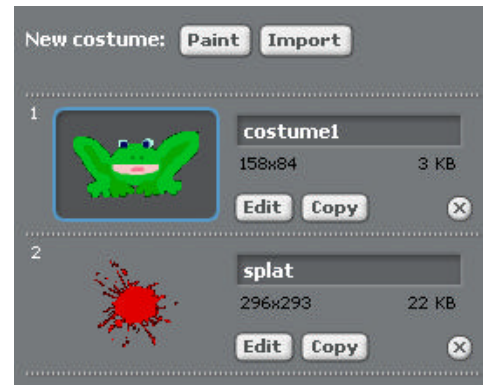


Simple platform game: Frog Jump

First select the sprite you want to move around the game and add the code to move them using the arrow keys.



Add a second costume to use when the sprite gets squashed.

Now edit the background so that you have a start position and several roads to cross. I have set my start position to be black – it doesn't matter which colour you choose, but all the steps you make for the frog to cross will have to be the same colour as the start position



Now you need to make the steps for the frog to cross. They are going to move back and forth along the bands in the road. You can just copy the first sprite to make new steps. You can alter the speed by changing the number of steps they make in the loop.



Challenge:

Now you need to add code to the frog to make a noise, change to the splat costume and go back to the start if it is not touching the start colour or the steps



Platform Game

This is a simple platform game. The player moves from left to right (or from down to up) and gains or loses points by collecting objects / avoiding hazards on the way.

The game works by having a background colour which the player cannot move over. This background colour must be the same on every level of the game.

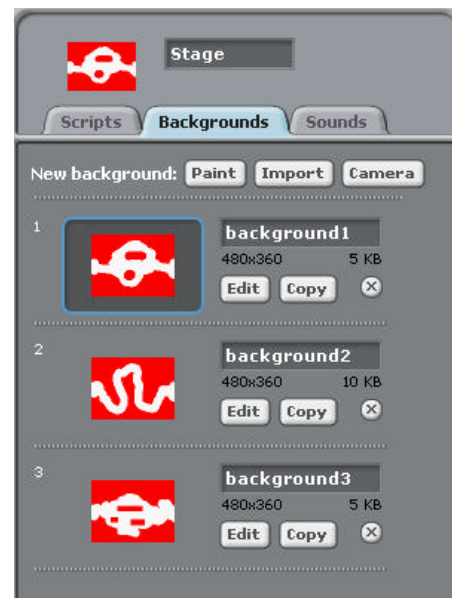
To start with you need to design several backgrounds

The joins between levels must be on the same place for each level.

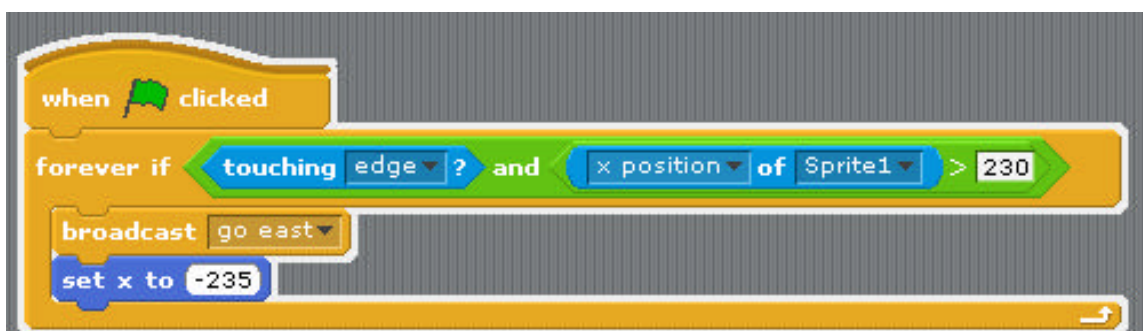
Here is a very simple example of three levels.

Notice that the joins on the left and right hand sides of the backgrounds are in the same place.

