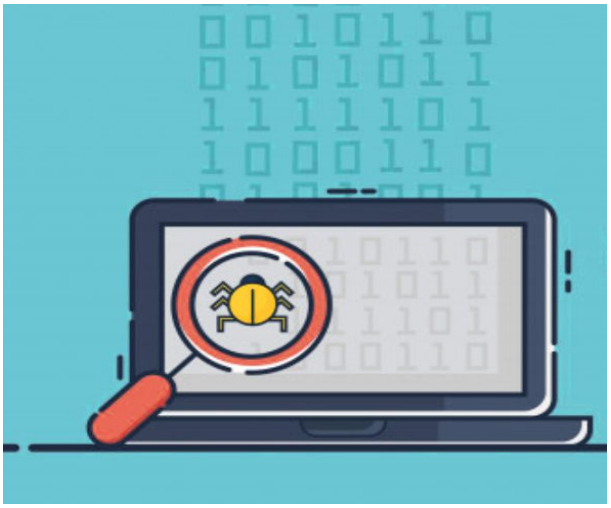
Code Debugging and Code Indentation



What we did:

- Learn to indent the code correctly to make it more readable.
- Learn to identify an additional condition needed in the program to stop the T-Rex from jumping again while it is in the air.
- Created an invisible ground sprite to make the T-Rex run below the ground.

How we did it:

Step 1: Code Indentation— Leave a space after every meaningful line of code

```
1  //create a trex sprite
2  var trex = createSprite(200,380,20,50);
3  trex.setAnimation("trex");
4
5  //scale and position the trex
6  trex.scale = 0.5;
7  trex.x = 50;
8
9  //create a ground sprite
10 var ground = createSprite(200,380,400,20);
11 ground.setAnimation("ground2");
12 ground.x = ground.width /2;
13
14 function draw() {
15 //set background to white
16 background("white");
17
18 ground.velocityX = -2;
19 console.log(ground.x);
20
21 if (ground.x < 0){
22 ground.x = ground.width/2;
23 }
24
25 //jump when the space key is pressed
26 if(keyDown("space")){
27 trex.velocityY = -10 ;
28 }
29
30 //add gravity
31 trex.velocityY = trex.velocityY + 0.8;
```

Leave an even space after every instruction contained inside another block of code.

```
function draw() {
  //set background to white
  background("white");

  ground.velocityX = -2;
  console.log(ground.x);

  if (ground.x < 0){
  ground.x = ground.width/2;
  }

  //jump when the space key is pressed
  if(keyDown("space")){
  trex.velocityY = -10 ;
  }

  //add gravity
  trex.velocityY = trex.velocityY + 0.8;

  //stop trex from falling down
  trex.collide(ground);

  drawSprites();
```

Step 2: Fix bugs
Bug 1: The dinosaur is running above the ground

Let us create an invisible ground sprite just below the actual ground sprite

```
//create a ground sprite
var ground = createSprite(200,380,400,20);
ground.setAnimation("ground2");
ground.x = ground.width /2;

var invisibleGround = createSprite(200,385,400,5);

function draw() {
  //set background to white
  background("white");
```

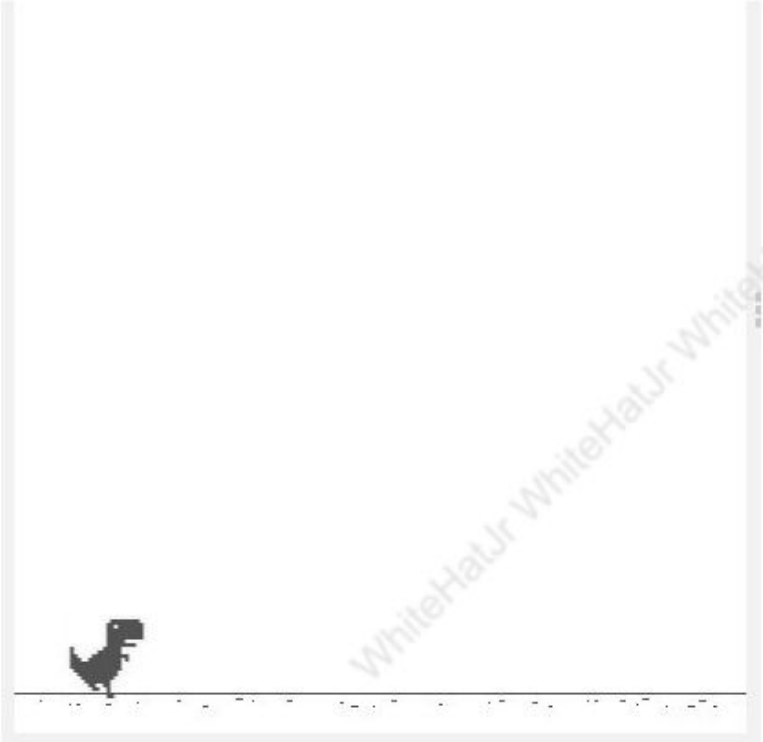
Instead of supporting the T-Rex on the ground, collide it with the invisible ground.

```
function draw() {
  //set background to white
  background("white");

  ground.velocityX = -2;

  console.log(ground.x);

  if (ground.x < 0){
    ground.x = ground.width/2;
  }

  //jump when the space key is pressed
  if(keyDown("space")){
    trex.velocityY = -10 ;
  }

  //add gravity
  trex.velocityY = trex.velocityY + 0.8;

  //stop trex from falling down
  trex.collide(invisibleGround);

  drawSprites();
}
```

Step 3:

Add the following line of code anywhere outside the function draw() and after creating the invisibleGround Sprite:

invisibleGround.visible = false;



Step 4:
Bug 2: The Trex jumps even when it is in the air!

Add an additional condition inside the IF block where we make the T_Rex jump only when it is on the ground.

```
28
29  //jump when the space key is pressed
30  if(keyDown("space") && trex.y >= 359){
31    trex.velocityY = -10 ;
32  }
33
34  //add gravity
35  trex.velocityY = trex.velocityY + 0.8;
36
37  //stop trex from falling down
38  trex.collide(invisibleGround);
39
40  drawSprites();
```

What's next? :
Creating floating clouds at different heights.