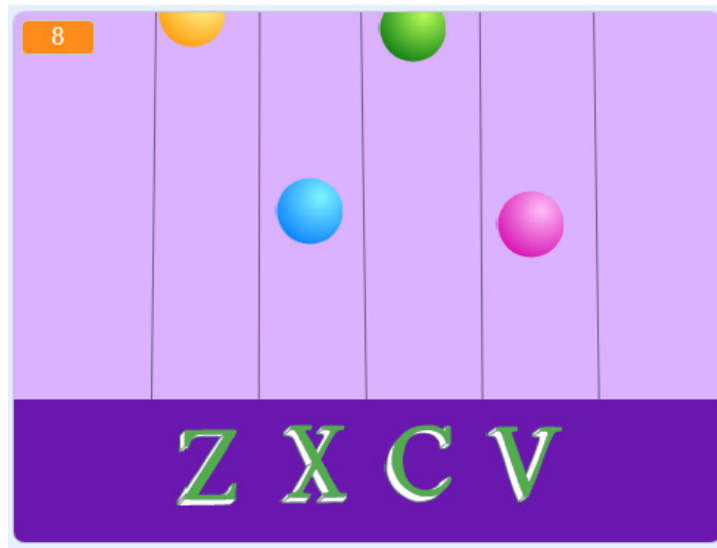# Music Hero!

In this game you press the letter keys as the balls (or notes) arrive at the purple bar – boost your score and make lovely music!


There are lots of sprites in this project, but their code is very similar, so start by choosing (or drawing) a single ball sprite and a single letter sprite – I chose these:
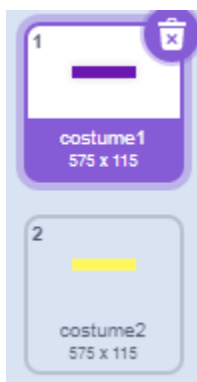

Your letter sprite needs two costumes, so if it only has one, you can duplicate it and change the colour to make a second one.

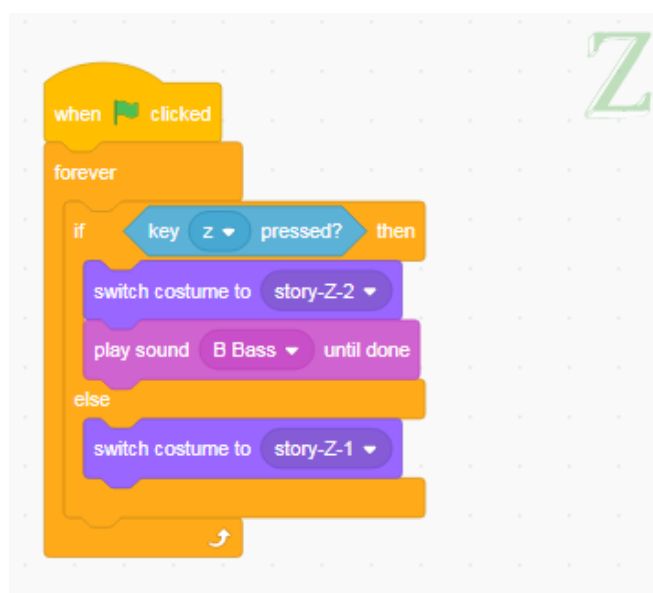Choose a colour for your backdrop and draw lines so we know where the balls will be:
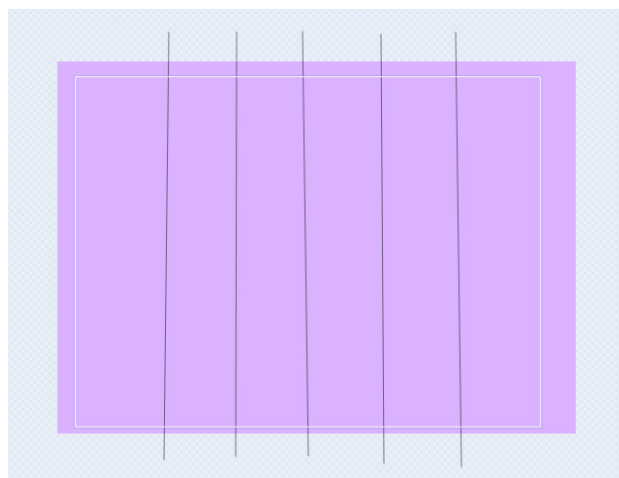
Save your project!

Draw a bar sprite, and position it at the bottom of the screen. This sprite
needs two costumes as well:

Now some code! Let's start with the letter sprite:

Choose a sound you'd like this letter to make. If you want to be musical,
the Notes section of Sounds has lots of different instruments. Or use any
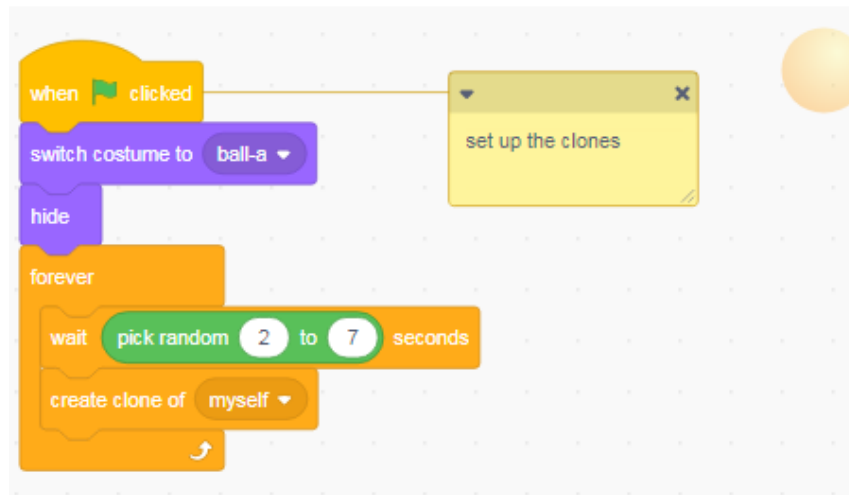sound you like!

Test it out, click the green flag and try pressing the letter key Z. You
should see a costume change and hear your sound — did it work?
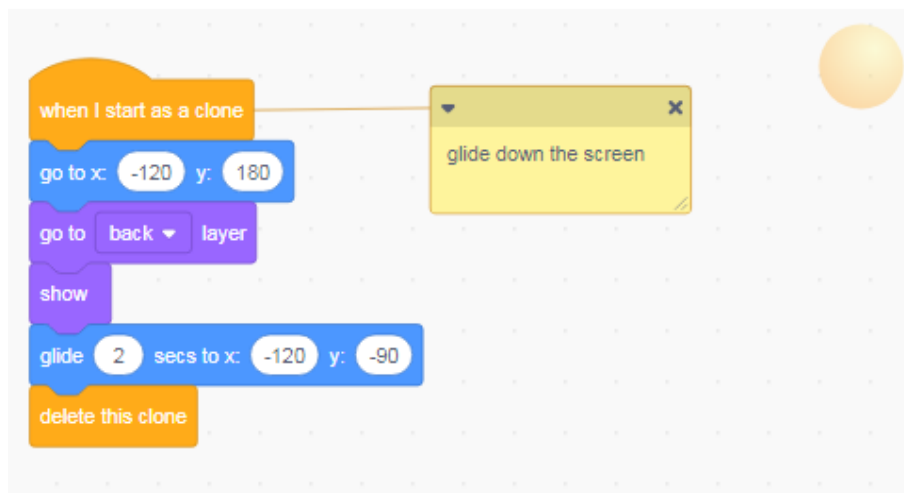
Save your project!

There is a little bit of code on the bar, to make sure it doesn't cover up
the letters:

download these instructions and more from https://github.com/ej3nk1ns/Code-Club
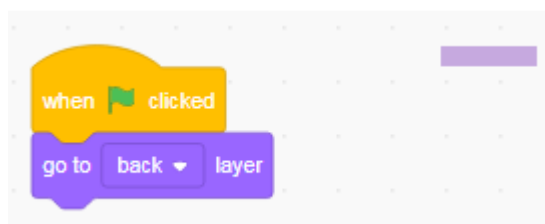
Now let's code the ball (or note) sprite for Z. We will use clones, so first add some code to set them up:

You won't see anything at this point, as we have told them to hide. Add the next bit of code to see them glide down the screen:

You may have slightly different numbers, just test it out and change them if you need to.

Save your project!

If everything is working, copy your ball sprite three times! Give all the four ball sprites names like 'Note X' or 'Ball X' so you don't get confused which one goes with which letter.

For the copied ball sprites, make the following changes:

- choose a different costume
- choose a new x position, so the ball lines up with its letter sprite (but the y position stays the same)
- change the numbers in the 'pick random' block to something different

Save your project!

Now choose (or draw) three more letter sprites, I used X, C, and V.

Copy your code from the Z letter sprite to each new letter sprite, and make the following changes:

- choose (or make) a second costume
- change the letter in the 'if key pressed' block
- change the costumes in the two costume blocks
- choose a new sound for each letter sprite, and then select it in the 'play sound' block

Test it out!

Save your project!

As a guide, here is my code for the letter, X, and its ball (note):

download these instructions and more from https://github.com/ej3nk1ns/Code-Club
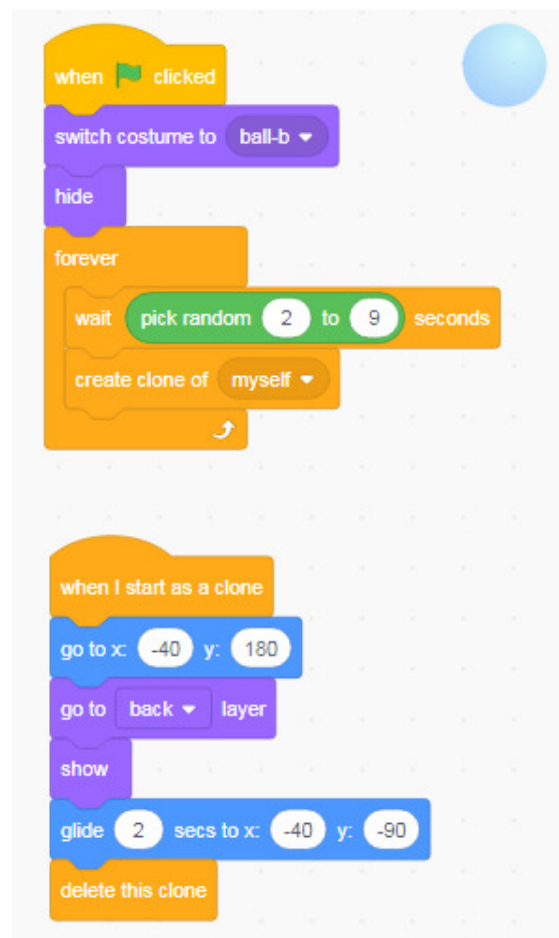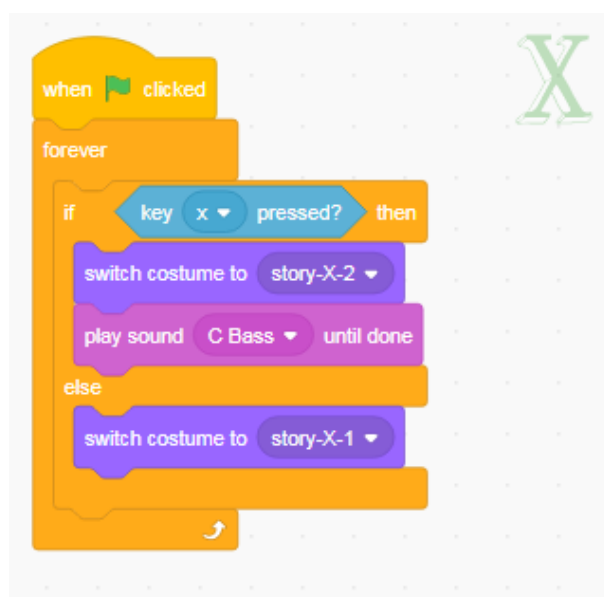
Now, we will add the score. This might be a bit more complicated than you are used to, but check the blocks carefully, you can code a great game!

The score blocks will go on the bar sprite. To know when to give you a point, it has to be told:

1. which key was pressed, and
2. where the ball sprite for that note was, at exactly that time

So we will use messages!

Use the 'broadcast' block to add a new message, one for each letter (I am showing Z here, you will need to do the same for X, C, and V):
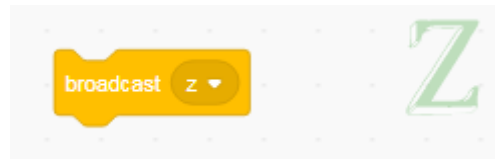
Add the 'broadcast z' block inside the 'if' block for the letter sprite, just before the 'play sound' block. You can test your code, but you won't see any changes, because we haven't received the message yet.

Save your project!

Now we know which key was pressed, we can tell the ball sprite to check if it is touching the bar sprite – you only get a point if you press the key at exactly the right time!

Add the code below to the Z ball sprite (and similarly for X, C, and V):

You will see we have created a fifth message (I called mine 'score!') – this tells the bar sprite we have pressed the letter key at exactly the right time, and earned a point.

You still won't see any changes, but be patient, we are nearly there!

Save your project!

When we earn a point, we want the bar sprite to change colour briefly, and our score to go up by 1.
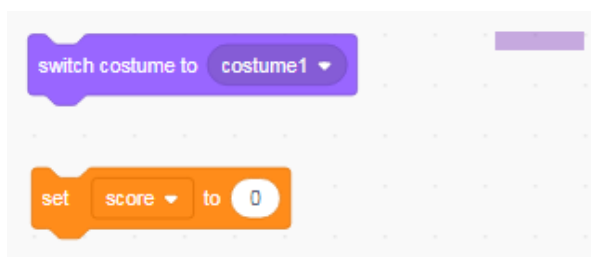
To set this up:

- add a variable, and call it 'score'
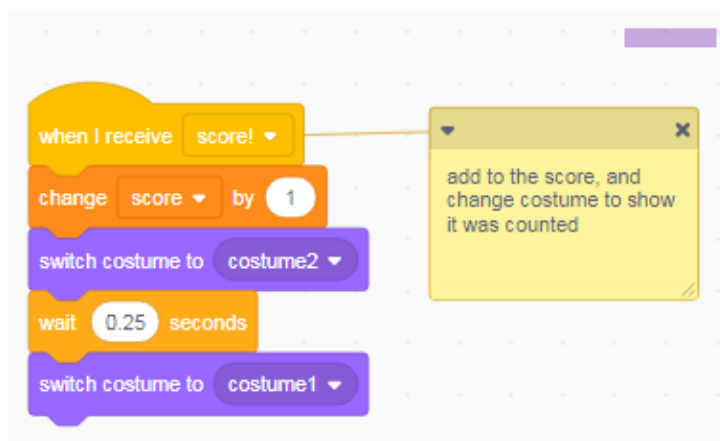- make a different coloured costume for the bar (you can duplicate it and use the paint can)

Next, check the code on your bar sprite, it should look like this:
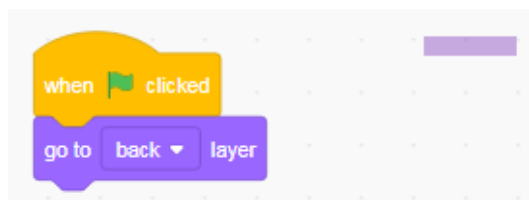
Add the code blocks below to this code, to show the starting costume and start the score at zero:

Now add the final code to the bar sprite – for when you receive the 'score!' message:

Test it out! You might find some letters work and some don't, so carefully compare the code, or ask a friend to look, and you should spot any mistakes.

Enjoy your game!

Save your project!

download these instructions and more from https://github.com/ej3nk1ns/Code-Club