

Conditional programming



What we did:

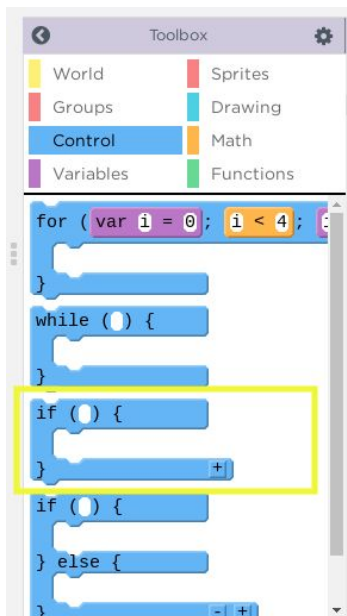
- Use conditional programming to add control to the ball's movements if a certain condition holds true
- Make a challenging game using the ball's movements

How we did it:

Step 1:

Find if conditional block.

Here's how you find it:



```
1 var ball = createSprite(200,200,10,10);
2
3 ball.velocityY = 2;
4 ball.velocityX = 2;
5
6 function draw() {
7   background("white");
8
9   if () {
10
11 }
12
13
14 createEdgeSprites();
15 ball.bounceOff(edges);
16 drawSprites();
17 }
18
```

Next is applying conditional programming to control the movements of the ball (Remember we made the ball using sprite commands last lesson and animated it)

```
1 var ball = createSprite(200,200,10,10);
2
3 ball.velocityY = 2;
4 ball.velocityX = 2;
5
6 function draw() {
7   background("white");
8
9   if (keyDown("UP_ARROW")) {
10     ball.velocityX = 0;
11     ball.velocityY = -2;
12   }
13
14   if (keyDown("DOWN_ARROW")) {
15     ball.velocityX = 0;
16     ball.velocityY = 2;
17   }
18
19
20 createEdgeSprites();
21 ball.bounceOff(edges);
22 drawSprites();
23 }
```

Step 2:

Now detail all the movements you want your ball to make and write commands like this:

```

if (keyDown("LEFT_ARROW")) {
    ball.velocityX = 0;
    ball.velocityY = -2;
}

if (keyDown("RIGHT_ARROW")) {
    ball.velocityX = 0;
    ball.velocityY = 2;
}

if (keyDown("DOWN_ARROW")) {
    ball.velocityX = -2;
    ball.velocityY = 0;
}

if (keyDown("UP_ARROW")) {
    ball.velocityX = 2;
    ball.velocityY = 0;
}

```

Bonus: You can create obstacles in your game!

```

1 var ball = createSprite(200,200,10,10);
2 var target = createSprite(330,10,80,10);
3 var obstacle1 = createSprite(10,50,300,10);
4 var obstacle2 = createSprite(320,50,250,10);
5
6 ball.velocityY = 2;
7 ball.velocityX = 2;
8
9 function draw() {
10     background("white");
11
12     ball.collide(obstacle1);
13     ball.collide(obstacle2);
14
15     if (keyDown("LEFT_ARROW")) {
16         ball.velocityX = 0;
17         ball.velocityY = -2;
18     }
19
20     if (keyDown("RIGHT_ARROW")) {
21         ball.velocityX = 0;
22         ball.velocityY = 2;
23     }
24
25     if (keyDown("DOWN_ARROW")) {
26         ball.velocityX = -2;
27         ball.velocityY = 0;
28     }

```

What's next?:

We will make the game a little more challenging by adding more objects.