Juggling Game

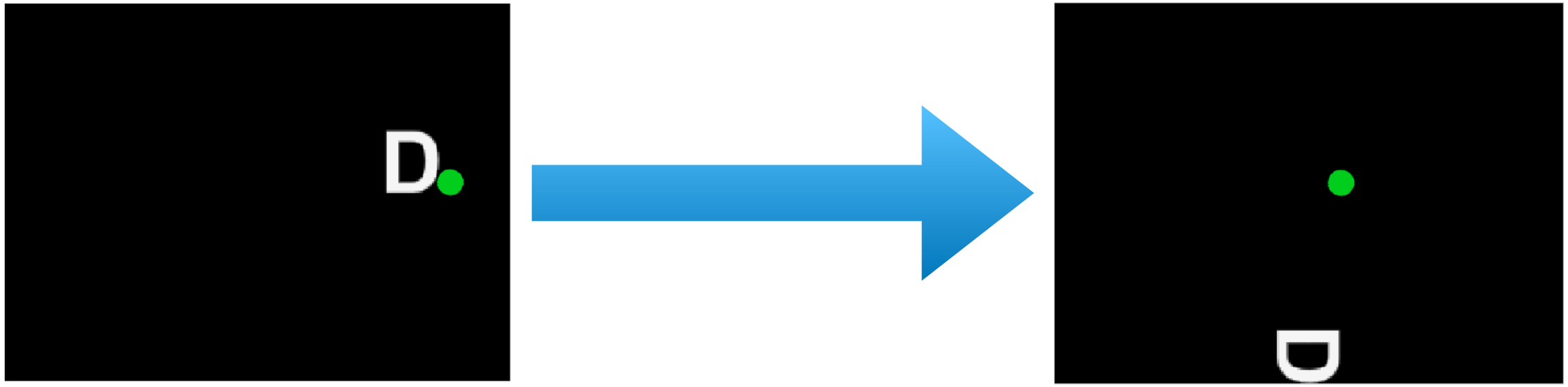
Scratch fun

EN v1

Hack4Kids.lu

Part 1 - Let's start (basic animation)

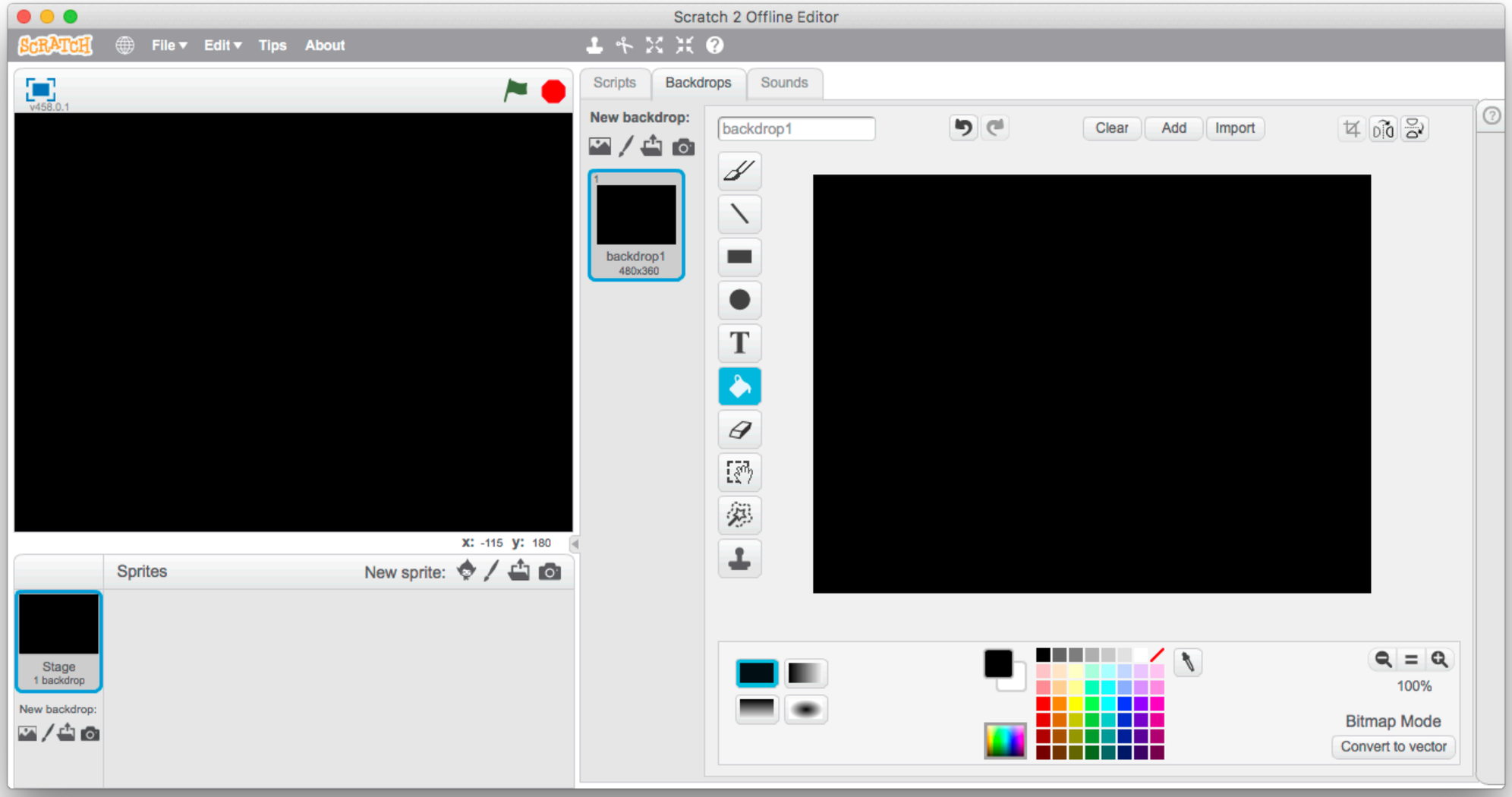
Start **End**



Part 1

Work on background

1

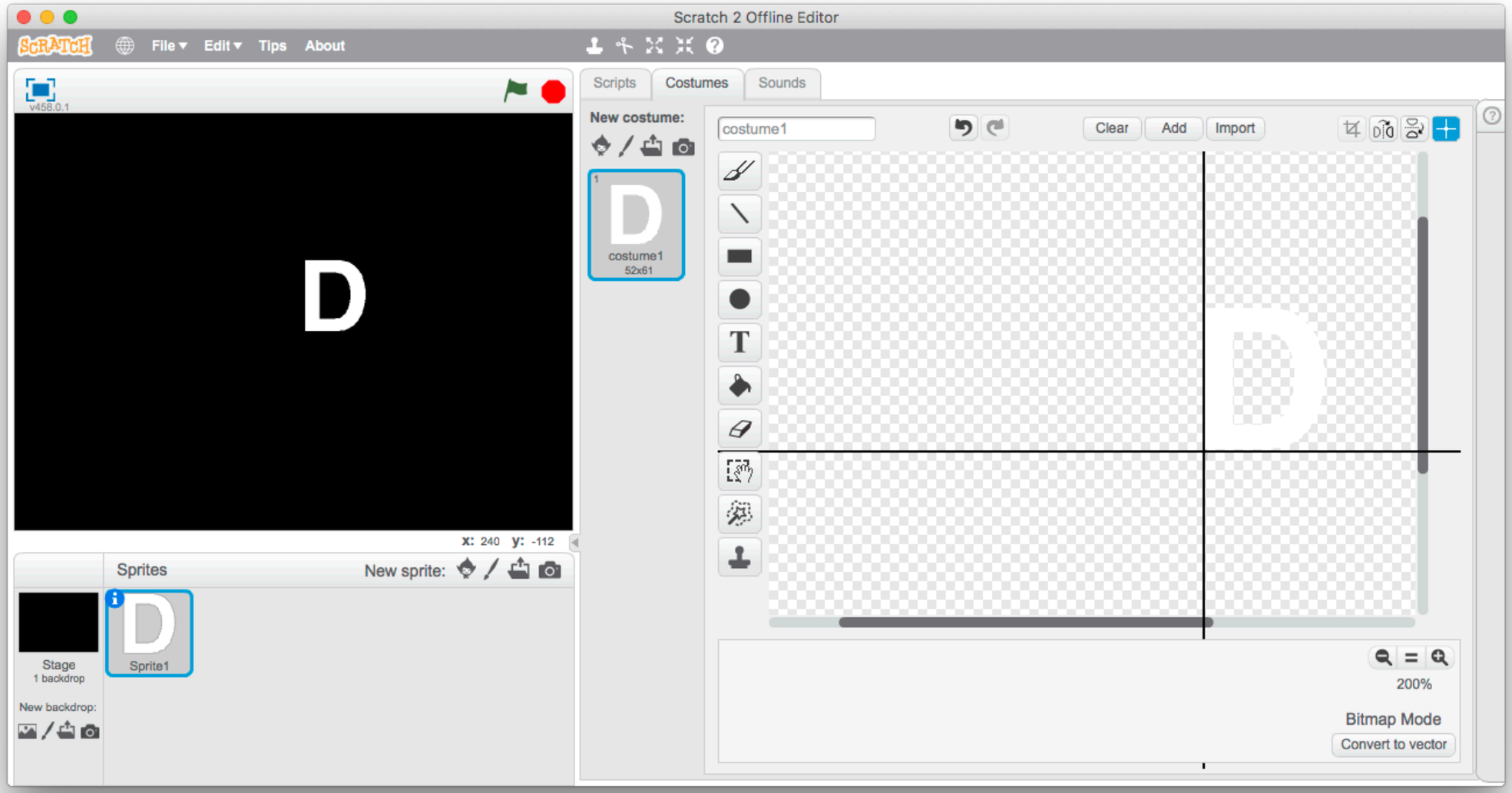


We will start by painting the background in black. Select the background, go in backdrops tap, select the paint bucket, the black color, and click on the backdrop to paint it.

