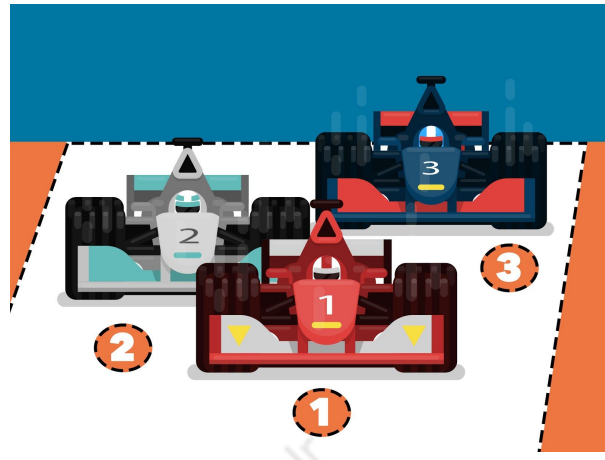


## Player Rank



### What is our GOAL for this MODULE?

The goal for this module is to assign the rank to each player.

### What did we ACHIEVE in the class TODAY?

We created a new property for each player called “rank” and displayed the rank of each player when the game ended.

### Which CONCEPTS/CODING BLOCKS did we cover today?

- Creating a leaderboard and assigning the rank .

### How did we DO the activities?

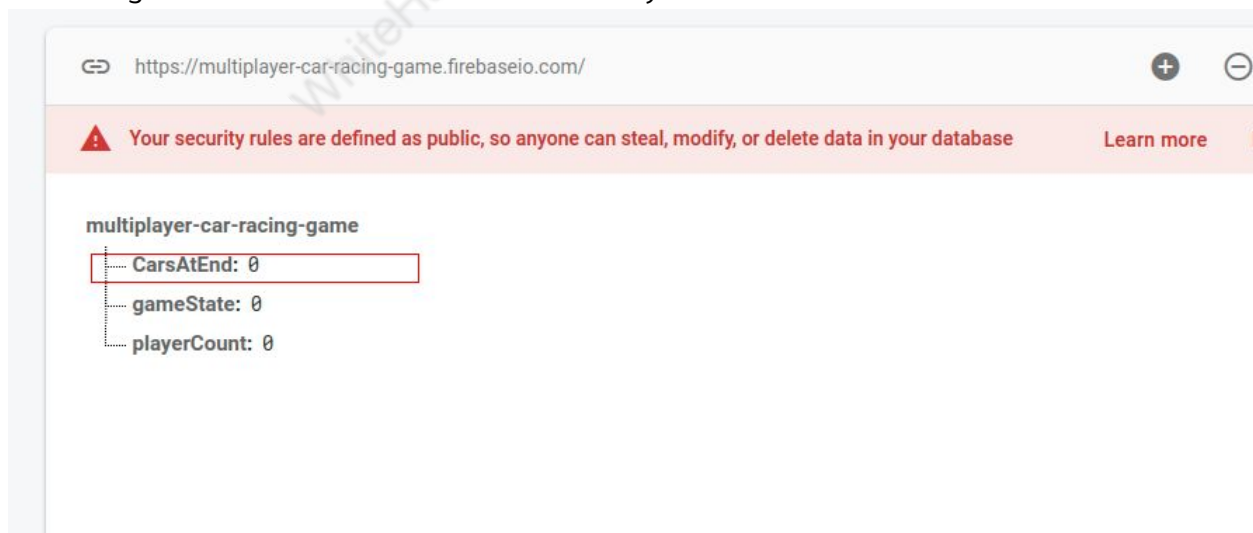
#### We gave rank in a racing game

We built a leaderboard that ranks the player according to when the players finished the game. It will tell who came first, second, third or fourth.

