PRO-C39

GAME CAMERA AND DISPLAY SIZE

What is our GOAL for this MODULE?

We used our knowledge about game cameras to focus on the current player.

What did we ACHIEVE in the class TODAY?

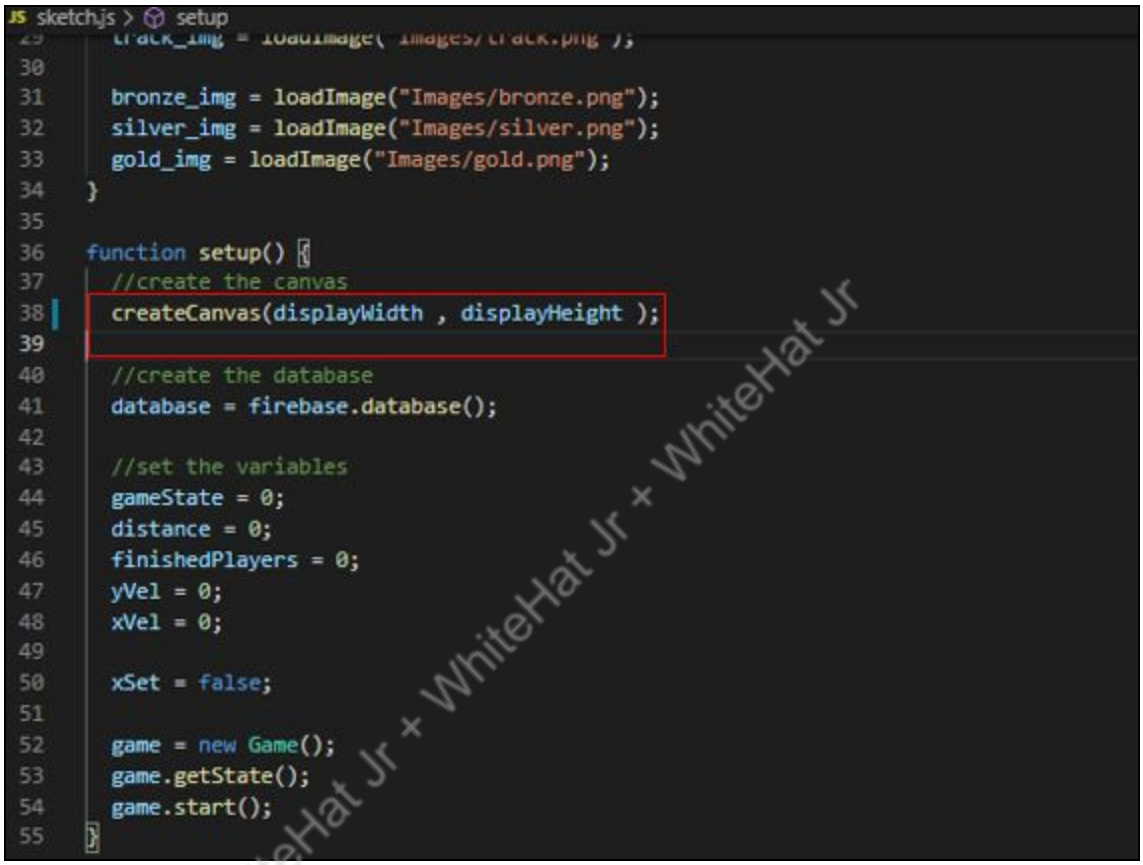
- We used the data from the database to design the car racing game when the game is in play state.
- We used Game Camera to focus the game on the active player in the game.
- We were able to adjust the game canvas to the size of the display device.

Which CONCEPTS/CODING BLOCKS did we cover today?

- Camera positions.
- Adjusting the camera size.

How did we DO the activities?

1. Use 'displayWidth' and 'displayHeight' in the code to create the canvas to fill the browser.



```
JS sketch.js > setup
30
31    bronze_img = loadImage("Images/bronze.png");
32    silver_img = loadImage("Images/silver.png");
33    gold_img = loadImage("Images/gold.png");
34  }
35
36  function setup() {
37    //create the canvas
38    createCanvas(displayWidth , displayHeight );
39
40    //create the database
41    database = firebase.database();
42
43    //set the variables
44    gameState = 0;
45    distance = 0;
46    finishedPlayers = 0;
47    yVel = 0;
48    xVel = 0;
49
50    xSet = false;
51
52    game = new Game();
53    game.getState();
54    game.start();
55  }
```