Part 1

Work on Sprite D

2

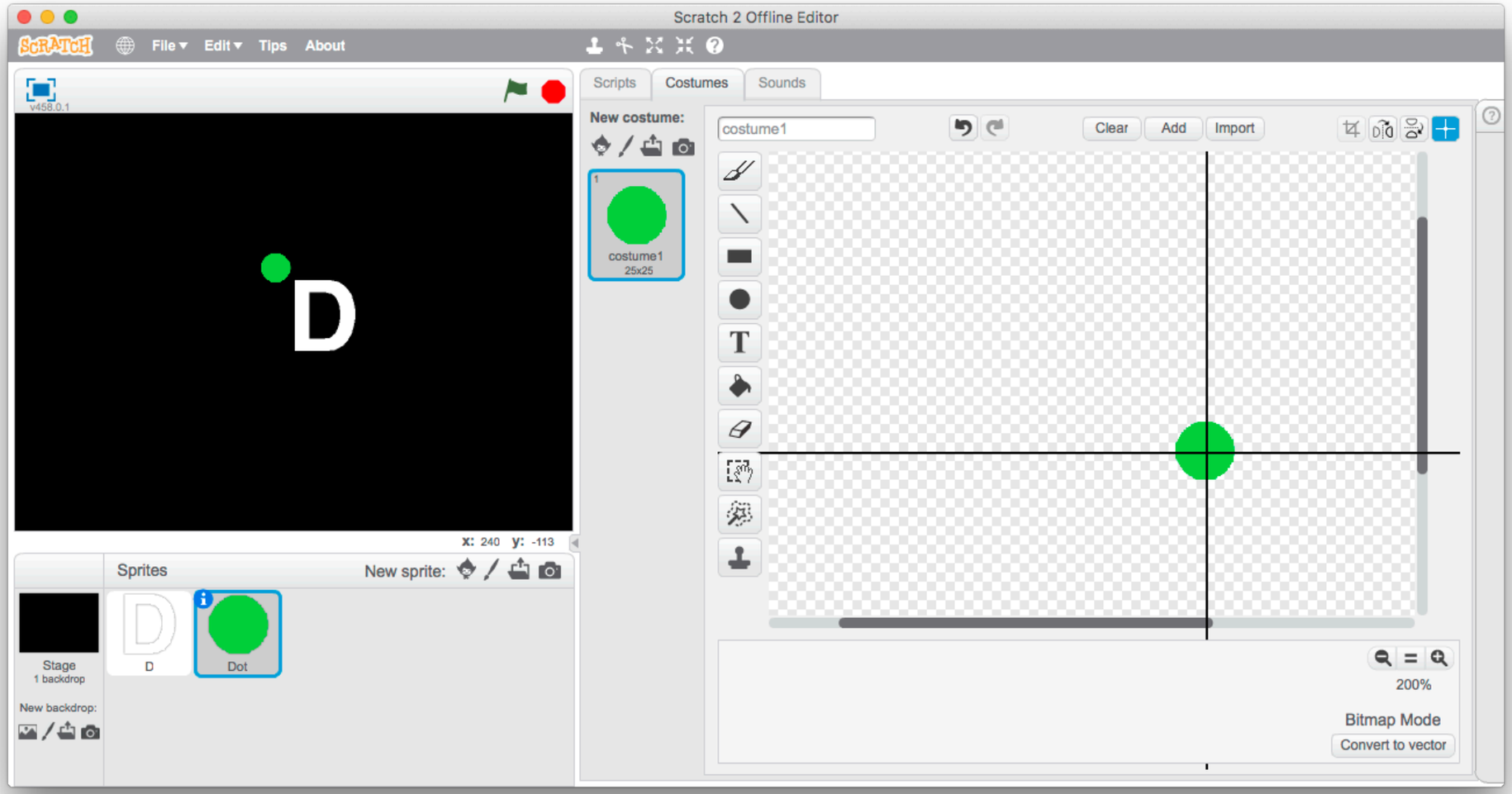


Let us create the first Sprite, our platform. Create a new sprite and put a D letter in white color. Be sure to adjust the height of your letter to 60 pixels. Set the costume center to the lower left part of the letter.

Advice: Click on the sprite « i » to change it's name

Part 1

Work on Sprite Dot



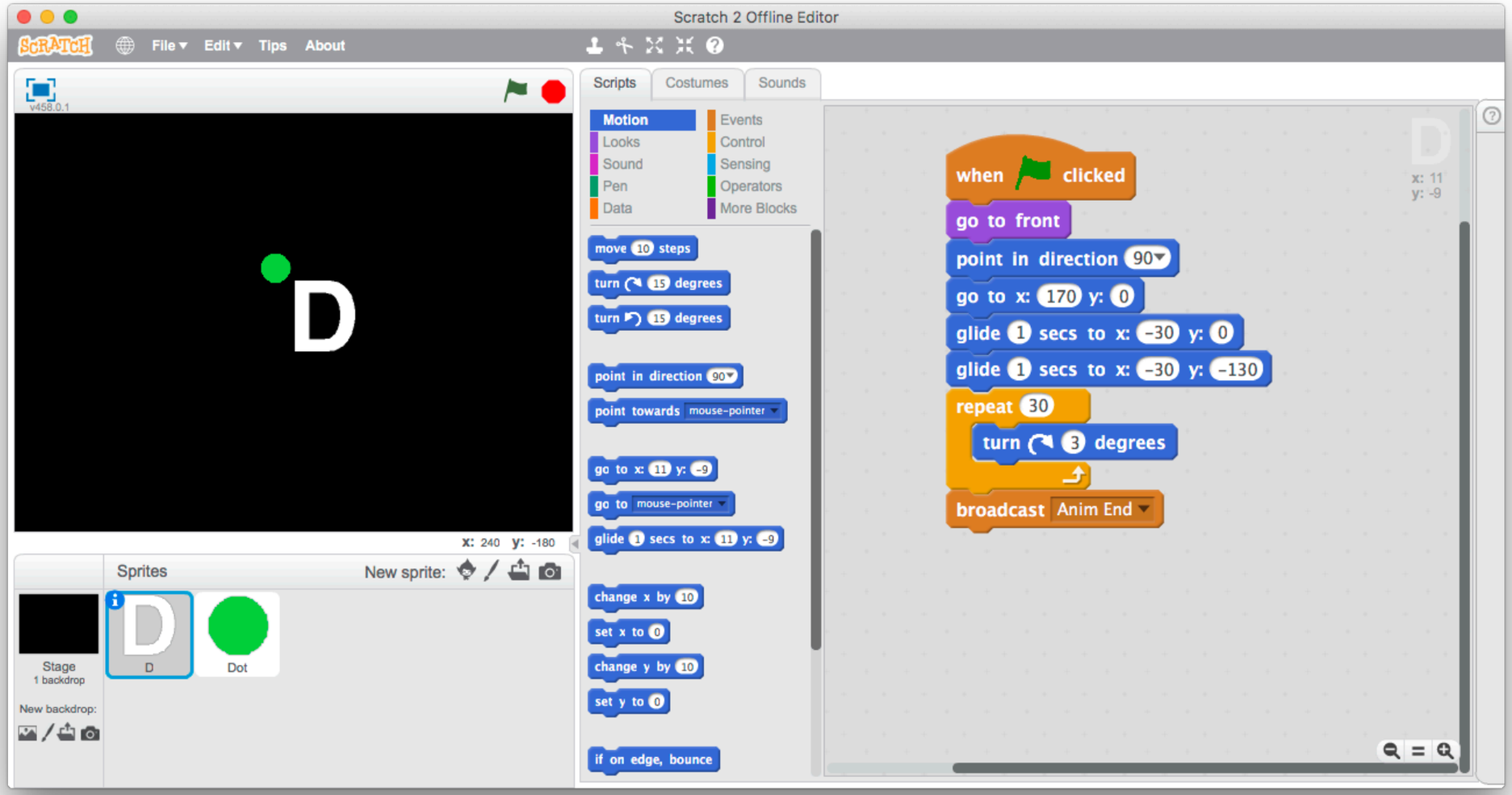
3

Let us create the second sprite, a ball, to be filled in green color. The sprite (use the shift key to draw a circle) should be 25 pixels large. Set the center of the costume at the center of the sprite.