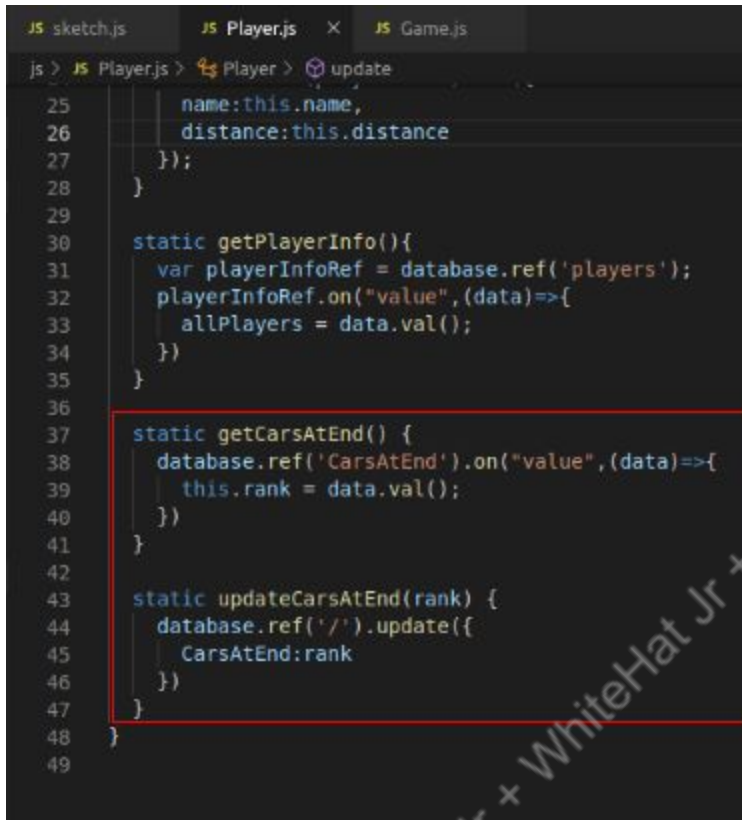
We added a property called 'rank' for each player.

```
JS sketch.js JS Player.js X JS Game.js
js > JS Player.js > Player > update
1 class Player {
2   constructor(){
3     this.index = null;
4     this.distance = 0;
5     this.name = null;
6     this.rank = null;
7   }
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    });
28  }
29
30  static getPlayerInfo(){
31    var playerInfoRef = database.ref('players');
32    playerInfoRef.on("value",(data)=>{
```

We changed the database to create a new entry for "CarsAtEnd".



We wrote static functions - `getCarsAtEnd()` and `updateCarsAtEnd()` to get and update the number of cars which have finished the race.



```
js > JS Player.js > Player > update
25     name: this.name,
26     distance: this.distance
27   });
28 }
29
30 static getPlayerInfo(){
31   var playerInfoRef = database.ref('players');
32   playerInfoRef.on("value", (data) => {
33     allPlayers = data.val();
34   })
35 }
36
37 static getCarsAtEnd() {
38   database.ref('CarsAtEnd').on("value", (data) => {
39     this.rank = data.val();
40   })
41 }
42
43 static updateCarsAtEnd(rank) {
44   database.ref('/').update({
45     CarsAtEnd: rank
46   })
47 }
48 }
49
```

```
js > JS Game.js > Game > play
39     car4.addImage("car4",car4_img);
40     cars = [car1, car2, car3, car4];
41 }
42
43 play(){
44     form.hide();
45
46     Player.getPlayerInfo();
47     Player.getCarsAtEnd();
48
49     if(allPlayers !== undefined){
50         background(rgb(198,135,103));
51         image(track, 0,-displayHeight*4,displayWidth, displayHeight*5);
52
53         //var display_position = 100;
54
55         //index of the array
56         var index = 0;
57
58         //x and y position of the cars
59         var x = 175 ;
60         var y;
61
62         for(var plr in allPlayers){
63             //add 1 to the index for every loop
64             index = index + 1 ;
65
66             //position the cars a little away from each other in x direction
67             x = x + 200;
68             //use data from the database to display the cars in y direction
```

```
81      camera.position.y = cars[index-1].y;
82    }
83
84    //textSize(15);
85    //text(allPlayers[plr].name + ": " + allPlayers[plr].distance, 120,display_position)
86  }
87
88  }
89
90  if(keyIsDown(UP_ARROW) && player.index !== null){
91    player.distance +=10
92    player.update();
93  }
94
95  if(player.distance > 3860){
96    gameState = 2;
97    player.rank +=1
98    Player.updateCarsAtEnd(player.rank)
99  }
100
101  drawSprites();
102 }
103
104 end(){
105   console.log("Game Ended");
106   console.log(player.rank);
107 }
108 }
109 }
```

Code to display the rank of each player:

```
s > JS Game.js > Game > play
81     camera.position.y = cars[index-1].y;
82   }
83
84   //textSize(15);
85   //text(allPlayers[plr].name + ": " + allPlayers[plr].distance, 120,disp
86   }
87
88   }
89
90   if(keyIsDown(UP_ARROW) && player.index !== null){
91     player.distance +=10
92     player.update();
93   }
94
95   if(player.distance > 3860){
96     gameState = 2;
97     player.rank +=1
98     Player.updateCarsAtEnd(player.rank)
99   }
100
101   drawSprites();
102 }
103
104 end(){
105   console.log("Game Ended");
106   console.log(player.rank);
107 }
108 }
109 }
```

### What's next?

In the next class, you will be doing JavaScript review.

### Extend Your Knowledge: