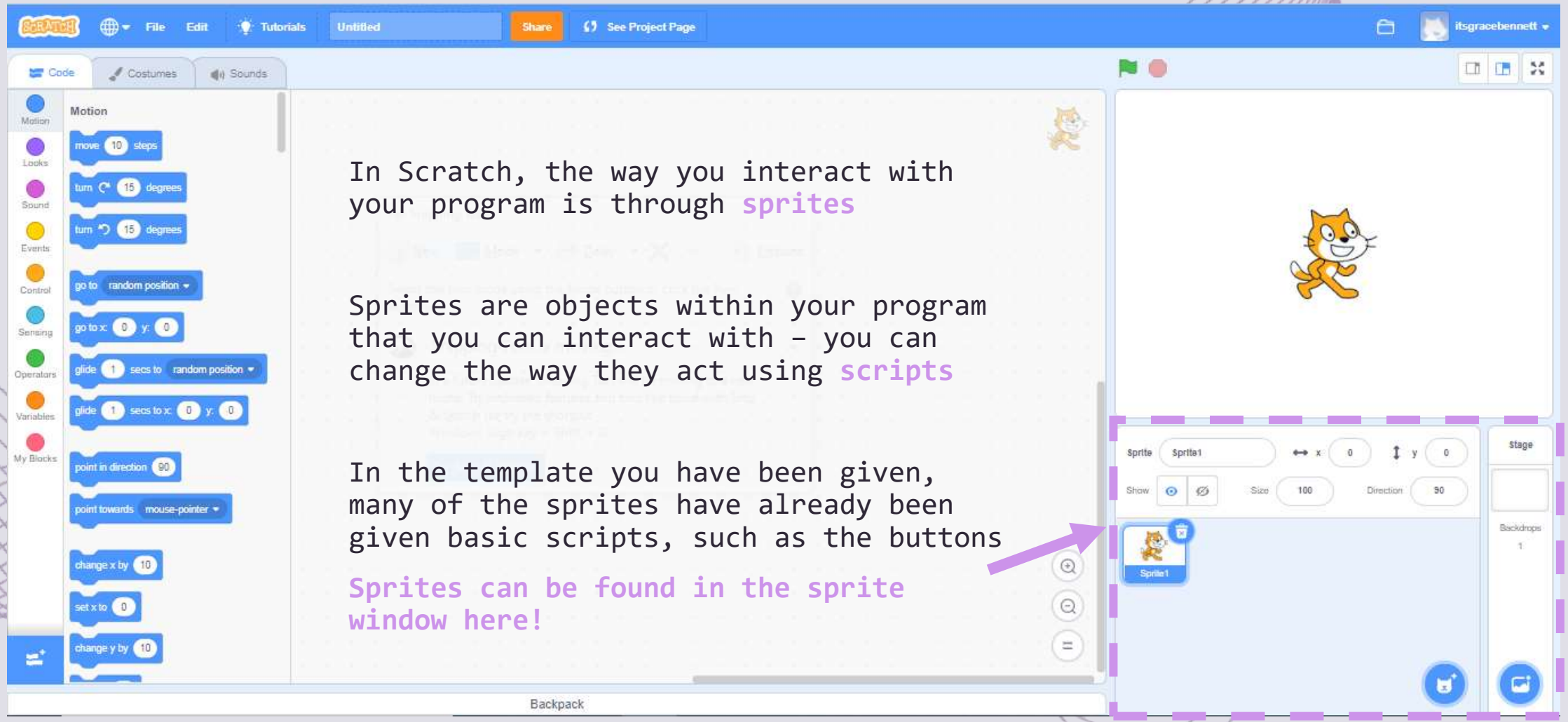
How does SCRATCH work?