Part 1

Work on Sprite D

4



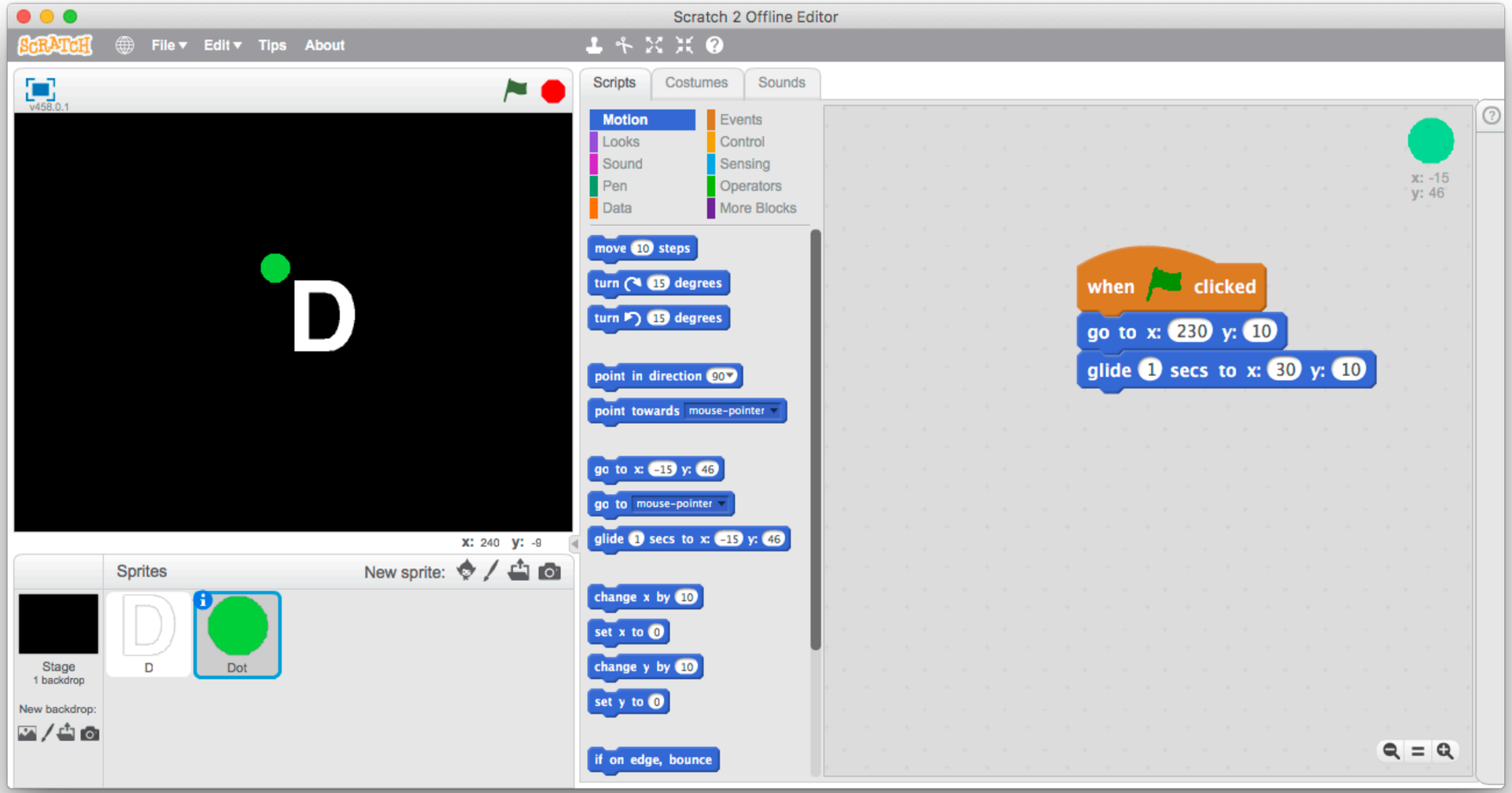
Basic animation for the letter D. It shall start on the right side, move to the center, then glide down and rotate to present it's side (which will be used as a paddle).

Advice: We created the message to be broadcasted by adding a new one in events

Part 1

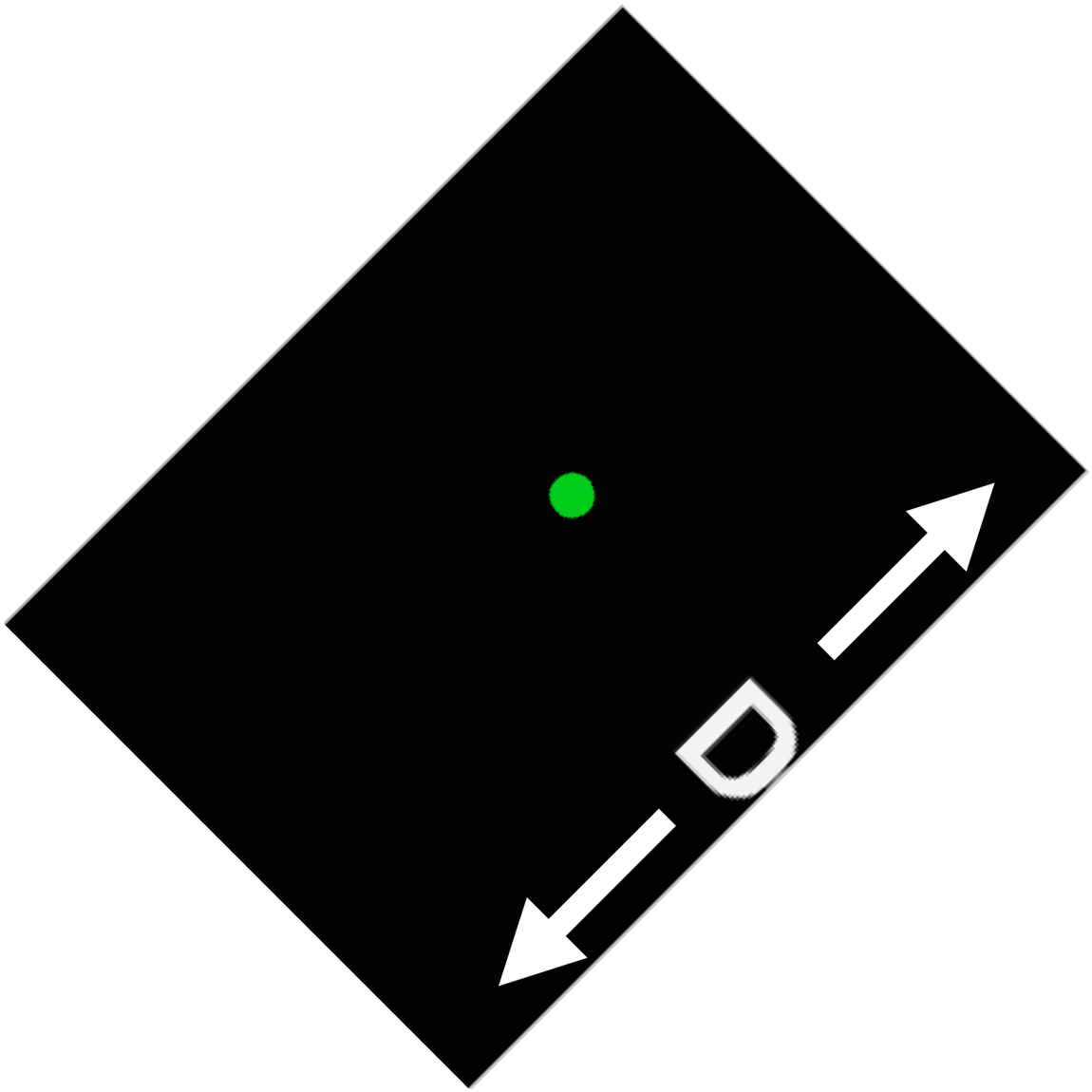
Work on Sprite Dot

5



Our code for the Ball animation. Start on the right, move to the center.

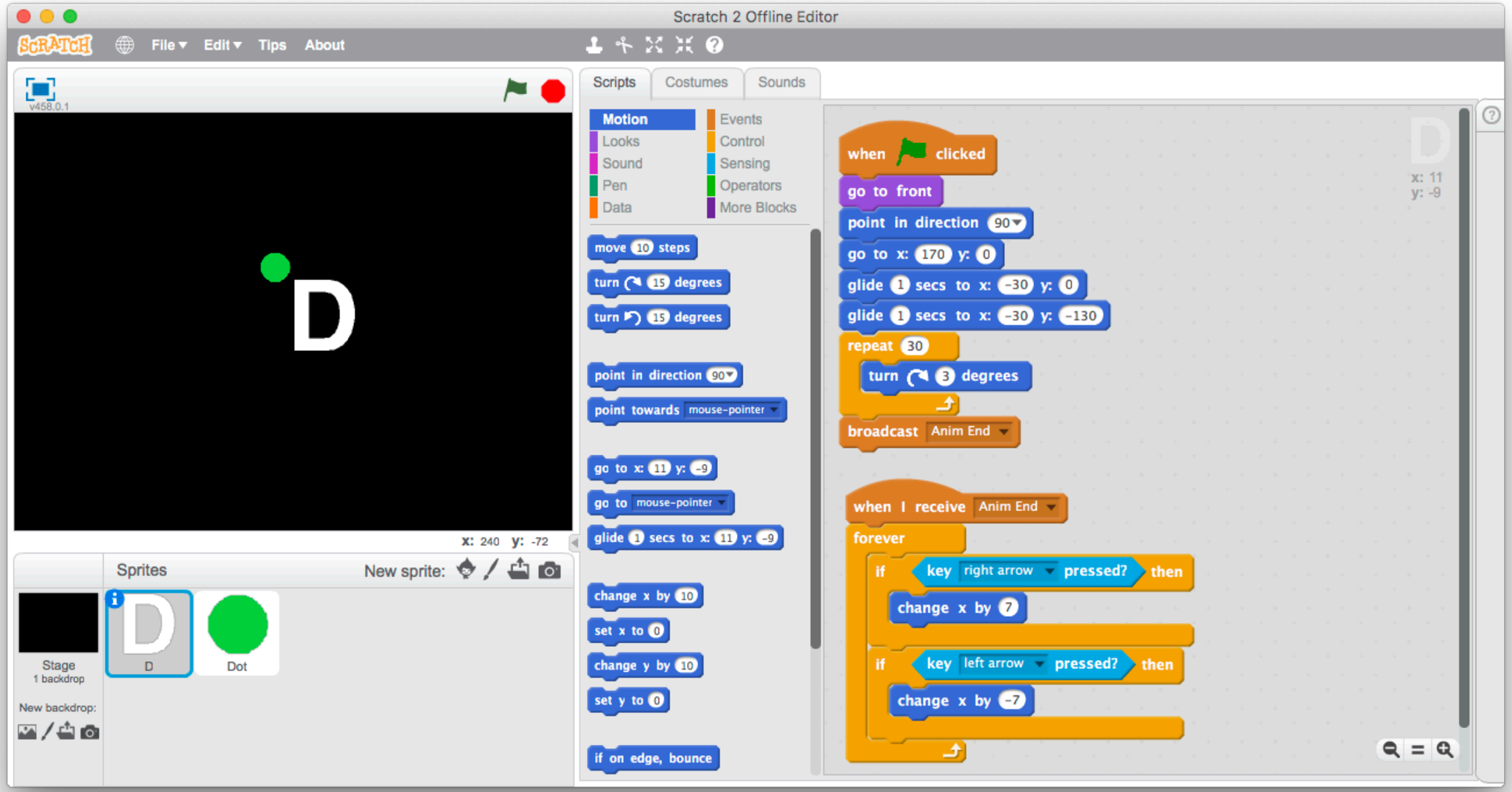
Part 2 - Bring some life!



