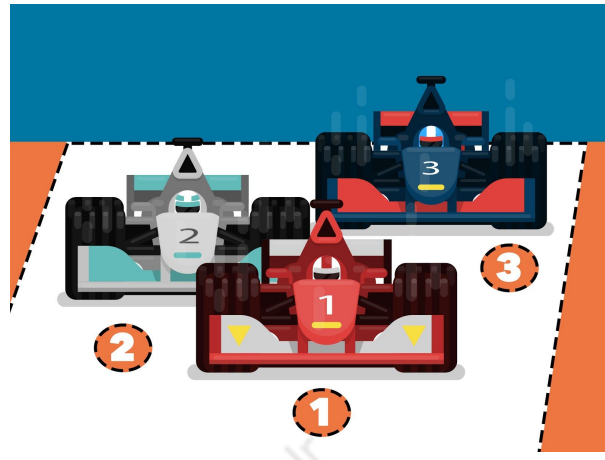


Player Rank



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?

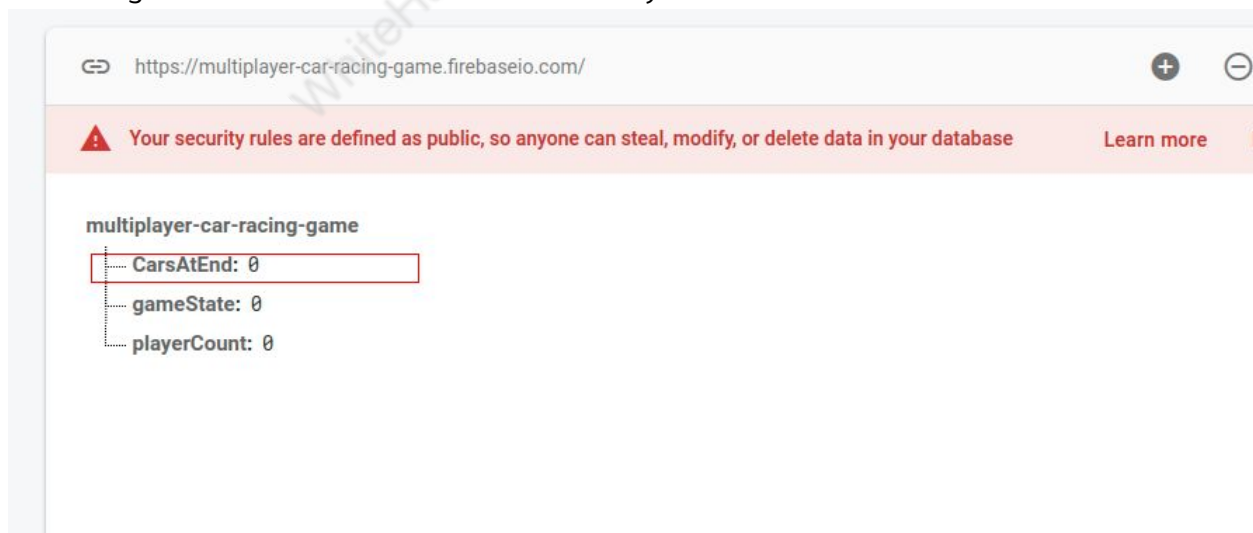
We gave rank in a racing game

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.

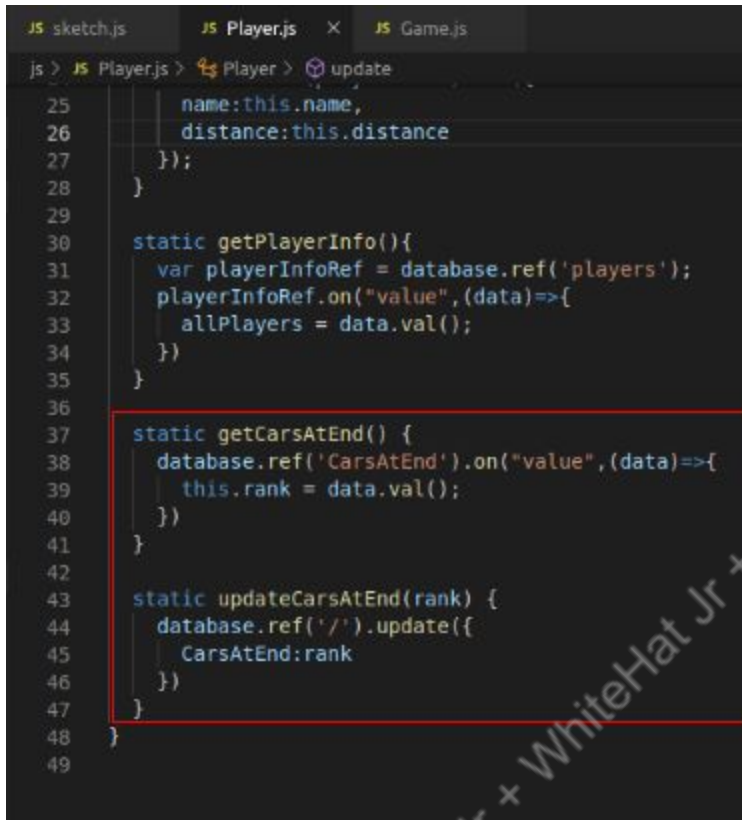
We added a property called 'rank' for each player.

```
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: