PRO-C41

WhiteHat Jr
Live Online Coding for Kids

CHANGING LANES

What is our GOAL for this MODULE?

We used our knowledge to change the lane and create an identification of the player's car.

What did we ACHIEVE in the class TODAY?

- Added the condition to move the car to left and right when the arrow key is pressed
- Added some identification to help the player identify which is their car.

Which CONCEPTS/CODING BLOCKS did we cover today?

- text() function
- keyIsDown()

How did we DO the activities?

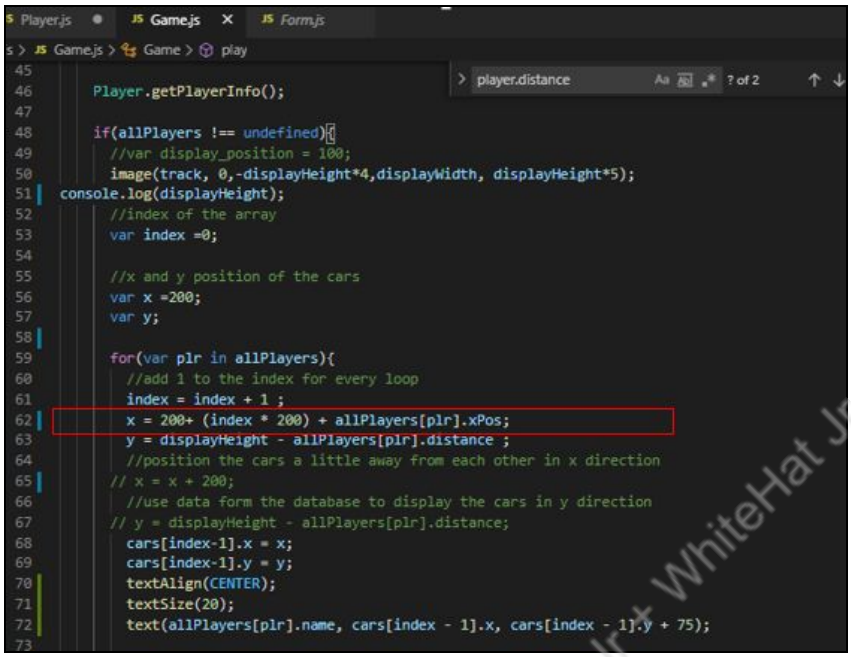
1. Initialize the value of xVel and yVel.

```
Player.js   sketch.js   Game.js
sketch.js > draw
19    car4_img = loadImage("../images/car4.png");
20    ground = loadImage("../images/ground.png");
21  }
22
23  function setup(){
24    canvas = createCanvas(displayWidth , displayHeight);
25    database = firebase.database();
26    gameState = 0;
27    distance = 0;
28   // finishedPlayers = 0;
29    yVel = 0;
30    xVel = 0;
31
32    xSet = false;
33    game = new Game();
34    game.getState();
35    game.start();
36  }
37
```

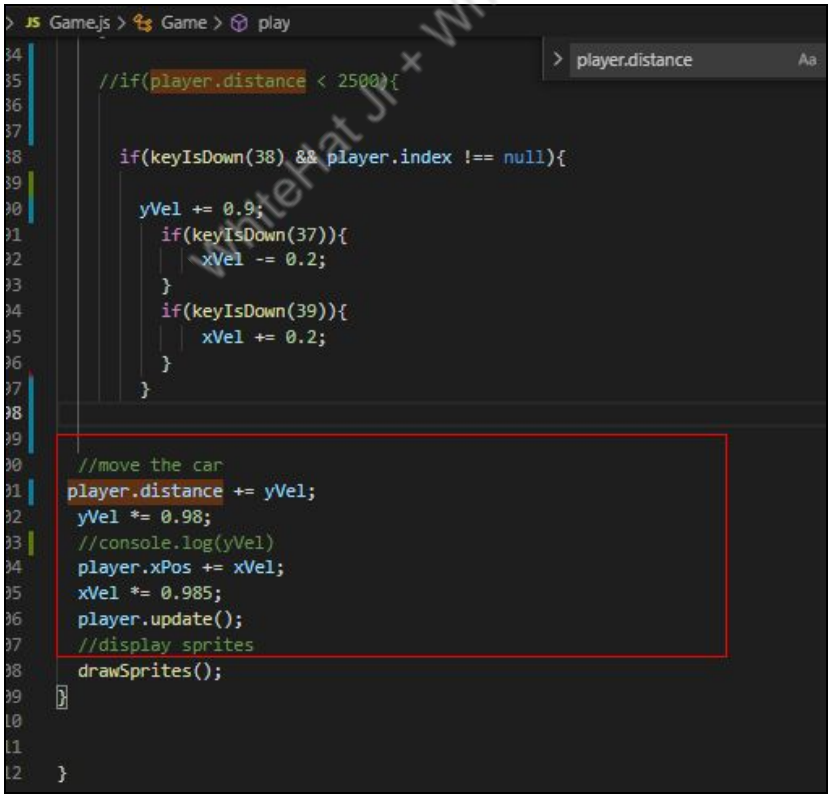
2. Add the condition to move the car left and right when the respective arrow key is pressed.

```
Player.js   sketch.js   Game.js
js > Game.js > Game > play
66          //use data form the database to display the cars in y direction
67        // y = displayHeight - allPlayers[plr].distance;
68          cars[index-1].x = x;
69          cars[index-1].y = y;
70
71          if (index === player.index){
72            cars[index - 1].shapeColor = "red";
73            camera.position.x = displayWidth/2;
74            camera.position.y = cars[index-1].y
75          }
76
77
78        }
79
80      }
81
82      if(keyIsDown(UP_ARROW) && player.index !== null){
83        player.distance +=10
84        player.update();
85      }
86      console.log(displayHeight)
87        if(keyIsDown(38) && player.index !== null){
88
89          yVel += 0.9;
90            if(keyIsDown(37)){
91                xVel -= 0.2;
92            }
93            if(keyIsDown(39)){
94                xVel += 0.2;
95            }
96        }
```

3. Change the index value of the player's car.



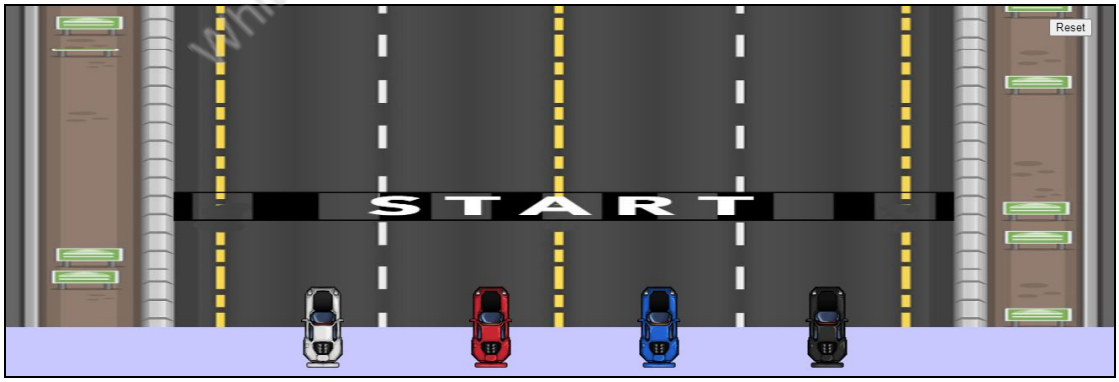
4. Include the code to move the car.



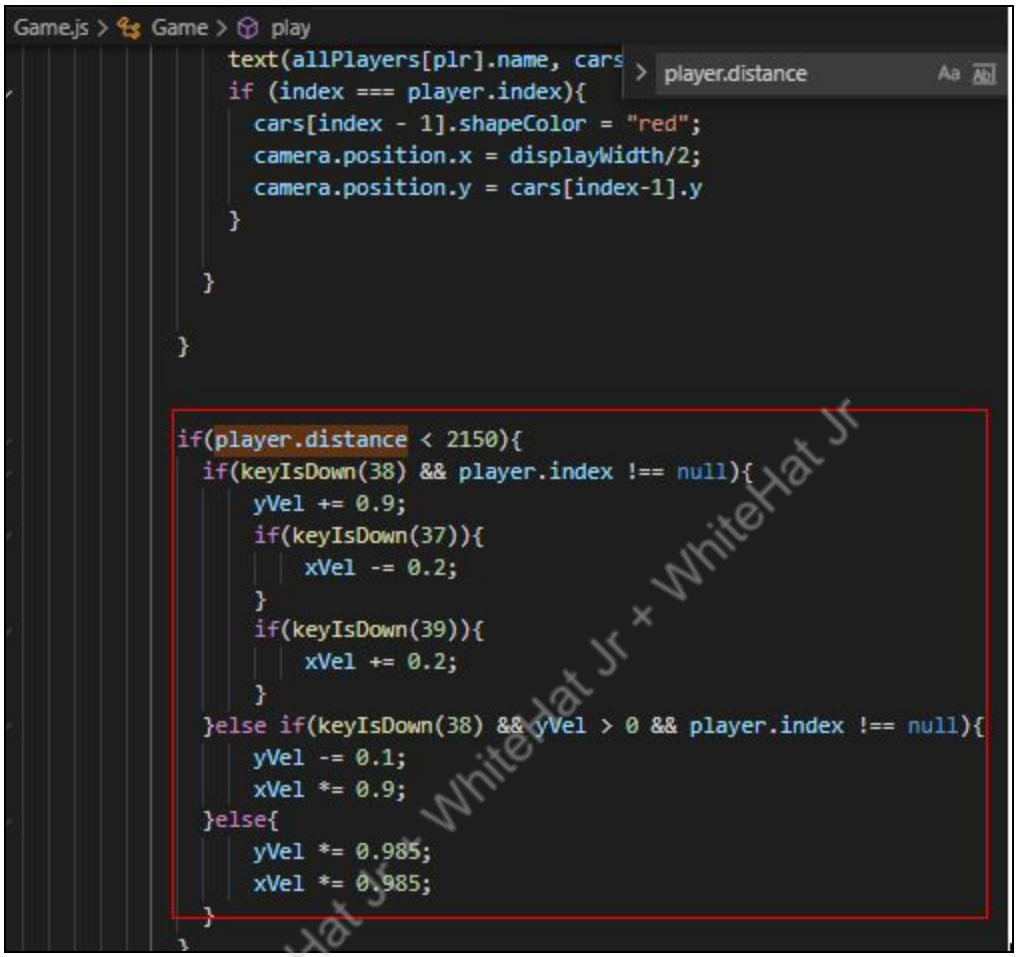
5. Add the initial state of xPos inside player.js.

```
Player.js ● | Game.js | Form.js
> Player.js > Player
1   class Player {
2     constructor(){
3       this.index = null;
4       this.distance = 0;
5       this.xPos = 0;
6       this.name = null;
7       this.place = 0;  }
8
9     getCount(){
10      var playerCountRef = database.ref('playerCount');
11      playerCountRef.on("value",(data)=>{
12        playerCount = data.val();
13      })
14    }
15
16    updateCount(count){
17      database.ref('/').update({
18        playerCount: count
19      });
20    }
21
22    update(){
23      var playerIndex = "players/player" + this.index;
24      database.ref(playerIndex).set({
25        name:this.name,
26        distance:this.distance,
27    //    place: this.place,
28              xPos: this.xPos
29      });
30    }
31
```