Part 2

Work on Sprite D

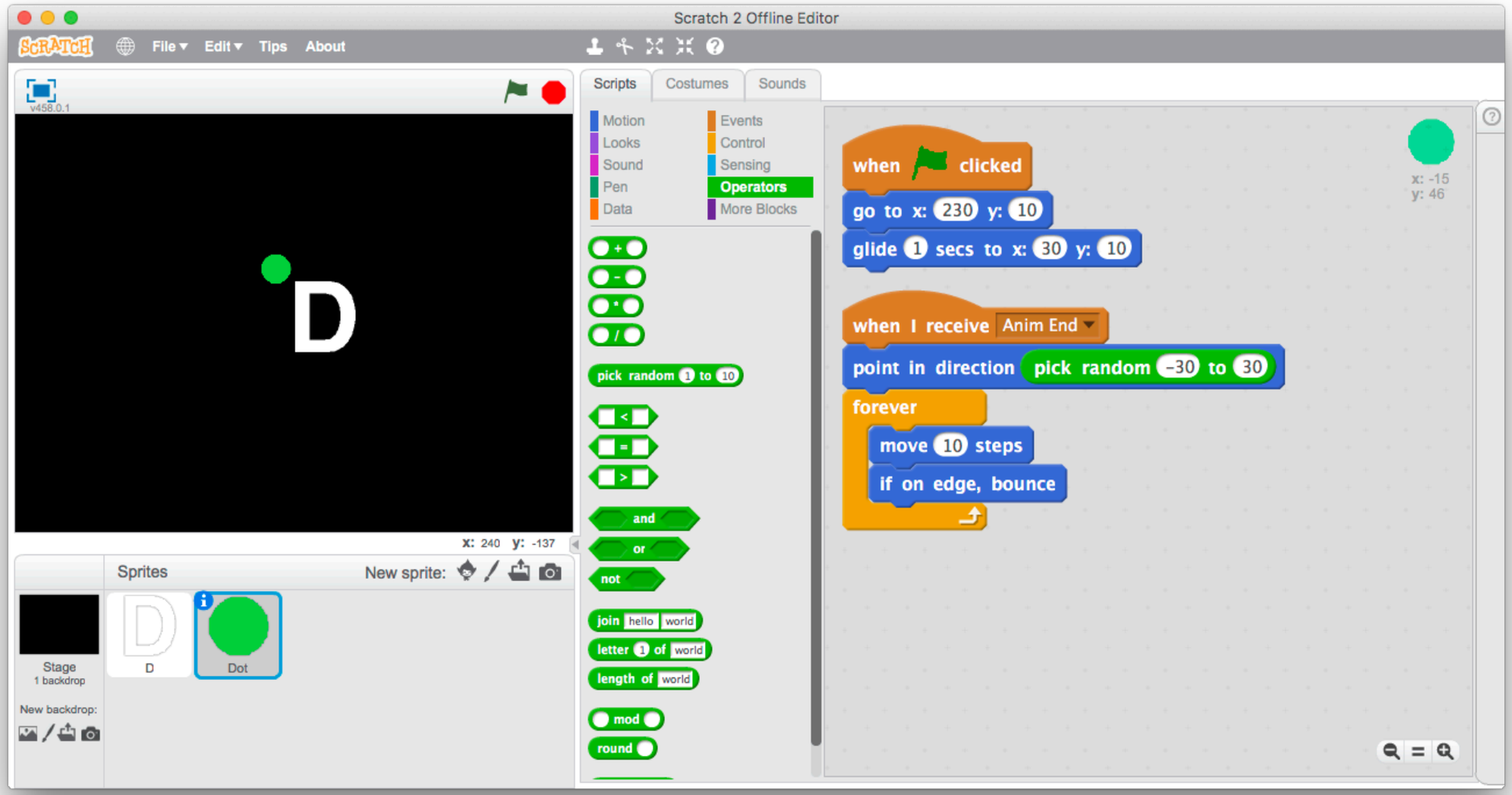
1



Paddle anime. It will move to the right by 7 pixels when right key is pressed. Same for the left.

Part 2

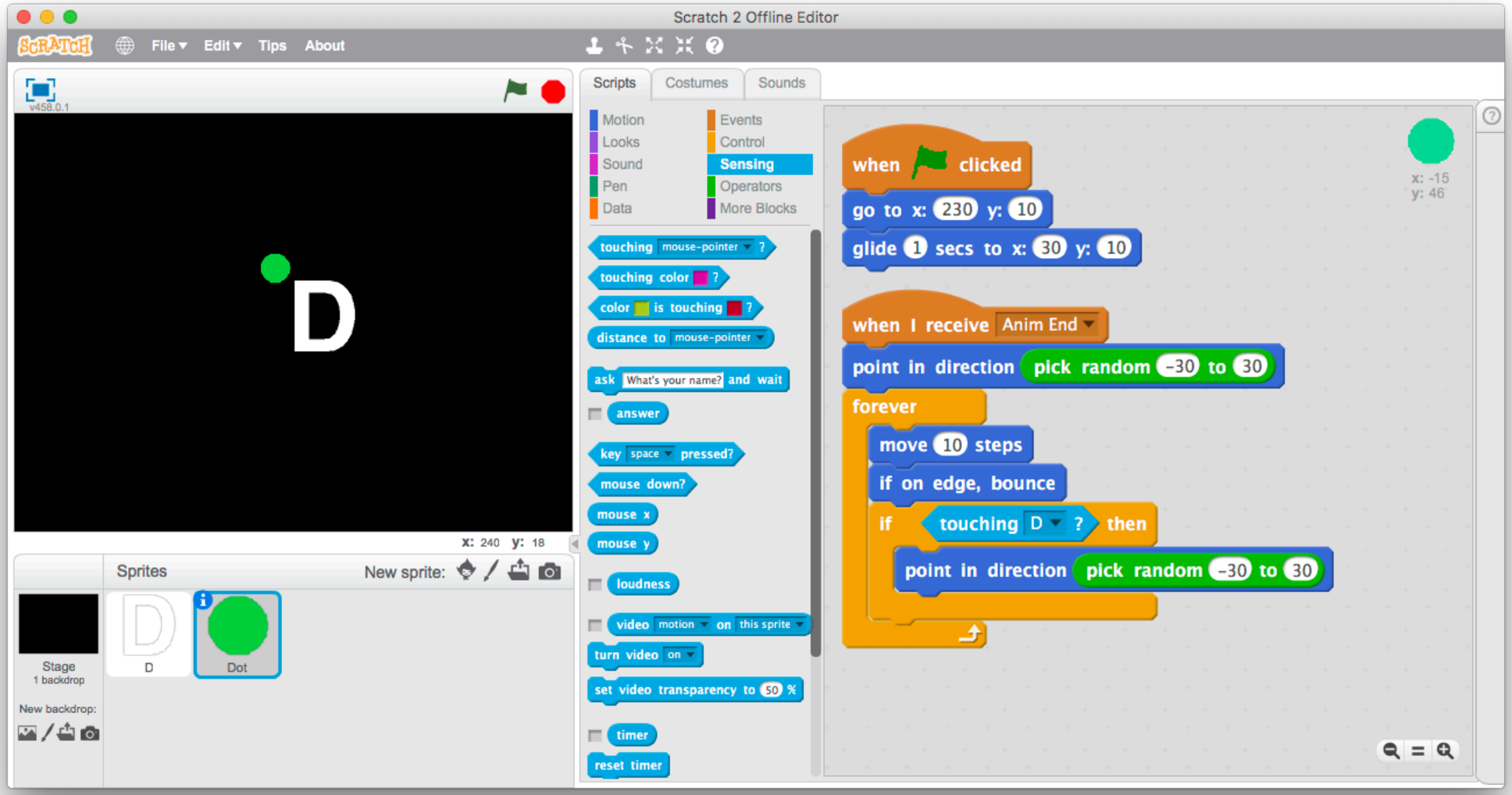
Work on Sprite Dot



Basic ball animation on game start. It goes up and bounces on edges.

Part 2

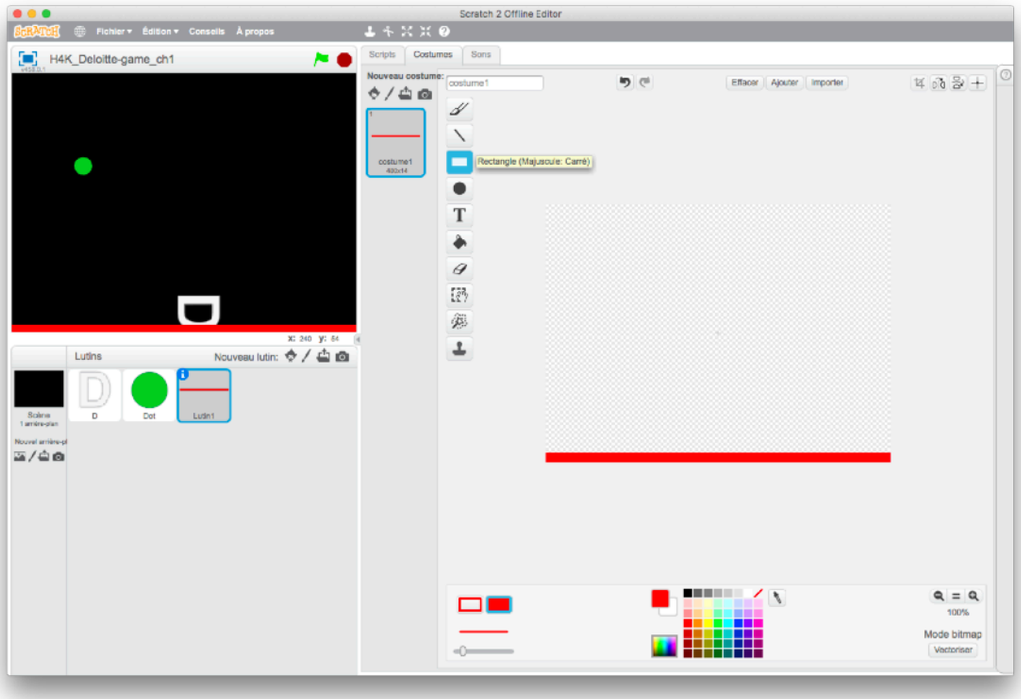
Work on Sprite Dot



3

Paddle and ball interaction. When the ball hits the paddle, it bounces back up. Our game will start to be usable!

Part 3 - Let’s make the game interesting



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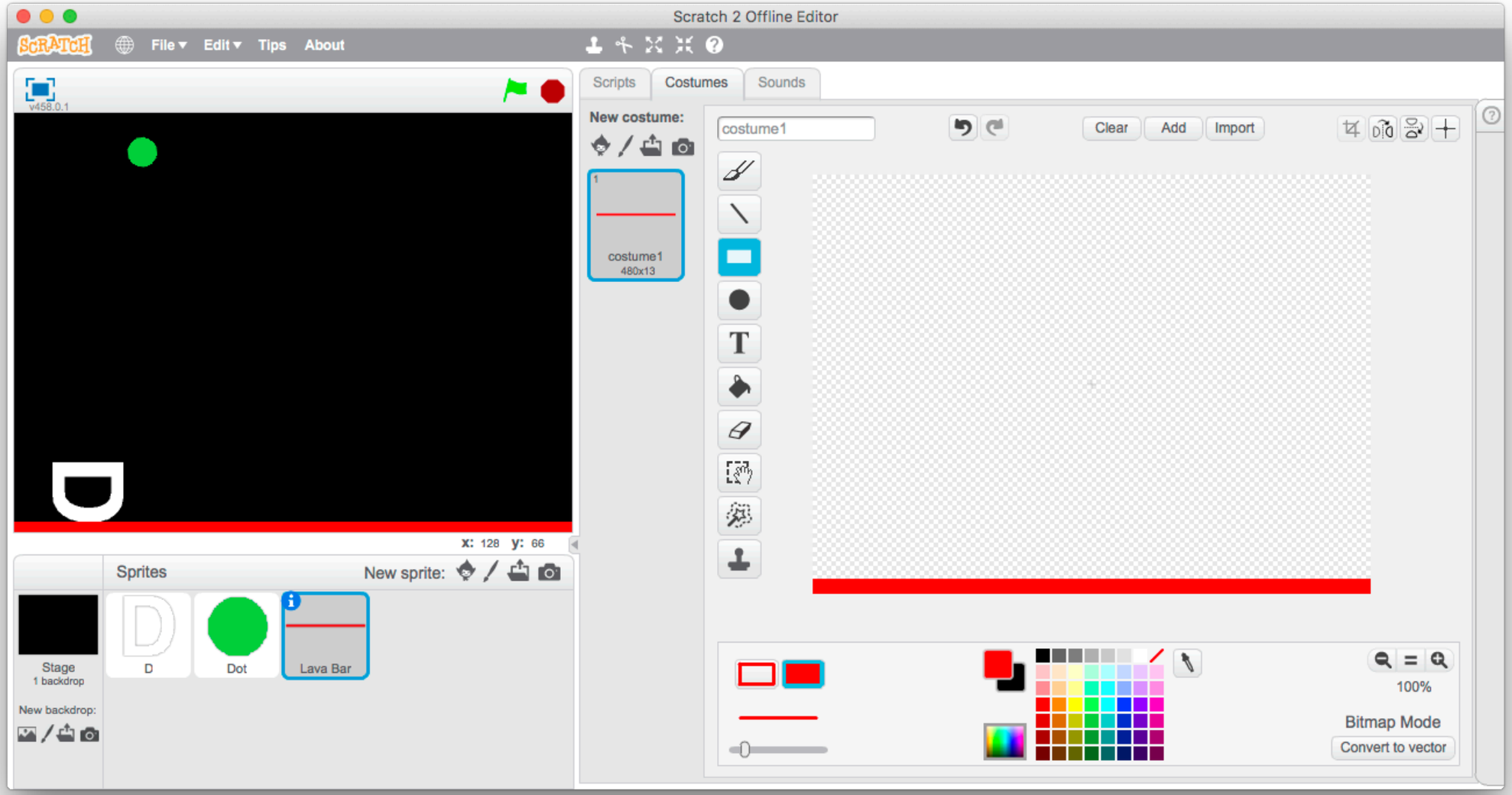
Part 3

Work on Sprite Lava Bar

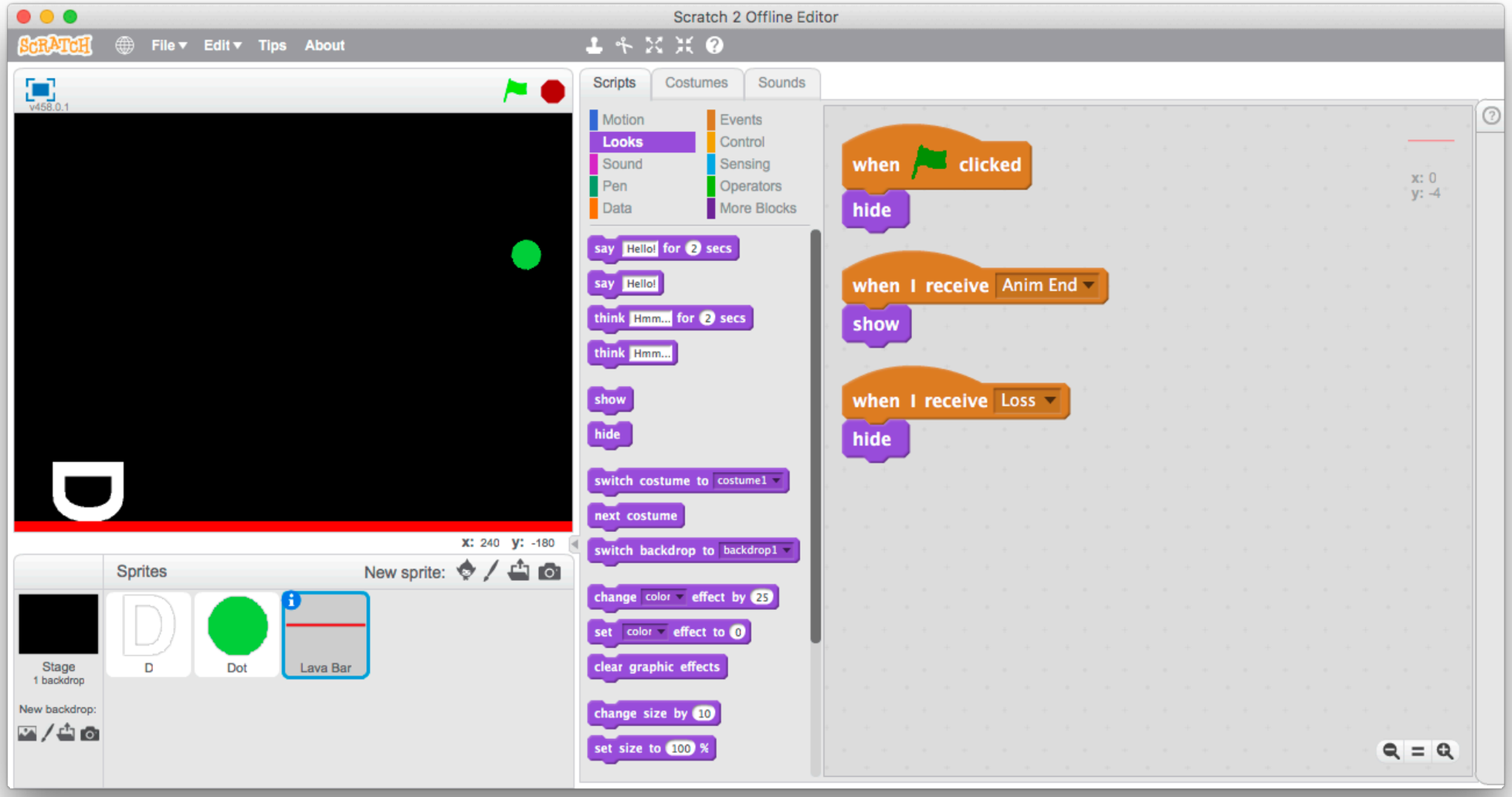


1

Let's create a death trap for our game - a lava bar. Create a new sprite, called « lava bar ». Draw a rectangle over the full width of the screen, and position it on the ground.

