BUGS - THE CURIOUS CASE OF DISAPPEARING GAME OBJECTS

What is our GOAL for this MODULE?
We diagnosed and designed a solution to the problem of disappearing obstacles and clouds.

What did we ACHIEVE in the class TODAY?
- Set the collider radius so that the game ends when Trex touches the obstacle.
- Diagnosed and designed a solution to the problem of disappearing obstacles and clouds.
- Added animation and reset functions when the game ends.

Which CONCEPTS/ CODING BLOCKS did we cover today?
- setLifetimeEach()
- changeAnimation()
- Visible property

How did we DO the activities?

1. Set the collision radius of the Trex using **sprite.setCollider()** function.

```
42
43    invisibleGround = createSprite(200,390,400,10);
44    invisibleGround.visible = false;
45
46    //create Obstacle and Cloud Groups
47    obstaclesGroup = createGroup();
48    cloudsGroup = createGroup();
49
50    console.log("Hello" + 5);
51
52    trex.setCollider("circle",0,0,40);
53    trex.debug = true
54
55    score = 0;
56
57 }
```

Output:
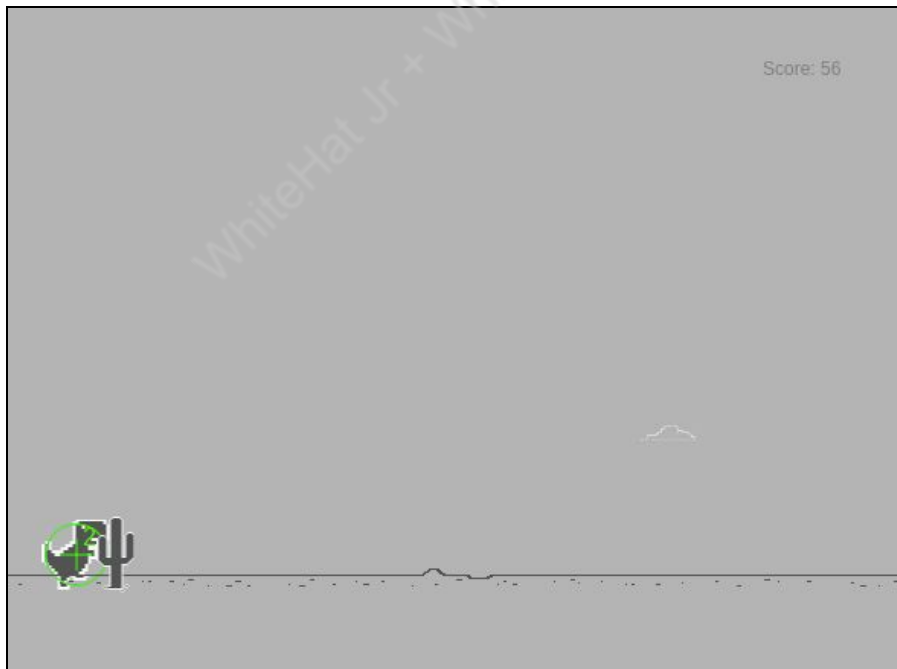
Score: 56

2. Print the game state in the console and see it change when the collision happens.

```
59  function draw() {
60
61      background(180);
62      //displaying score
63      text("Score: "+ score, 500,50);
64
65      console.log("this is ",gameState)
66
67
68      if(gameState === PLAY){
69          //move the ground
70          ground.velocityX = -4;
71          //scoring
72          score = score + Math.round(getFrameRate()/60);
```

3. Change the Trex animation after END state where its eyes pop out after the collision.

```
sketch.js          ▼
index.html
style.css
trex1.png
trex3.png
trex4.png
trex_collided.png
ground2.png
gameOver.png
restart.png
cloud.png
obstacle1.png
obstacle5.png
obstacle2.png
obstacle4.png
obstacle6.png
obstacle3.png
p5.play.js
```

4. Change the Trex animation when the game state changes to END.

```
94        }
95      }
96 ▼    else if (gameState === END) {
97          ground.velocityX = 0;
98          //change the trex animation
99          trex.changeAnimation("collided",trex_collided);
100        obstaclesGroup.setVelocityXEach(0);
101        cloudsGroup.setVelocityXEach(0);
102      }
```