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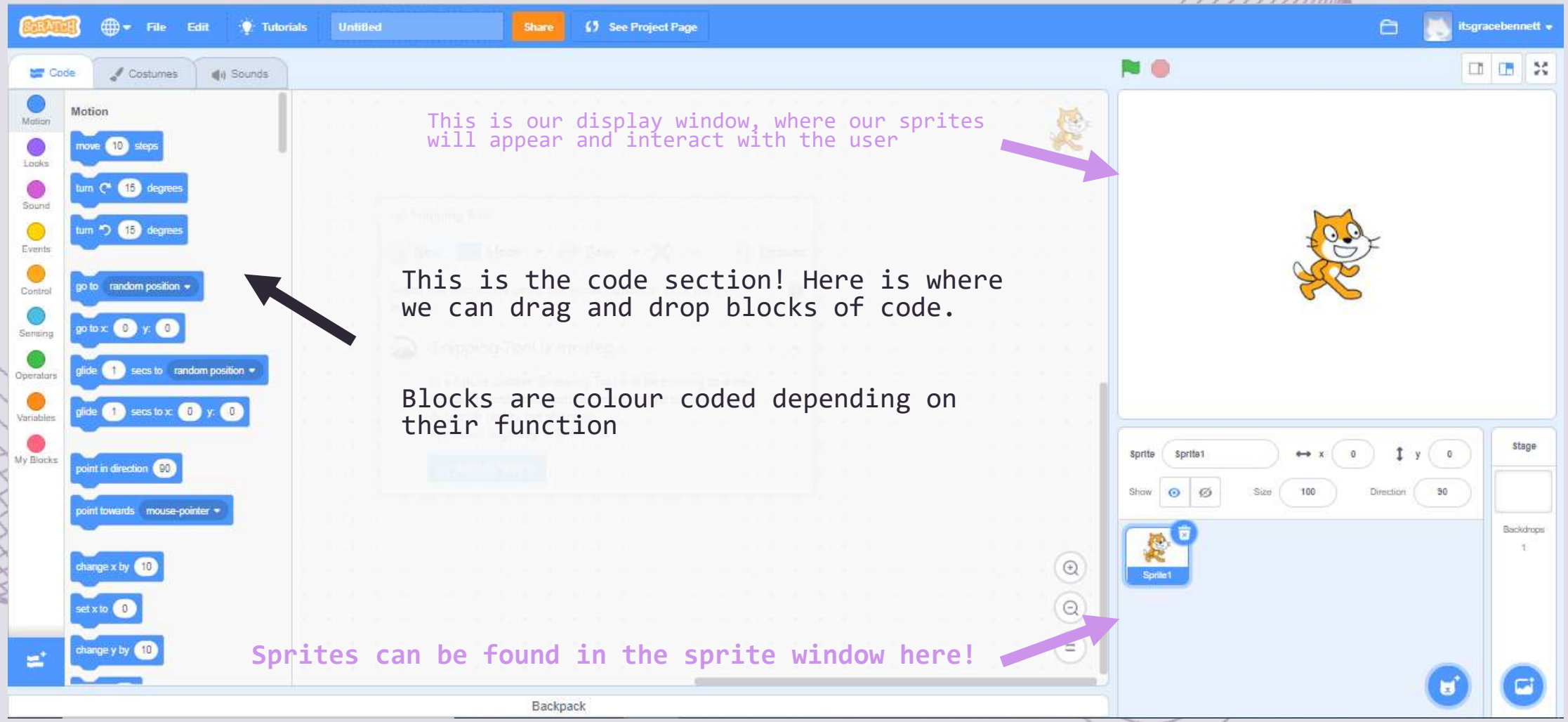