Part 3

Work on Sprite Lava Bar

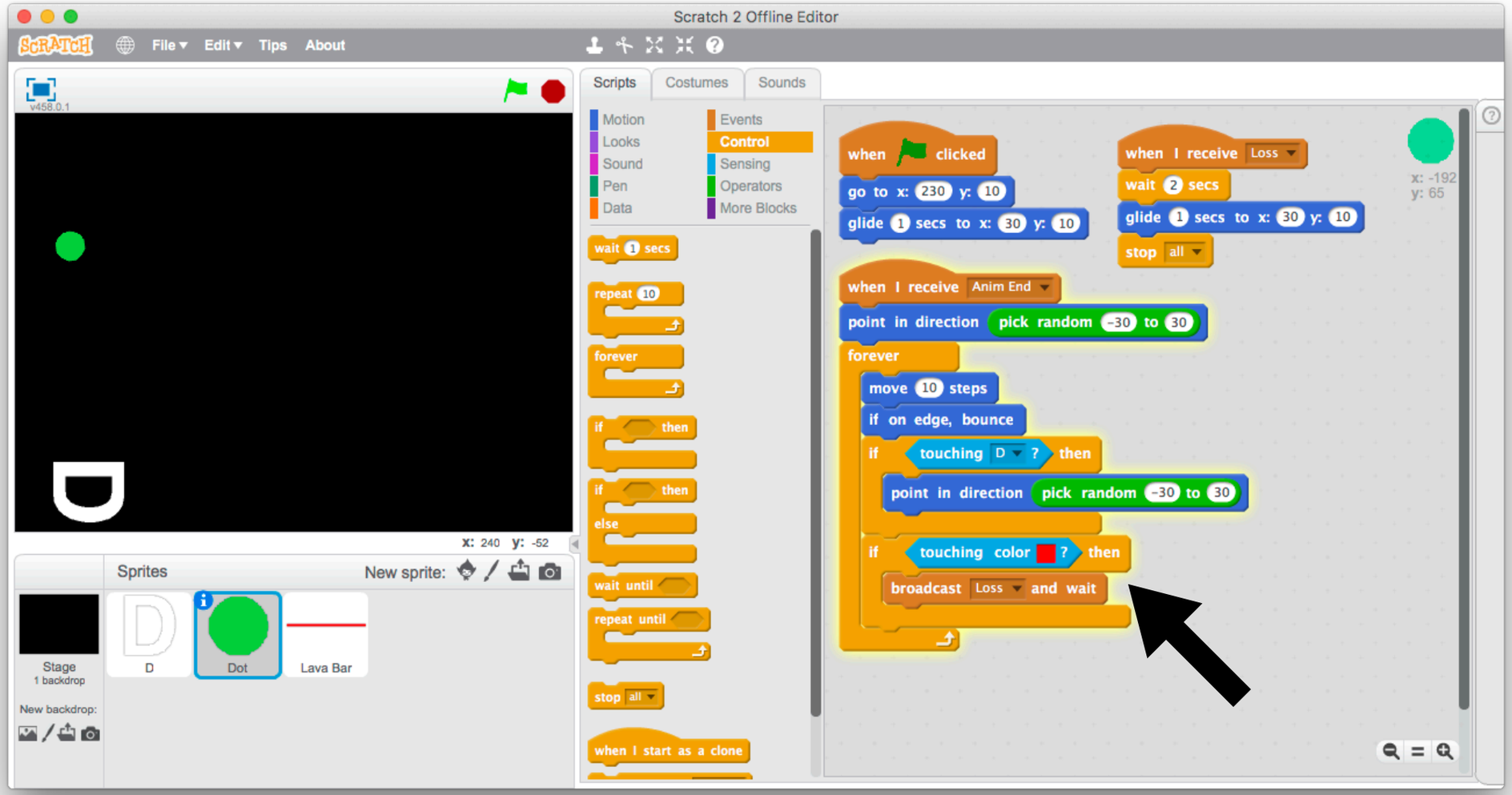


2

Code for lava. It hides at start, shows during game, and hides again after. To hide after game, we need to create a new message « Loss », which we will use next.

Part 3

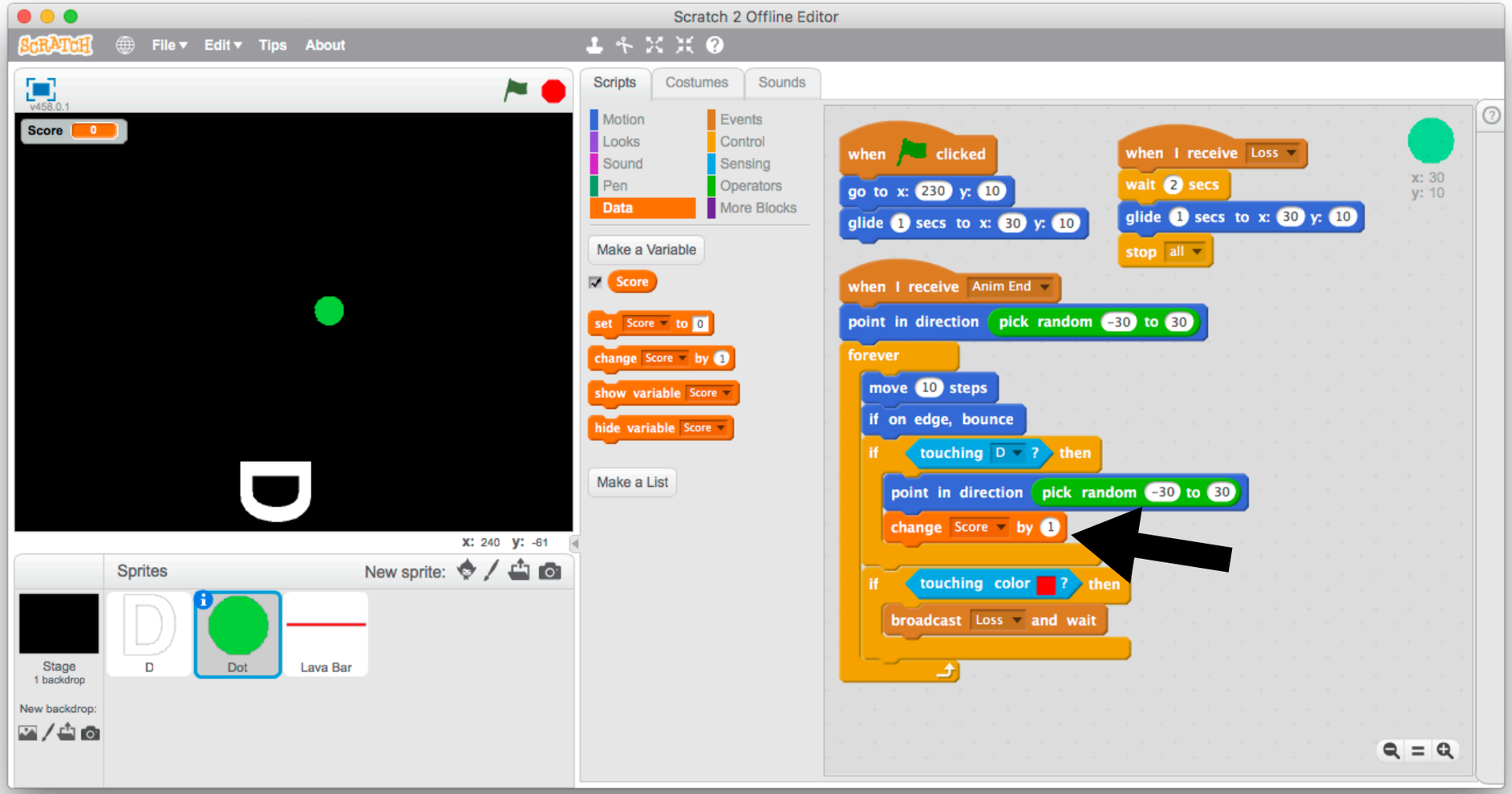
Work on Sprite Dot



Now we shall program the ball. If it touches the lava (red color), it broadcasts the « Loss » message. Then it waits a bit, and moves back to the Center.

