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//  Will Kreidler
//    30 January 2020
//  This is a comment
//  The setup function function is called once when your program
begins
var boids = []//array for boids
function setup() {
  var cnv = createCanvas(800, 800);
  cnv.position((windowWidth-width)/2, 30);
  background(221, 245, 66);
  fill(221, 245, 66);
  loadBoids(100);
}
//  The draw function is called @ 30 fps
function draw() {
  runBoids();
}
function loadBoids(n){
  for(var i = 0; i < n; i++){
    boids[i] = new Boid(random(width), random(height), random(-1, 1),
random(-1, 1), i);
  }
}//loads boids in array
function runBoids(){
  for(var i = 0; i < boids.length; i++){
    boids[i].run();
  }
}//runs boids

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//    0130
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begins
class Boid{
  constructor(x, y, dx, dy, n){
    this.loc = createVector(x, y);//location vector
    this.vel = createVector(dx, dy);//velocity vector
    this.acc = createVector(0, 0);//acceleration vector
    this.clr = color(random(0, 255), random(0, 255), random(0, 255),
10);//line color
    this.id = n;
  }
```

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run(){
  this.checkEdges();
  this.update();
  this.render();
}
checkEdges(){
  if(this.loc.x < 0){
    this.vel.x = -this.vel.x
    this.loc.x = 0;
  }
  if(this.loc.x > width){
    this.vel.x = -this.vel.x
    this.loc.x = width;
  }
  if(this.loc.y < 0){
    this.vel.y = -this.vel.y
    this.loc.y = 0;
  }
  if(this.loc.y > height){
    this.vel.y = -this.vel.y
    this.loc.y = height;
  }
}//checkEdges end
update(){
  this.vel.add(this.acc);
  this.loc.add(this.vel);
  this.vel.limit(5);
  this.acc.x = random(-1, 1);//random acceleration
  this.acc.y = random(-1, 1);
}//update end
render(){
  stroke(this.clr);
  var distToBoid;//creates s distance variable
  for(var i = 0; i < boids.length; i++){
    if(i === this.id){}else {//ignores itself
      distToBoid = this.loc.dist(boids[i].loc);//sets distance to
selected boid
      if(distToBoid < 100){
        line(this.loc.x, this.loc.y, boids[i].loc.x,
boids[i].loc.y);
      }//draws line if boid is within 200 spaces
    }
  }
```

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    }//render end
}//end boid class
```