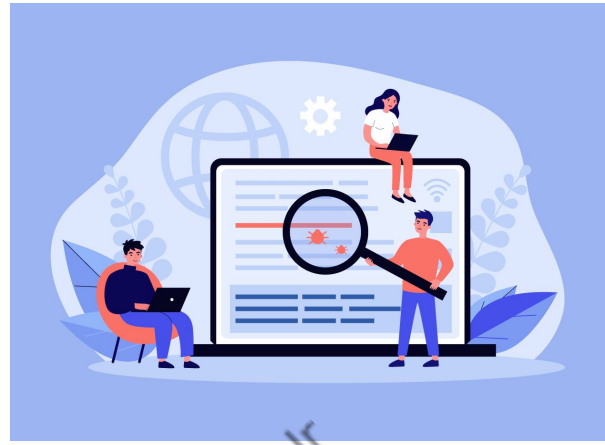


## SCORING AND DEBUGGING



### What is our GOAL for this MODULE?

We used our knowledge about debugging to clear the two bugs in the code and include a scoring system.

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

- Learned tips and tricks to minimize errors and bugs in the code.
- Debugged the Bird's trajectory when shooting multiple times.
- Debugged the Bird's swings in rapid motion when it is reset.
- Learned to add the scoring system to the game.

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

- Empty array.
- Scoring system.
- `Matter.Body.setPosition(body, position)`.

## How did we DO the activities?

1. Find the part of the code which is responsible for drawing the trajectory.

```

1  class Bird extends BaseClass {
2    constructor(x,y){
3      super(x,y,50,50);
4      this.image = loadImage("sprites/bird.png");
5      this.smokeImage = loadImage("sprites/smoke.png");
6      this.trajectory = [];
7    }
8
9    display() {
10     //this.body.position.x = mouseX;
11     //this.body.position.y = mouseY;
12
13     super.display();
14
15     if(this.body.velocity.x > 10 && this.body.position.x > 200){
16       var position = [this.body.position.x, this.body.position.y];
17       this.trajectory.push(position);
18     }
19
20
21     for(var i=0; i<this.trajectory.length; i++){
22       image(this.smokeImage, this.trajectory[i][0], this.trajectory[i][1]);
23     }
24   }
25 }

```

2. Create an empty array whenever the space key is pressed.

```

77   bird.display();
78   platform.display();
79   //log6.display();
80   slingshot.display();
81 }
82
83 function mouseDragged(){
84   //if (gameState!=="launched"){
85     Matter.Body.setPosition(bird.body, {x: mouseX , y: mouseY});
86   //}
87 }
88
89
90 function mouseReleased(){
91   slingshot.fly();
92   gameState = "launched";
93 }
94
95 function keyPressed(){
96   if(keyCode === 32){
97     bird.trajectory = [];
98     slingshot.attach(bird.body);
99   }
100 }
101
102 async function getBackgroundImg(){
103   var response = await fetch("http://worldtimeapi.org/api/timezone/Asia/Kolkata");
104   var responseJSON = await response.json();
105
106   var datetime = responseJSON.datetime;
107   var hour = datetime.slice(11,13);
108
109   if(hour>=0600 && hour<=1900){
110     bg = "sprites/bg1.png";

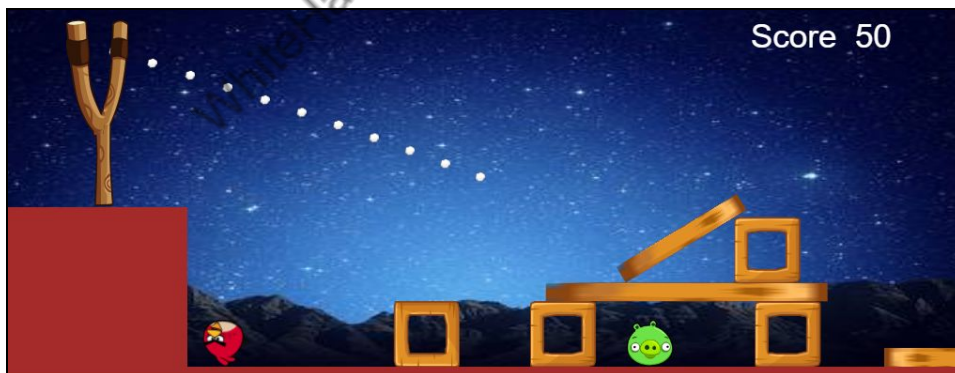
```

3. Use **Matter.Body.setPosition** to position the Bird at the starting point to avoid the Bird swinging widely when attached to the slingshot.

```
JS sketch.js • JS Bird.js JS Pig.js
JS sketch.js > ...
69   pig3.display();
70   pig3.score();
71   log3.display();
72
73   box5.display();
74   log4.display();
75   log5.display();
76
77   bird.display();
78   platform.display();
79   //log6.display();
80   slingshot.display();
81 }
82
83 function mouseDragged(){
84     Matter.Body.setPosition(bird.body, {x: mouseX , y: mouseY});
85 }
86
87
88 function mouseReleased(){
89     slingshot.fly();
90 }
91 function keyPressed(){
92     if(keyCode===32)
93         bird.trajectory=[];
94
95     Matter.Body.setPosition(bird.body,{x:200, y:50});
96
97     slingshot.attach(bird.body);
```

4. Add the score feature to the game to make it more interesting.

```
JS Pig.js > ...
1  class Pig extends BaseClass {
2    constructor(x, y){
3      super(x,y,50,50);
4      this.image = loadImage("sprites/enemy.png");
5      this.remove=true;
6    }
7
8    display(){
9      //console.log(this.body.speed);
10     if(this.body.speed < 3){
11       super.display();
12     }
13     else{
14       World.remove(world, this.body);
15       if(this.remove==true)
16       {
17         score=score+50;
18         this.remove=false;
19       }
20     }
21   }
22 }
23
24
25
26
27 };
```



### What's NEXT?

In the next class, you will be learning about real-time databases.

### EXTEND YOUR KNOWLEDGE:

1. This document contains a detailed description of debugging tricks. You can explore it to learn more about it:

<https://www.geeksforgeeks.org/debugging-tips-to-get-better-at-it/>

WhiteHat Jr + WhiteHat Jr + WhiteHat Jr