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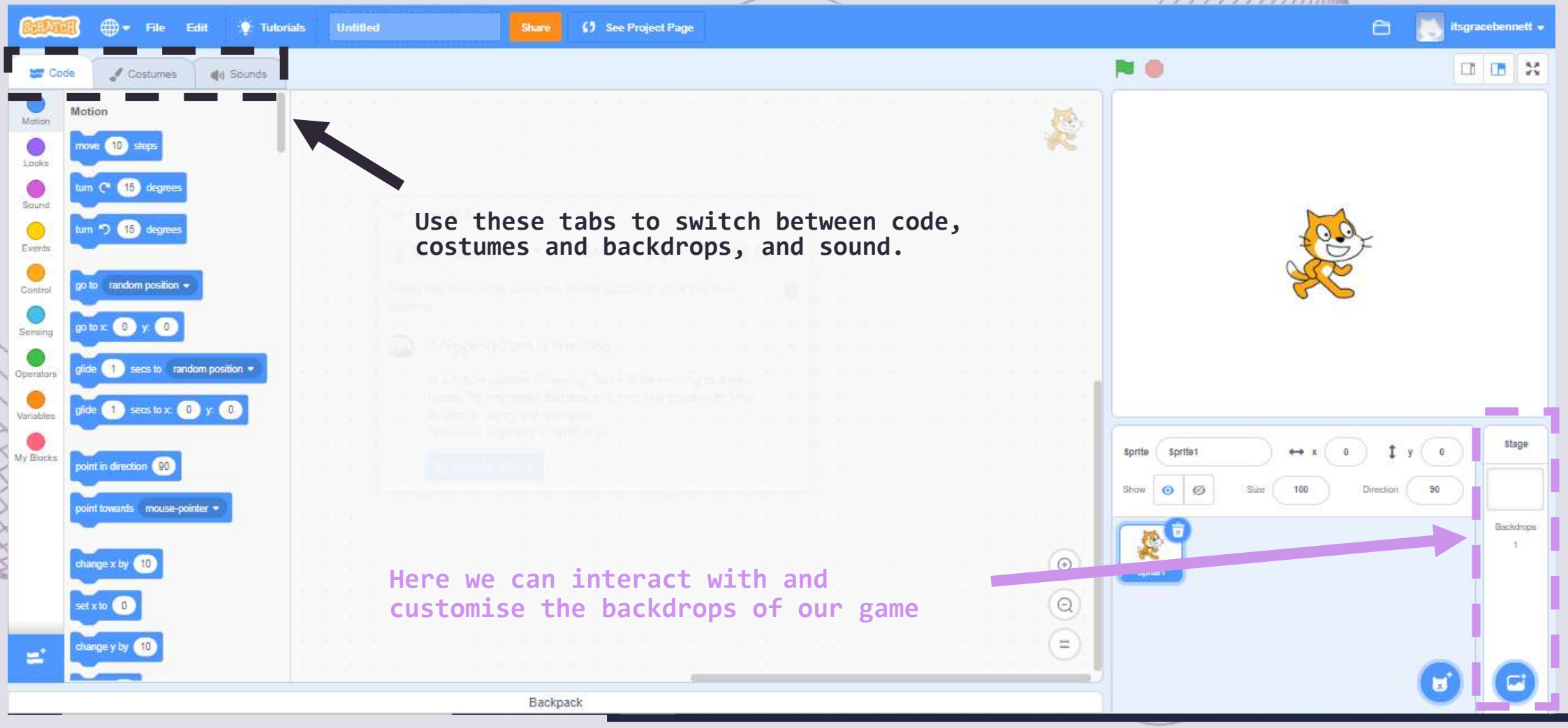
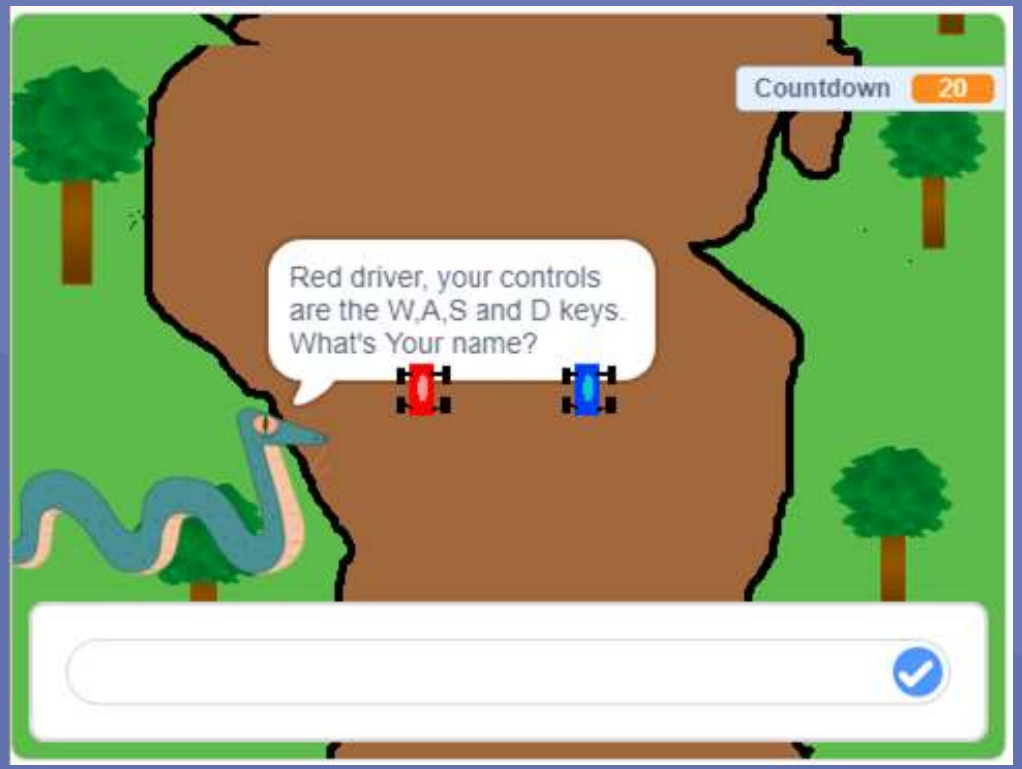


What our game will look like...