Output

Preview

Score: 110
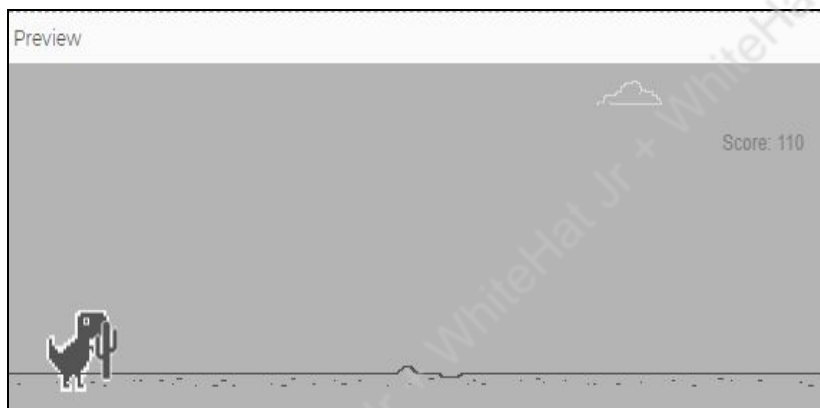
5. Set the lifetime of all the spawned objects in the groups to be (-1) in the END condition of the game.

```
92 ▼      if(obstaclesGroup.isTouching(trex)){
93            gameState = END;
94        }
95      }
96 ▼    else if (gameState === END) {
97          ground.velocityX = 0;
98          //change the trex animation
99          trex.changeAnimation("collided",trex_collided);
100
101          //set lifetime of the game objects so that they are
        never destroyed
102        obstaclesGroup.setLifetimeEach(-1);
103        cloudsGroup.setLifetimeEach(-1);
104
105          obstaclesGroup.setVelocityXEach(0);
106          cloudsGroup.setVelocityXEach(0);
107      }
```

6. Resolve the bug where, when we press space just at the time of the collision, the Trex flies upwards without gravity.

```
91
92▼      if(obstaclesGroup.isTouching(trex)){
93          gameState = END;
94      }
95  }
96▼   else if (gameState === END) {
97       ground.velocityX = 0;
98       trex.velocityY = 0
99       //change the trex animation
100      trex.changeAnimation("collided",trex_collided);
101
102      //set lifetime of the game objects so that they are
     never destroyed
103     obstaclesGroup.setLifetimeEach(-1);
104     cloudsGroup.setLifetimeEach(-1);
105
106      obstaclesGroup.setVelocityXEach(0);
107      cloudsGroup.setVelocityXEach(0);
108  }
```

7. Set "Game Over" text and restart icon displayed on the screen when the game ends.

```
34      trex = createSprite(50,380,20,50);
35      trex.addAnimation("running", trex_running);
36      trex.scale = 0.5;
37
38      ground = createSprite(200,380,400,20);
39      ground.addImage("ground",groundImage);
40      ground.x = ground.width /2;
41
42       gameOver = createSprite(300,100);
43      gameOver.addImage(gameOverImg);
44
45      restart = createSprite(300,140);
46      restart.addImage(restartImg);
47
48      gameOver.scale = 0.5;
49      restart.scale = 0.5;
50
51      invisibleGround = createSprite(200,390,400,10);
52      invisibleGround.visible = false;
```

```
103    }
104▼   else if (gameState === END) {
105        gameOver.visible = true;
106        restart.visible = true;
107
108        ground.velocityX = 0;
109        trex.velocityY = 0
110        //change the trex animation
111        trex.changeAnimation("collided",trex_collided);
112
113        //set lifetime of the game objects so that they are
       never destroyed
114        obstaclesGroup.setLifetimeEach(-1);
115        cloudsGroup.setLifetimeEach(-1);
116
117        obstaclesGroup.setVelocityXEach(0);
118        cloudsGroup.setVelocityXEach(0);
119    }
```

Output:

What's next?
We will add sounds to the game.

Extend Your Knowledge:
1. P5 Functions and their examples: Read more about the different functions and their usage of p5.play by exploring examples