

```

//Lab1209 Austin Matel
//12/09/19
var balls = [];
var numBalls = 0;
//this code swaps the location of the bars as well as their index
function swap(list,a,b){
    var temp = list[a].loc.x;
    list[a].loc.x = list[b].loc.x;
    list[b].loc.x = temp;
    temp = list[a];
    list[a] = list[b];
    list[b] = temp;
}
//renders the balls
function runBalls(){
    for(var j = 0; j < balls.length; j++){
        balls[j].run();
    }
}
function setup() {
    var cnv = createCanvas(800, 800);
    cnv.position((windowWidth-width)/2, 30);
    background(200);
    fill(200, 30, 150);
    //loads the balls into the list
    function makeList(n, list){
        for (var i = 0; i < n; i++){
            numBalls = n;
            list[i] = new Ball(i * (width / n) + 20, 400, 10);
        }
    }
    //first parameter is the number of balls
    makeList(50, balls);
}
//bubble code
var i = balls.length - 1;
function draw(){
    frameRate(20);
    i = i + 1;
    background(100);
    runBalls();
    for(var j = 0; j < balls.length - 1 - i; j++){
        if(balls[j].clr > balls[j + 1].clr){

```

```

        swap(balls, j, j + 1);
    }
}

//Austin Matel
//12/09/19
class Ball{
    constructor(x, y, w){
        this.loc = createVector(x, y);
        this.clr = random(255);
        this.w = w;
    }

    run(){
        this.render();
    }

    render(){
        fill(this.clr, 0, 0);
        ellipse(this.loc.x, this.loc.y, this.w, this.w);
    }
}

<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>Lab1209 Ball Sort</title>
    <script src="libraries/p5.js" type="text/javascript"></script>
    <script src="libraries/p5.dom.js" type="text/javascript"></script>
    <script src="libraries/p5.sound.js"
type="text/javascript"></script>
    <script src="sketch.js" type="text/javascript"></script>
    <script src="ball.js" type="text/javascript"></script>
    <style> body {padding: 0; margin: 0;} canvas {vertical-align:
top;} </style>
  </head>

  <body>
  </body>
</html>

```