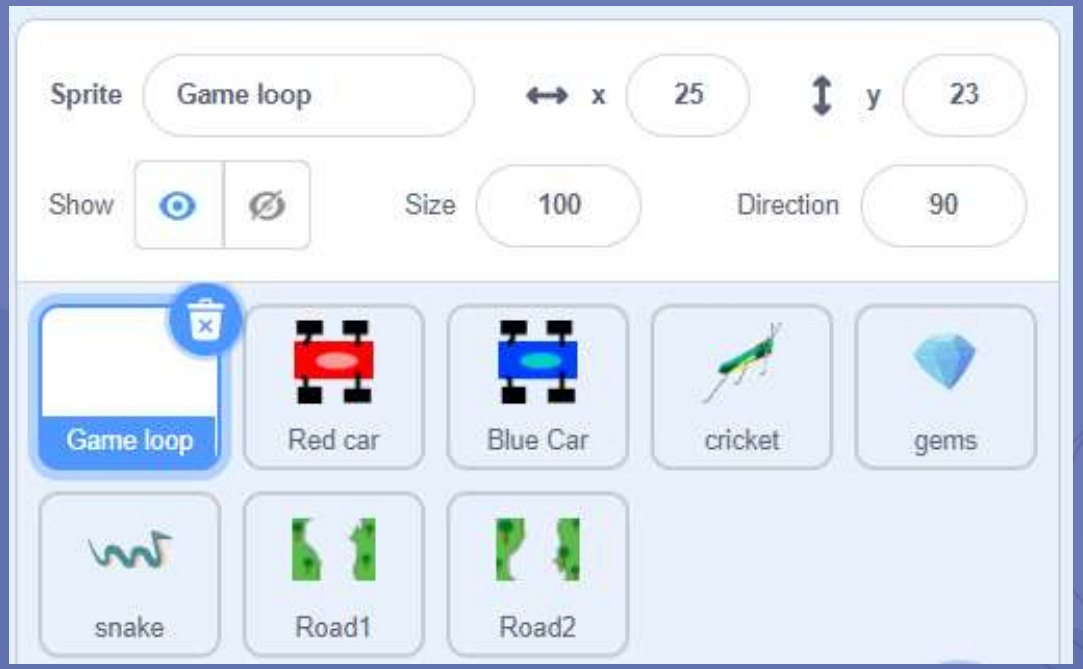
Once you have logged into Scratch...

Click here to access the template for our project!

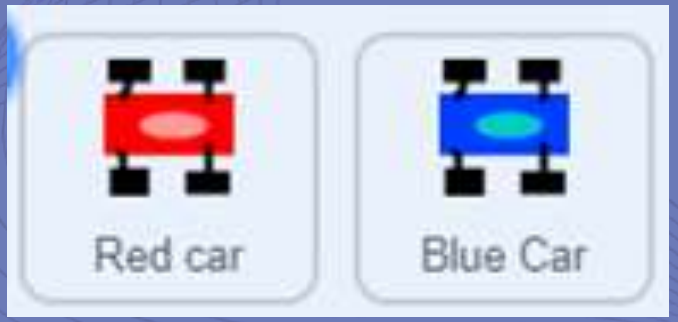
*Click **Remix** to get started with your project*

By the end of this resource, your project should look like this! (Use this if you get stuck)

The following project has lots of different sprites. You can see them all in the sprite menu on the right-hand side!



For this project, you will only be using the two following sprites!



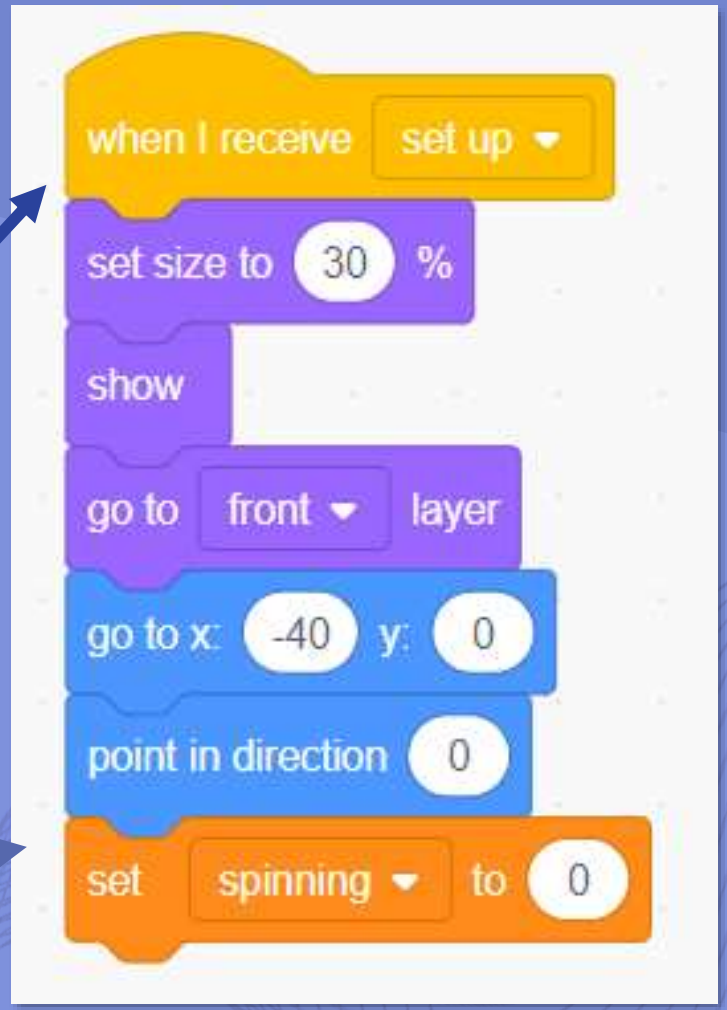
Step 1

Setting up Player 1

In this project, there is an invisible ‘Game Loop’ sprite that keeps the game moving. For most of the code, we use messages from this sprite to get our code started.

This script will run when the “Setup” message is sent by the Game Loop at the start of the game.

This script sets up the sprite’s size, position and direction. We also make sure they don’t spin by setting the ‘spinning’ variable to 0.

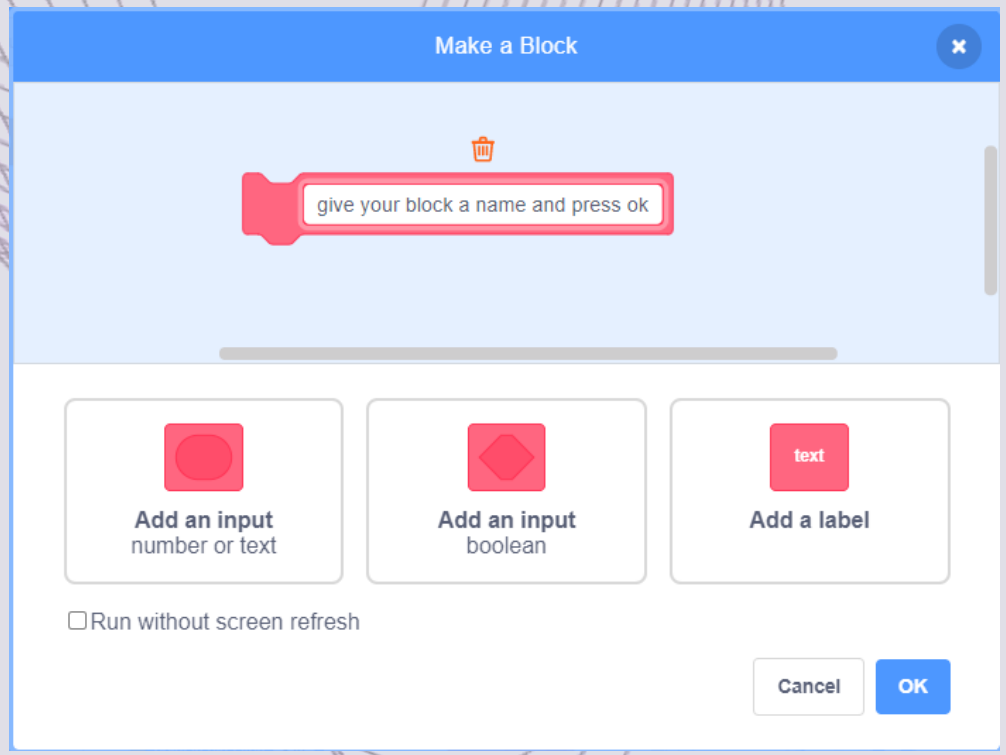


Blocks

Sometimes it's useful to organize our code into 'blocks'. When we have code that we will probably use more than one, by writing it in a block, we can easily access and reuse it at any time!

To make a block, click the 'My Blocks' menu on the left-hand side and click the 'Make a Block' button.

It should come up with a menu like this. Enter a name for your block and press OK!



Step 2

Player 1's Movement

Make a Block called car controls inside of your Red Car sprite called 'car controls'. Add the following code.

Each IF block reacts to the keys that the user presses. For example, if the user pushes the 'W' key, their Y coordinate will be increased (using the car's speed).

This will make it look like the car is driving upwards!

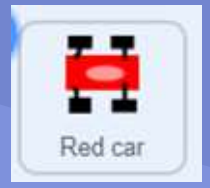
Step 2

Player 1's Movement

Before you test it, add this code to your sprite. This script will run our 'car controls' block many times per second and will allow you to steer your car along the road.

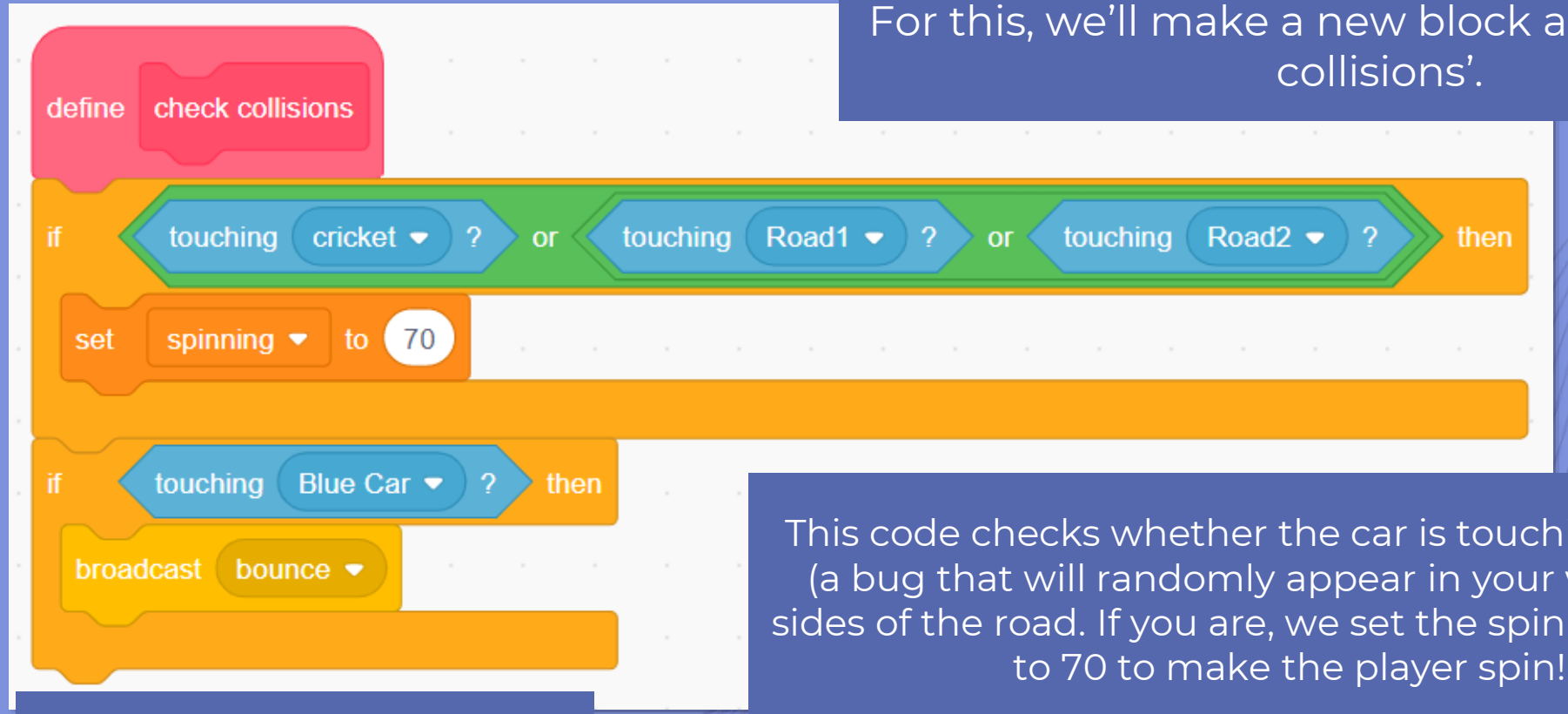
Step 3

Collisions and Spins!



To make the game challenging, let's make our car spin out of control if they come off the road.

For this, we'll make a new block and call it 'check collisions'.

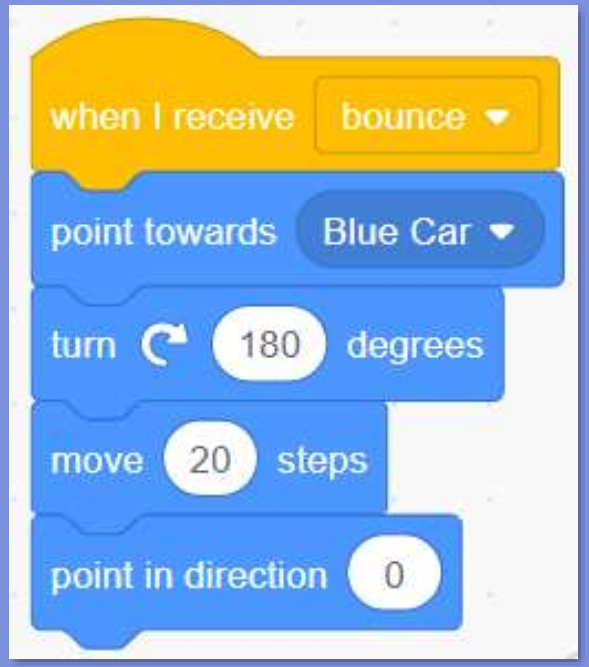


This code checks whether the car is touching a cricket (a bug that will randomly appear in your way) or the sides of the road. If you are, we set the spinning variable to 70 to make the player spin!

This IF block will broadcast a message that we will use later!