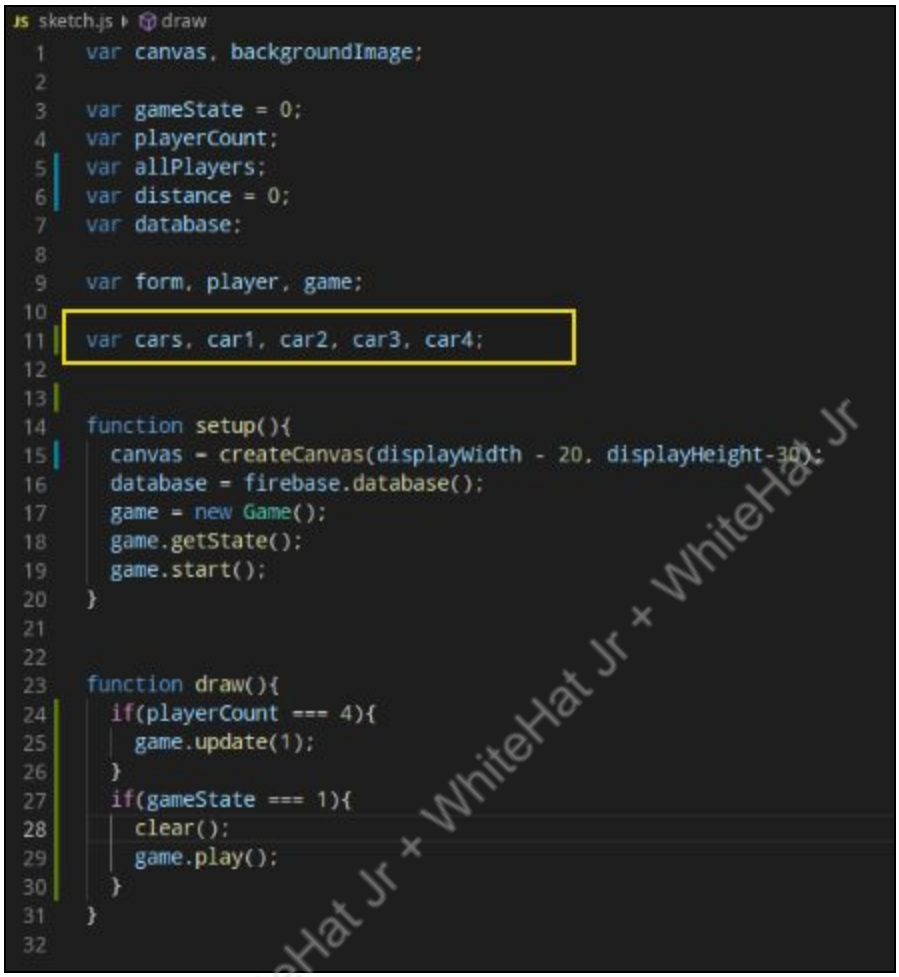
2. Change the positions of the form elements with 'displayWidth' and 'displayHeight' .

```
    this.input = createInput("Name");
    this.button = createButton('Play');
    this.greeting = createElement('h2');
    this.title = createElement('h2');
  }
  hide(){
    this.greeting.hide();
    this.button.hide();
    this.input.hide();
    this.title.hide();
  }

  display(){
    this.title.html("Car Racing Game");
    this.title.position(displayWidth/2 - 50, 0);

    this.input.position(displayWidth/2 - 40 , displayHeight/2 - 80);
    this.button.position(displayWidth/2 + 30, displayHeight/2);

    this.button.mousePressed(()=>{
      this.input.hide();
      this.button.hide();
      player.name = this.input.value();
      playerCount+=1;
      player.index = playerCount;
      player.update();
      player.updateCount(playerCount);
      this.greeting.html("Hello " + player.name)
      this.greeting.position(displayWidth/2 - 70, displayHeight/4);
    });

  }
}
```

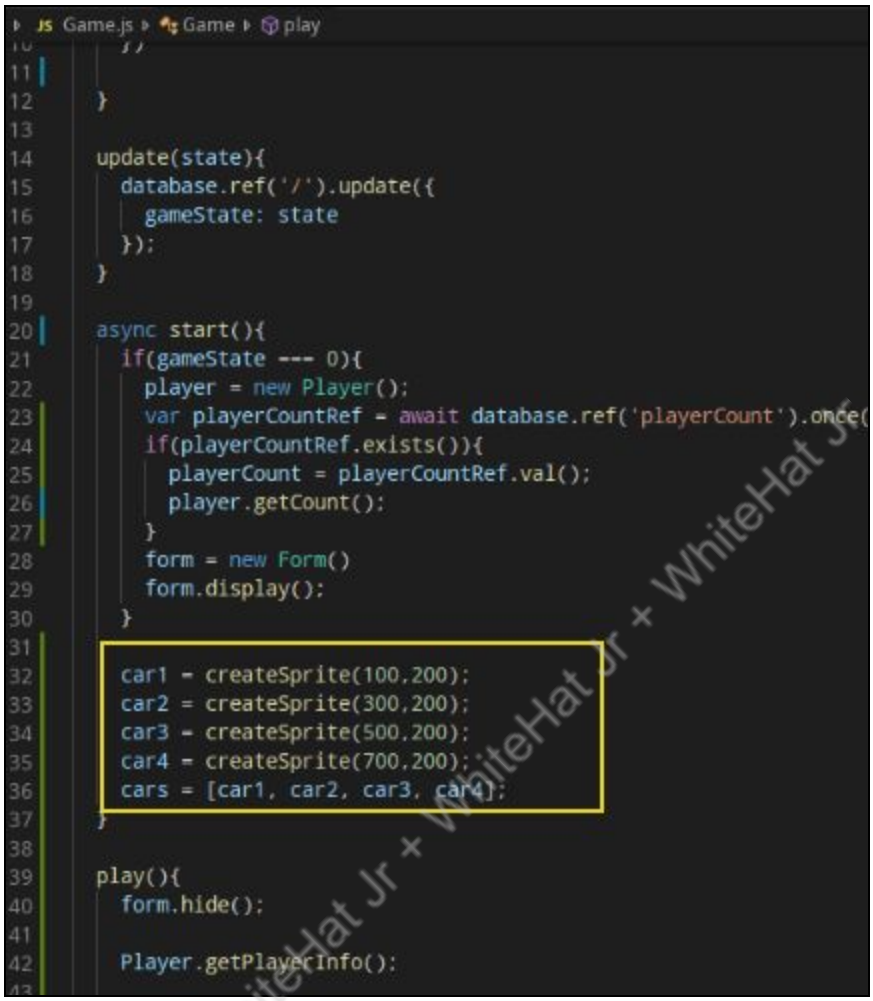
There is an available update.

Download Nov

3. Initialize the car variables inside sketch.js



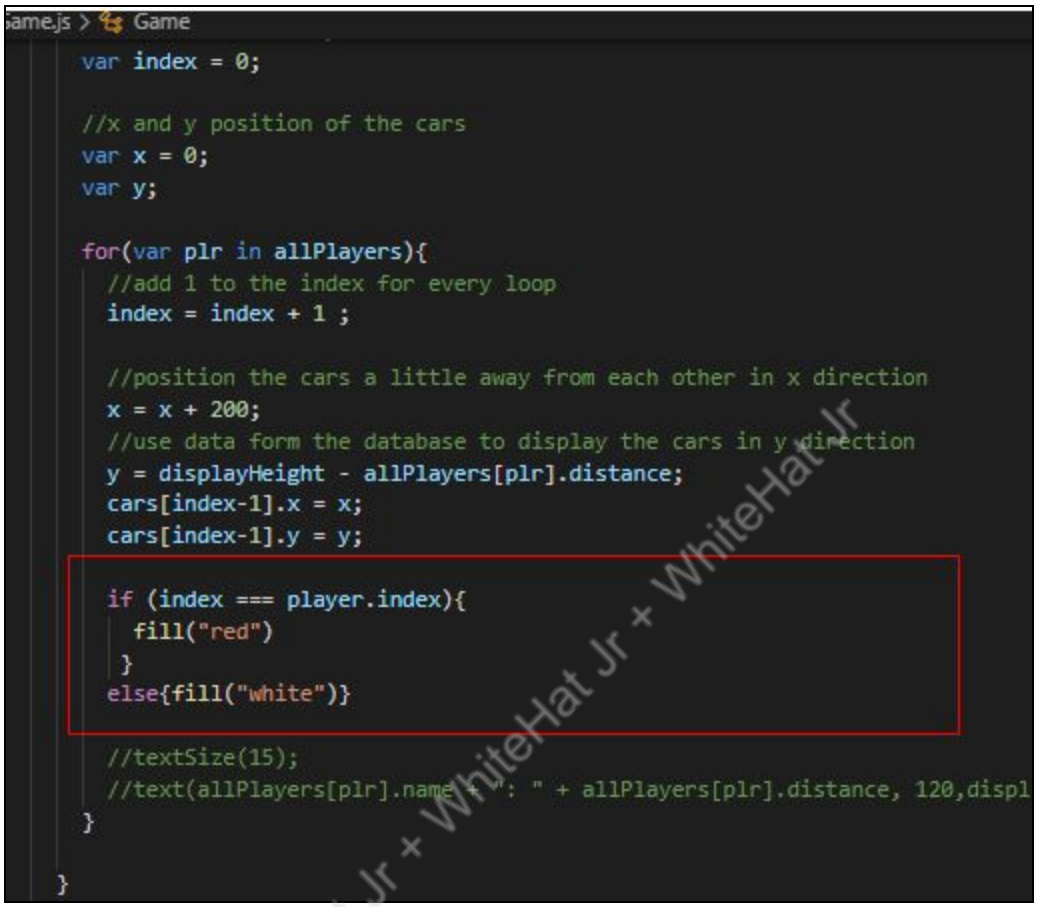
4. Create the sprite for all the players.



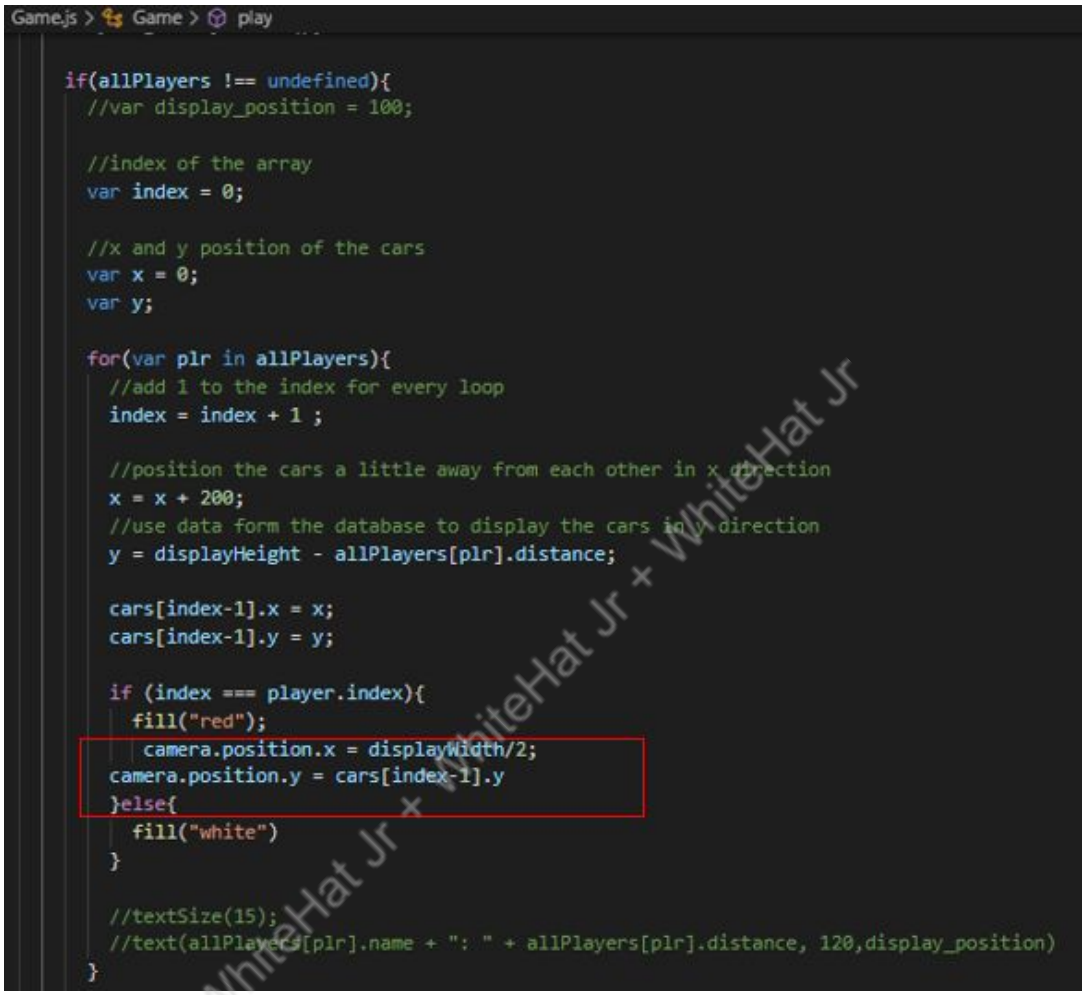
5. Assign the x and y position to the player.