Part 3

Work on Sprite Dot



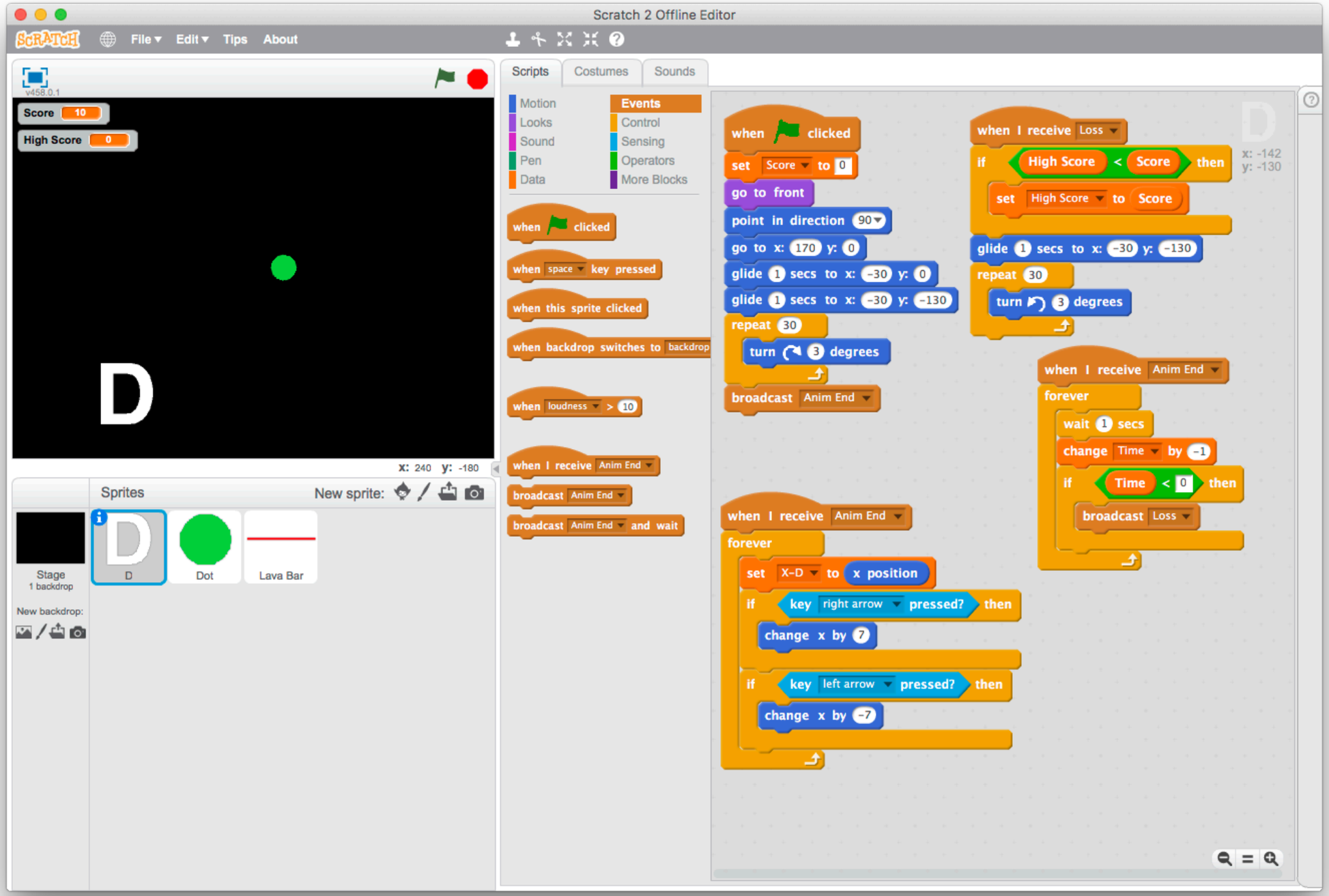
4

Our first variable to be created is « Score ». It will track a simple aspect of the game: Whenever the paddle will hit the ball, one point will be scored.

Part 3

Work on Sprite D

5



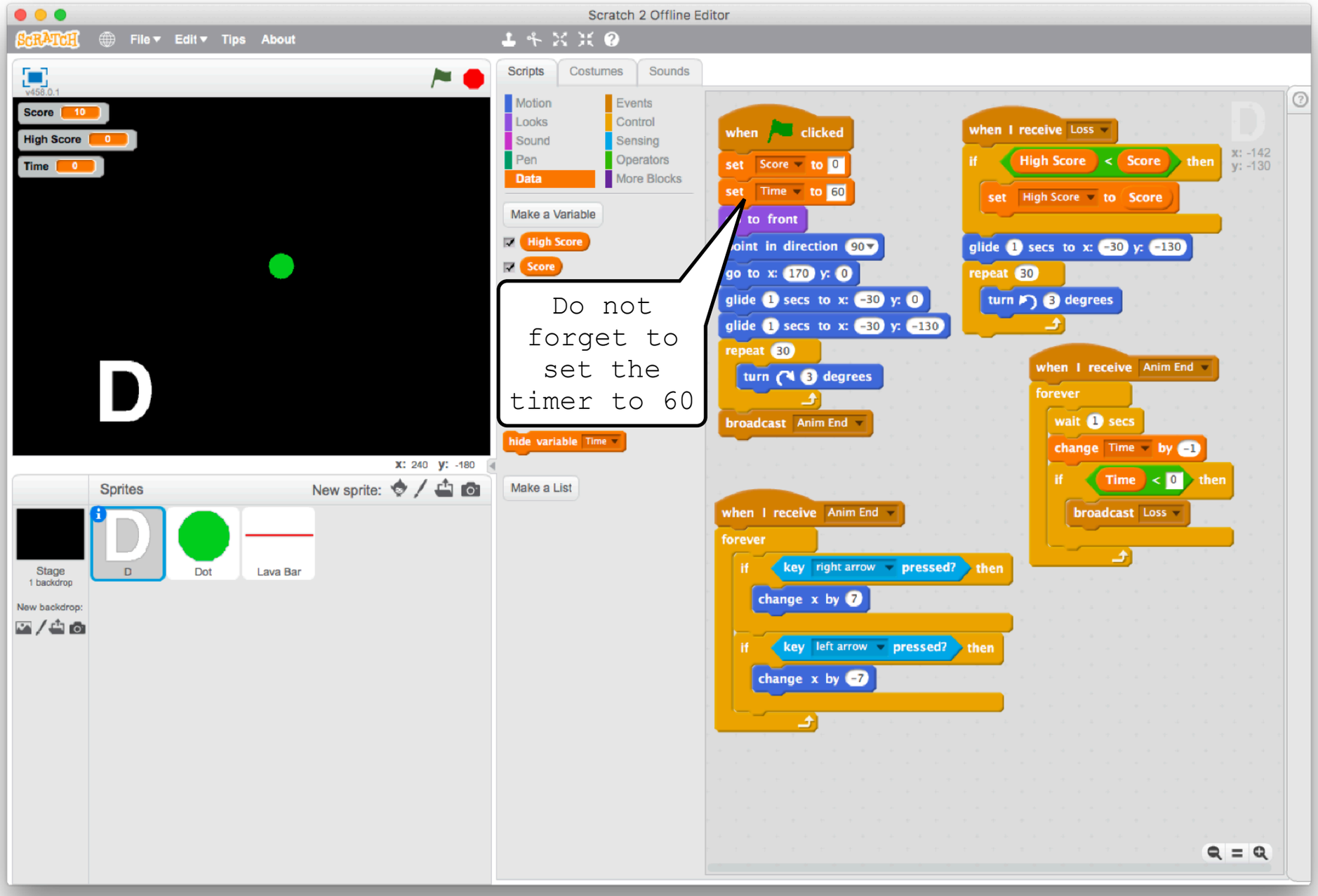
We the variable « Score » at 0 when the game starts. We also create a second variable to track high scores. Finally, at the end of the game, the D sprite will animate itself and move back vertically to the middle.

Advice: We compare the values of the variables « Score » and « High Score ». The highest of the two is set as the new « High Score ».

Part 3

Work on Sprite D

6



Lets set a timer, running for 60 seconds. We create a new variable « Time », give it a value of 60, and remove 1 to that value every second after the game starts. When our timer reaches 0, our game will end.

For the experts

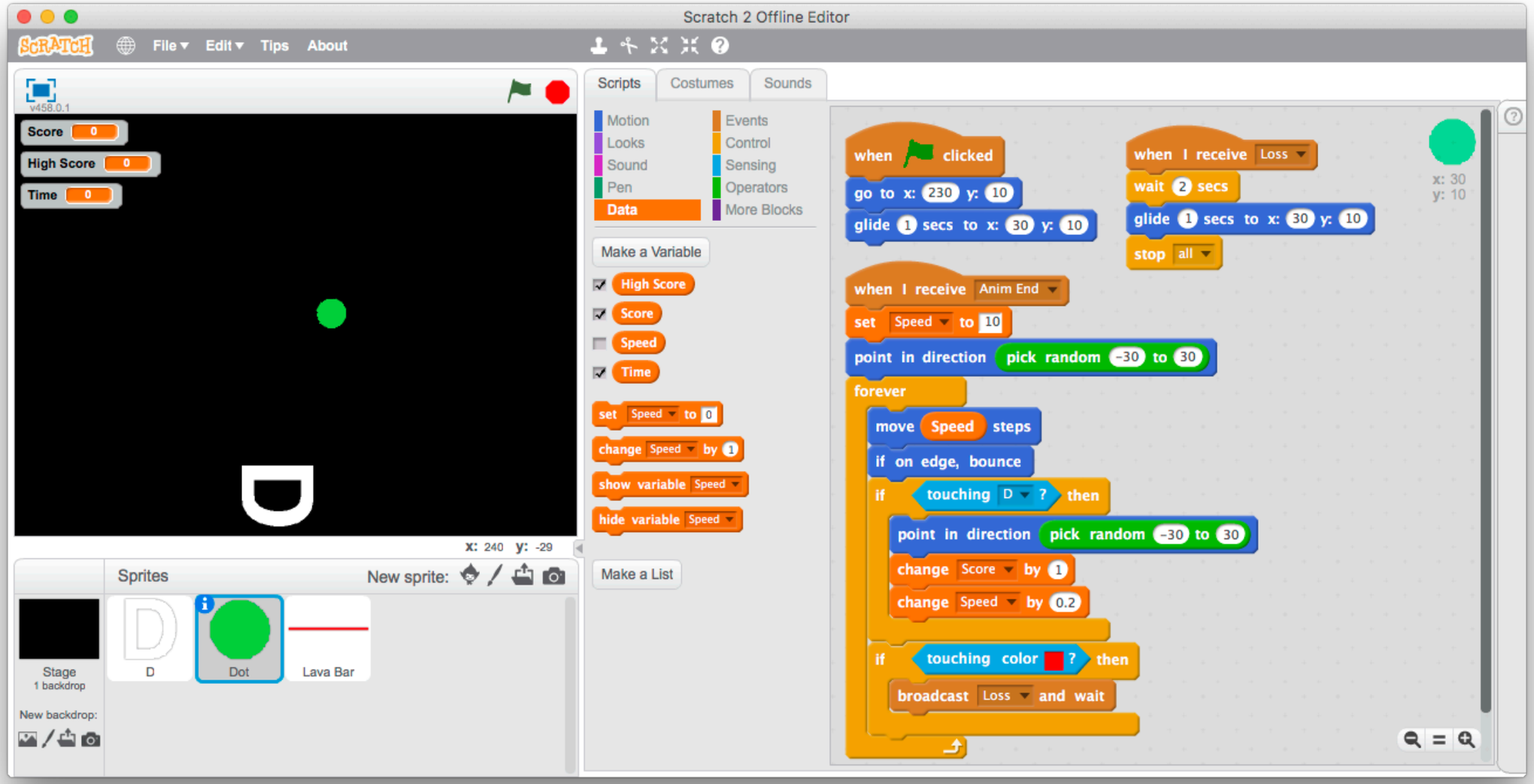
The game will be made more complicated

1 - The ball's speed will increase each time that it will hit the paddle

2 - The bounce direction of the ball will depend on the location where the ball will hit the paddle