Step 3

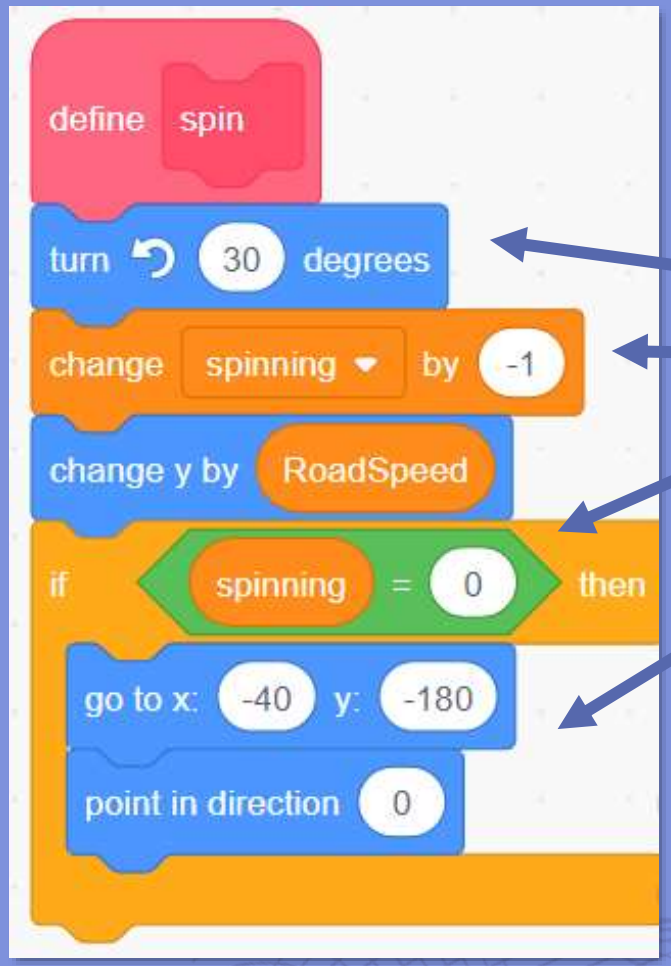
Collisions with the Blue Car!



This script will move the cars away from each other when they collide. This code will make them bounce away from each other!

Step 4

Spins!



To make our car spin, make a new block and call it ‘spin’.

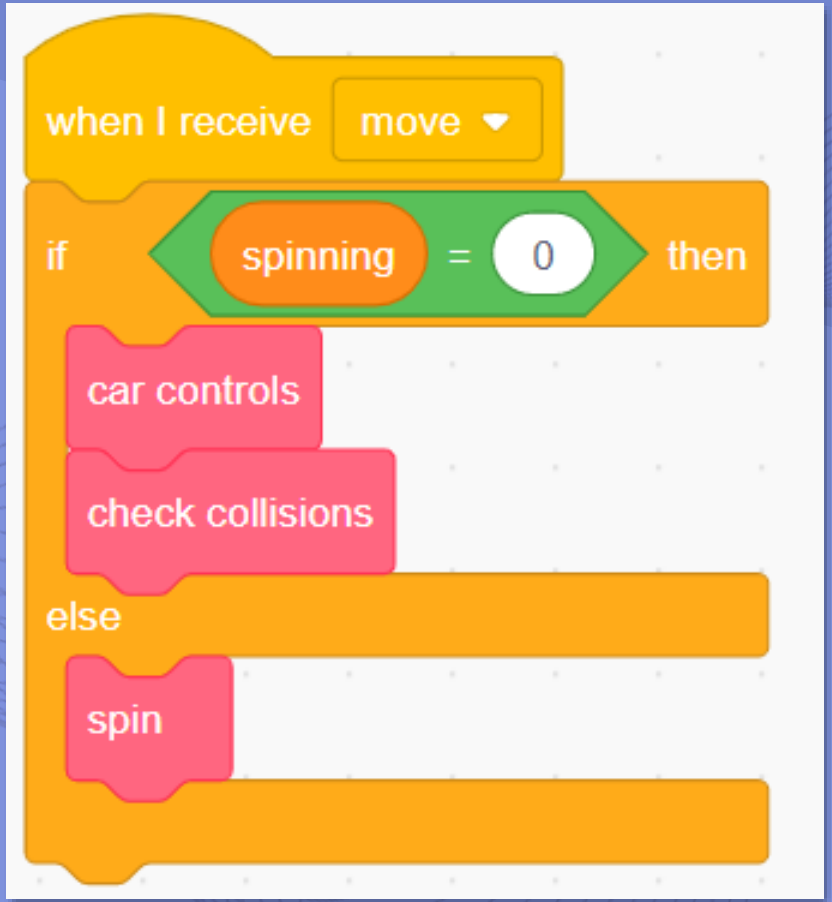
It turns the car around and reduces the ‘spinning’ variable by one. When the variable reaches zero, the spin ends and the car is reset at the bottom of the screen.

Step 5

Updating our screen

Finally, change the existing script triggered by the “move” message to look like this.

This should make your car spin only when you hit obstacles!

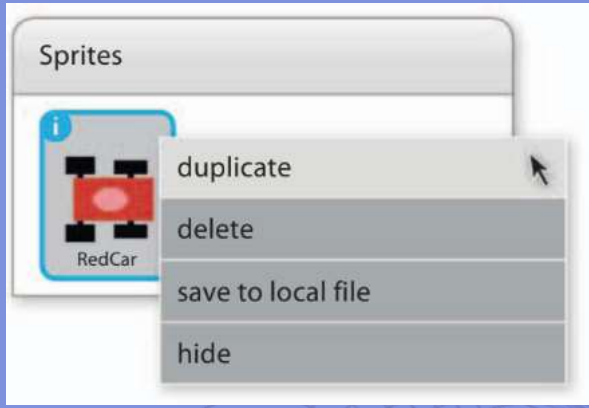


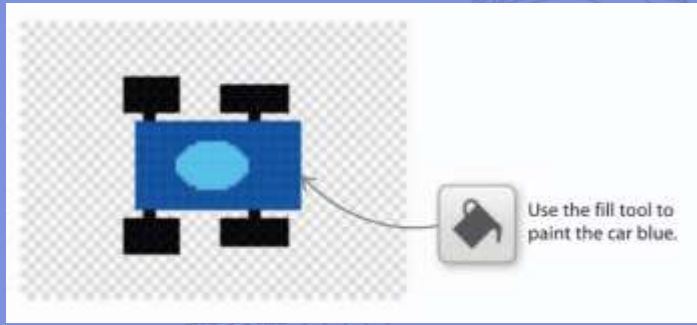
Step 6

Player 2!

For the Blue Car, you want to repeat steps 1-5 but inside the Blue Car sprite so that they have the same code.

You can do this manually by rewriting the code, or you can duplicate the sprite.





To do this, right-click on the sprite and click ‘Duplicate’. Make sure you rename it to ‘Blue Car’ and change its costume in the ‘Costumes’ tab. Delete the empty sprite.

Step 7

Player 2 Setup

Tweak this script so that the positioning is slightly different for the blue car sprite.

Make sure the code in your blue car sprite looks like this.

Step 8

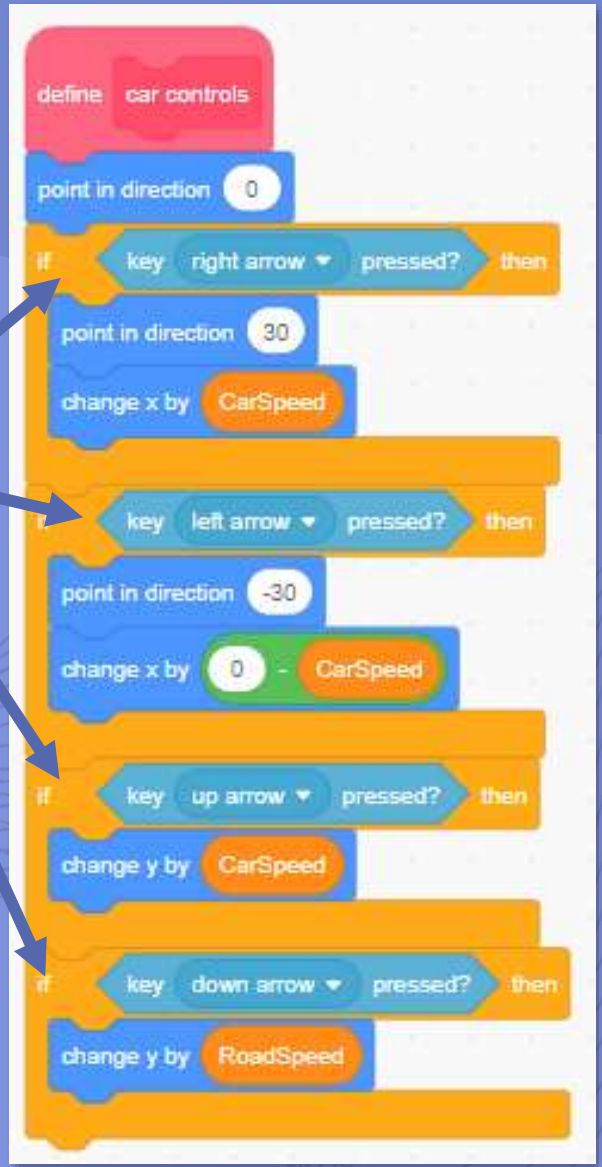
Player 2's Spin

You also need to alter the 'spin' block – change that code to the following inside of your blue car sprite.

Step 9

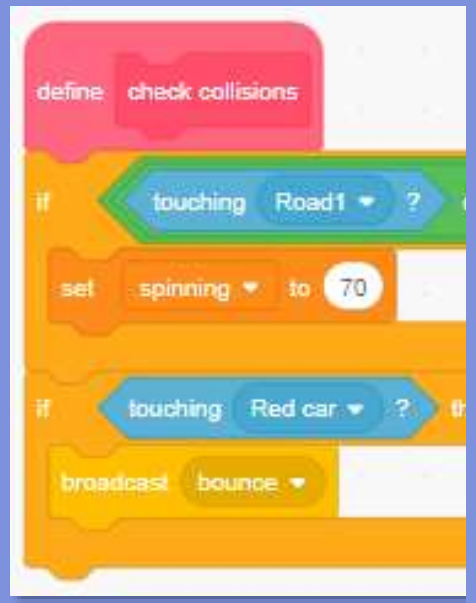
Player 2's Movement

The 'car controls' block code needs to be changed so that the 'key pressed' blocks are now using the arrow keys instead of WASD.



Step 10

Collisions with the Red Car!



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