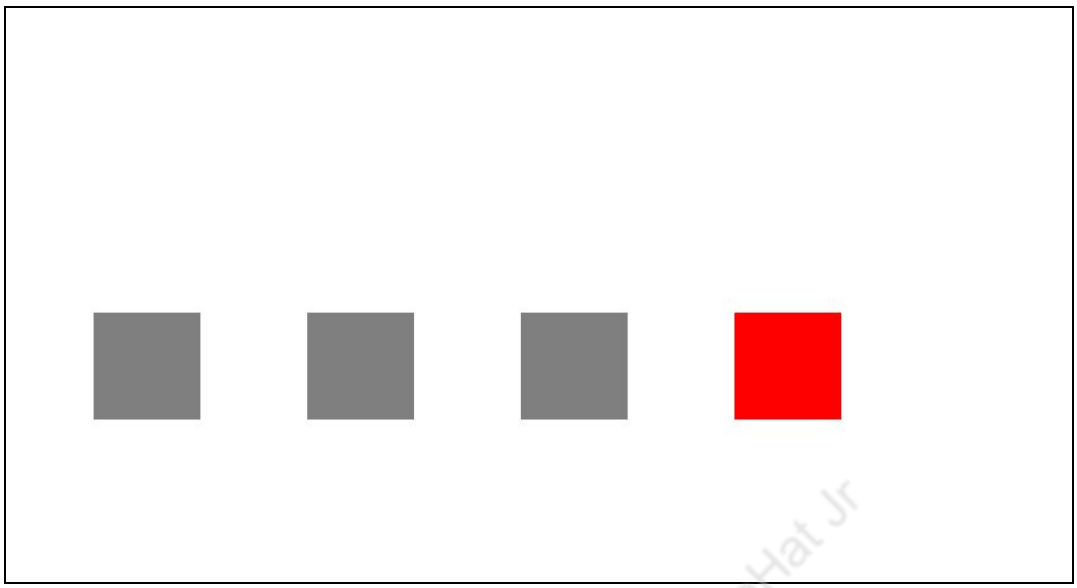
```
    cars = [car1, car2, car3, car4];
}

play(){
  form.hide();

  Player.getPlayerInfo();

  if(allPlayers !== undefined){
    //var display_position = 100;

    //index of the array
    var index = 0;

    //x and y position of the cars
    var x = 0;
    var y;

    for(var plr in allPlayers){
      //add 1 to the index for every loop
      index = index + 1 ;

      //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;

      if (index === player.index){
        cars[index - 1].shapeColor = red;

      }
```

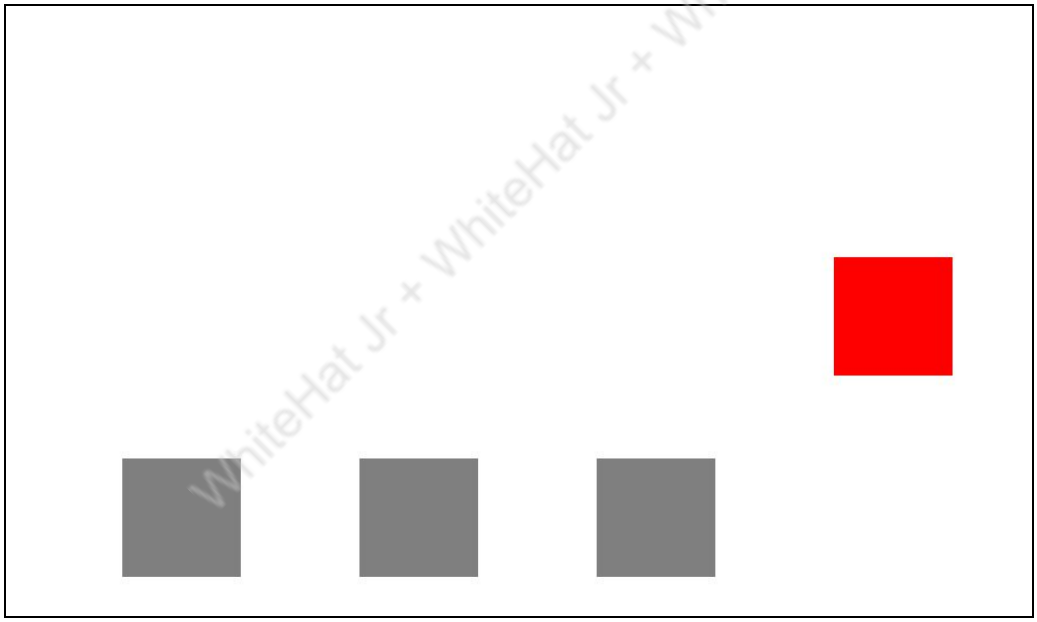
6. Give a different color to the active player in the browser.



7. Set camera position for each player in the game.







What's NEXT?

In the next class, you will be learning about replacing the sprites with real cars of their choice.

EXTEND YOUR KNOWLEDGE:

1. Read this document for know more about the camera positions in p5: https://p5js.org/reference/#/p5.Camera