player.distance Aa



6. Reduce the speed of the car once it reaches the end by adding the conditions.



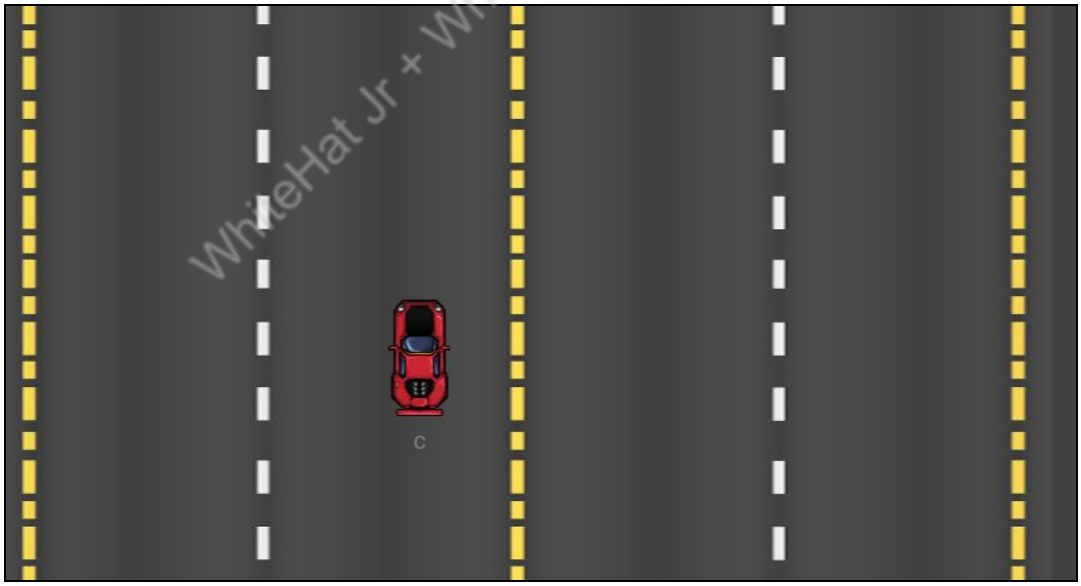
7. Include the player identification.

```
image(track, 0,-displayHeight*4,displayWidth, displayHeight*5);

//index of the array
var index =0;

//x and y position of the cars
var x =200;
var y;

for(var plr in allPlayers){
  //add 1 to the index for every loop
  index = index + 1 ;
  x = 200 + (index * 200) + allPlayers[plr].xPos;
  y = displayHeight - allPlayers[plr].distance ;
  //position the cars a little away from each other in x direction
 // x = x + 200;
  //use data form the database to display the cars in y direction
// y = displayHeight - allPlayers[plr].distance;
  cars[index-1].x = x;
  cars[index-1].y = y;
  textAlign(CENTER);
  textSize(20);
  text(allPlayers[plr].name, cars[index - 1].x, cars[index - 1].y + 75);
  if (index === player.index){
    cars[index - 1].shapeColor = "red";
```



PRO-C41

What's NEXT?

In the next class, you will be learning to create obstacles and add sounds to our car racing game.

EXTEND YOUR KNOWLEDGE:

1. Learn more about the keycode.