The code to move the player sprite needs to cope with movement up, down and left right.



The code to move to the next level East depends on checking to see whether the edge has been touched and what the x position is.



The broadcast message is received by the background and tells it to change to the next level.



Challenge:

Set the player to the beginning of the game when the green flag is clicked and create a points variable to store their score

Add some objects which can be hit to gain points – Ideally these objects would change colour or disappear once the points have been gained

Add objects which make you lose points when you hit them

Other ideas:

The size of the player could increase as points increase, making the game more difficult

The objects to gain points or lose points could move around in a random way

There could be barriers the same colour as the background which only disappear when the player does something.

Scrolling background game

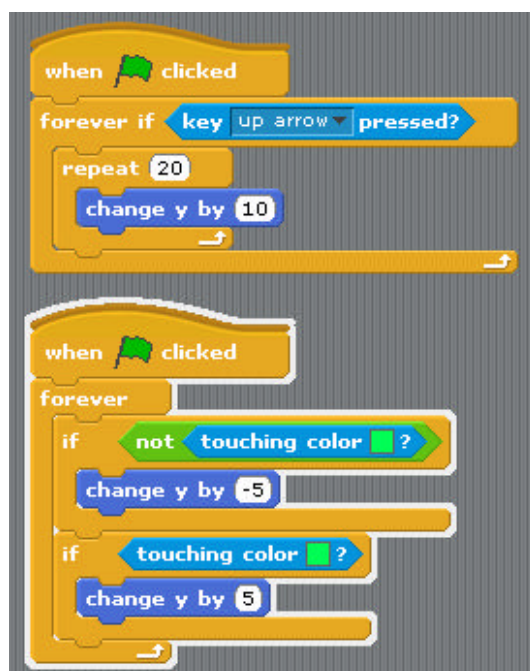
Start up scratch and click on File Open, then choose the examples button on the left hand side of the dialogue box then from the games section, choose number 8, **ScrollingDemo**.

This game has got four background sprites already drawn. You move the player from left to right and up using the arrow keys (the player will fall to any green part of the background automatically)

The scrolling is done with these three pieces of code:



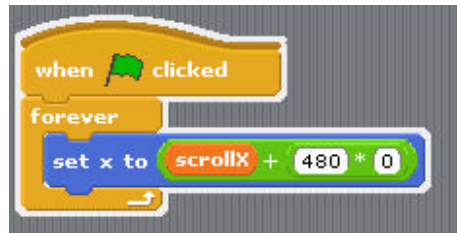
The player is moved up and down and interacts with the green parts of the background using these two pieces of code:



Challenge:

Look at the code for the player and make sure you understand how it moves. Try changing values to alter the speed of the game.

The code for the scrolling backgrounds is the same for each sprite except for the value which **scrollx** is multiplied by.

**Challenge:**

1. Add another terrain to the game and edit **terrain3** so that it is no longer the last one.
2. Create a score variable and add some objects to gain points. The objects should disappear (use **hide**) when you capture them.
3. Change the backgrounds to add more platforms or scenery
4. Add objects which deduct points if you hit them
5. Change the backgrounds so that there are sections in a different colour which will deduct points if you touch it
6. Try adding sound or music to the game.

Running your Scratch programs on a web page:

You can make a web page to run your programs .

Make a folder to keep the programs and the web pages.

Copy these three files from the s2 scratch folder in shared documents into your new folder



Now right click on the webpage and choose **send to notepad** from the menu. You should see this code in notepad:

```
<html>
<body>
Click the green flag to start. Use the space bar to
fire.
<p>
<p>
<applet id="ProjectApplet" style="display:block"
code="ScratchApplet" codebase="./"
archive="ScratchApplet.jar" height="387" width="482">

<param name="project" value="myprogram.sb">

</applet>
</body>
</html>
```

Change this to the name of
your scratch program

Change **myprogram.sb** to the name of your program and save the file. Test it by double clicking on the web page.

Add the scratch pages to your **E-Folio**