Part 4

Work on Sprite Dot

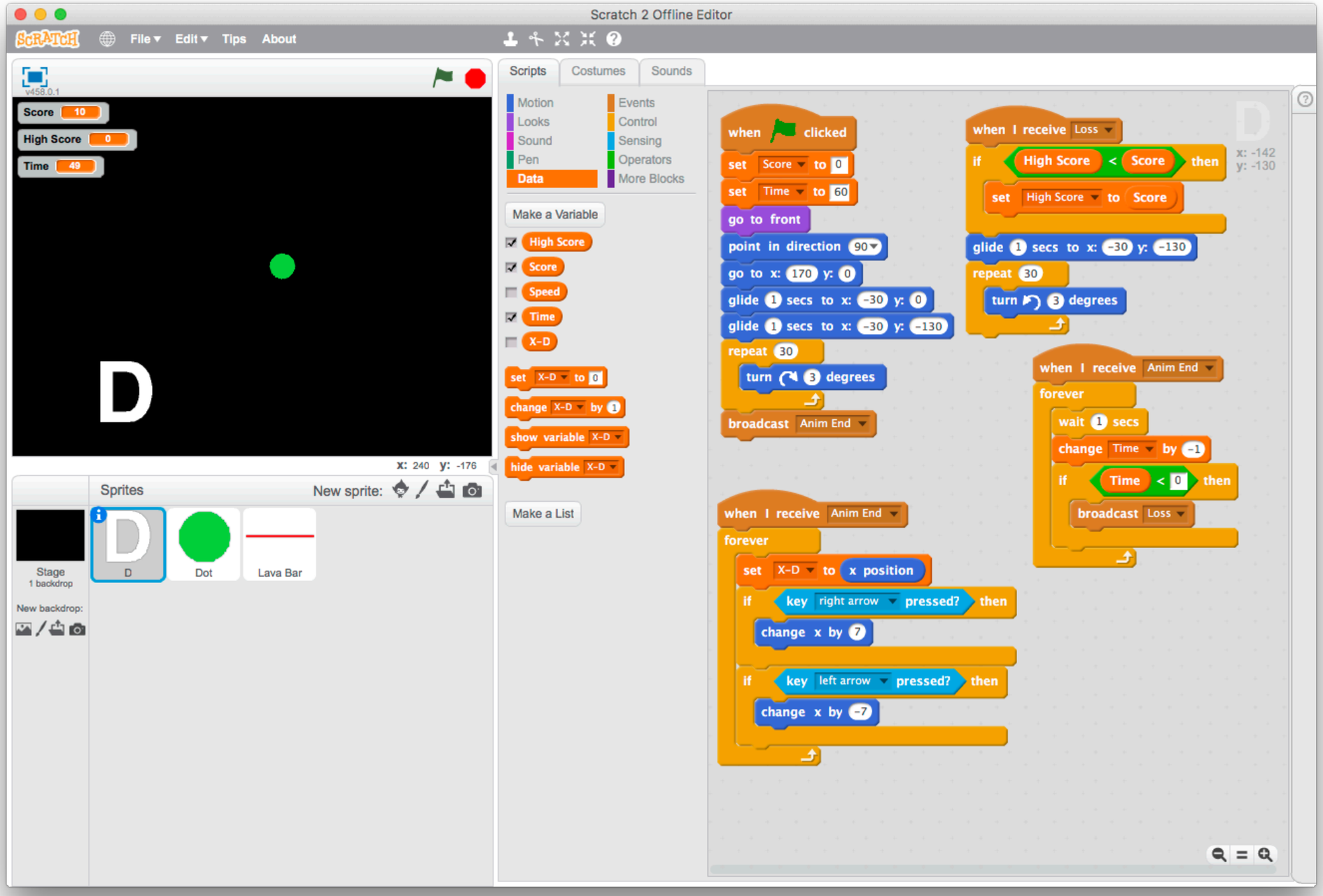


1

We are going to make the ball's speed vary. The ball's speed becomes a new "speed" variable. The ball's speed will increase of 0.2 unit each time that it will hit the paddle.

Part 4

Work on Sprite D

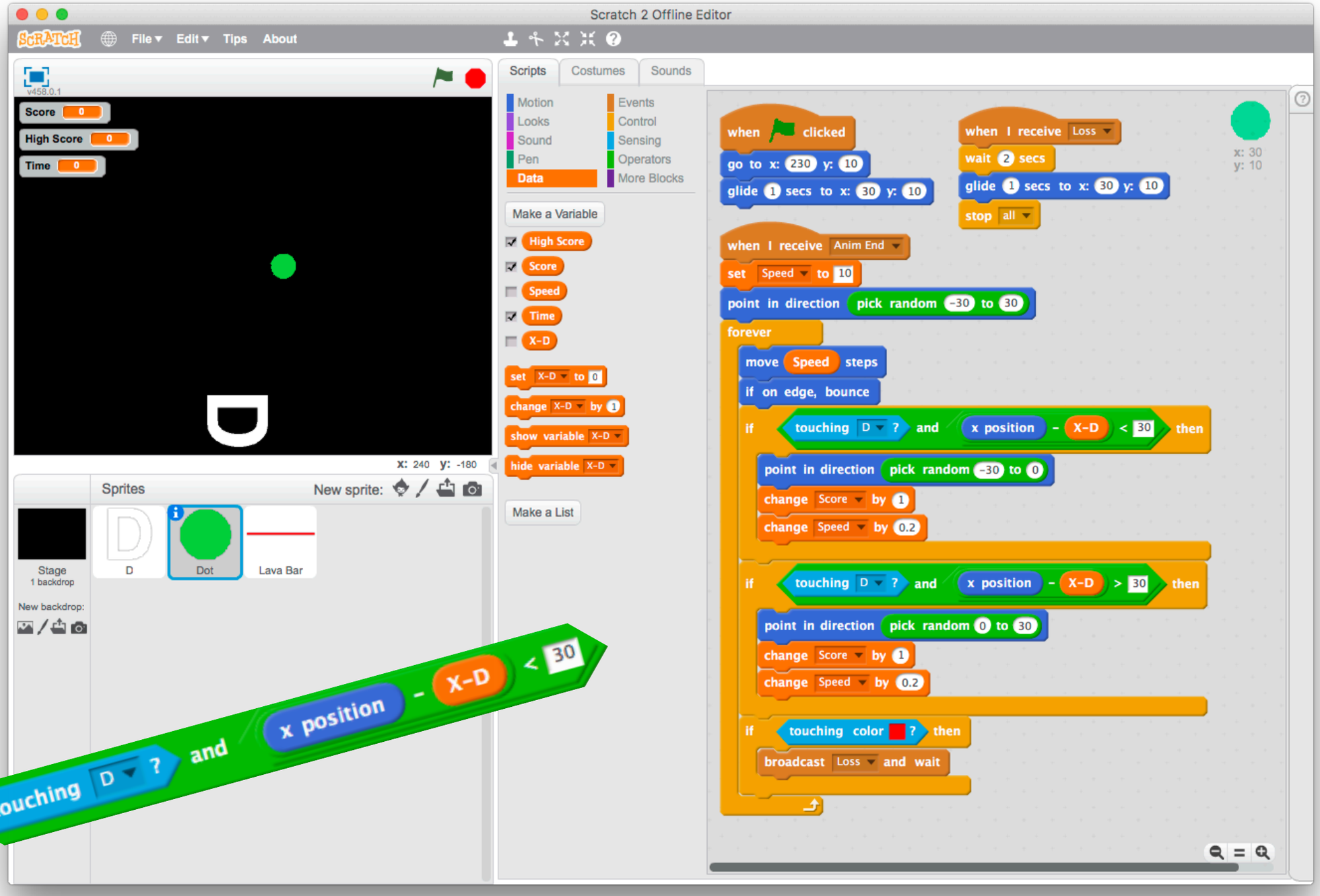


More complicated… The ball will bounce towards the right if hits the right side of the racket. Same for the left side. To do this, we already know that the paddle is 60 pixel wide. We will need a new variable (« X-D » which corresponds to the paddle costume center) to know which part of the paddle will be hit by the ball..

Part 4

Work on Sprite Dot

2 (bis)



We know where the paddle is thanks to the « X-D » variable. We just have to compare the place where the ball will hit the paddle and make it bounce accordingly.

Advice: Good Luck :-)