```
//  Allison Smith
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var ship = []
var sliderLimit, sliderAttract, sliderLimitText, sliderAttractText

function setup() {
  var cnv = createCanvas(800, 800);
  cnv.position((windowWidth-width)/2, 30);
  //slider text
  sliderLimitText = createP("Limit")
  sliderLimitText.position(200, 450)
  //slider for limit
  sliderLimit = createSlider(1, 10, 1);
  sliderLimit.position(200, 500);
  //slider text
  sliderAttractText = createP("Attract")
  sliderAttractText.position(200, 350)
  //slider for limit
  sliderAttract = createSlider(0, 5, 1);
  sliderAttract.position(200, 400);
  loadThings();
}

//  The draw function is called @ 30 fps
function draw() {
  background(20,20,20, 70);
  runObjects();
}

function loadThings(){
  planet = new Planet(random(width/2), random(height/2), random (-5,5), random(-5,5));
  for(var i=0; i<=30; i++){
    ship[i]=new Ship(random(width), random(height), random (-1,1), random(-1,1));
  }
}

function runObjects(){
  planet.run();
  for(var i = 0; i < ship.length; i++){
    ship[i].run();
  }
}
class Ship{
```

```
  constructor(x,y,dx,dy){
    this.loc = createVector(x,y);
    this.vel = createVector(dx,dy);
    this.clr = color(random(255), random(255), random(255))
    this.angle= 0;
  }

run(){
  this.checkEdges();
  this.update();
  this.render();
}

checkEdges(){
  var distToplanet;
      distToplanet = this.loc.dist(planet.loc);
      // attract balls
      if(distToplanet < 800){
        this.acc = p5.Vector.sub(planet.loc, this.loc);
        this.acc.normalize();
        this.acc.mult(sliderAttract.value()/10);
      }
      //repell balls
      if(distToplanet < 50){
        planet.loc.x = Math.floor(random(0,790));
        planet.loc.y = Math.floor(random(0,790));
            }
  if(this.loc.x<0){
  this.loc.x = -this.loc.x
  }

  if(this.loc.x>width){
  this.loc.x = -this.loc.x
  }

  if(this.loc.y<0){
  this.loc.y = -this.loc.y
  }

  if(this.loc.y>height){
  this.loc.y = -this.loc.y
  }
}
```

```
update(){
  this.vel.limit(sliderLimit.value())
  this.vel.add(this.acc);
  this.loc.add(this.vel);
}

render(){
  fill(this.clr);
  this.angle = this.angle + .03;
  push();
    translate(this.loc.x, this.loc.y);
    rotate(this.angle);
    triangle(-5, 8, 5, 8, 0, -8);
  pop();
  }
}
class Planet{
  constructor(x,y,dx,dy){
    this.loc = createVector(x,y);
    this.vel = createVector(dx,dy);
    this.clr = color(255,105,180)
  }

run(){
  this.checkEdges();
  this.update();
  this.render();
}

checkEdges(){
  if(this.loc.x<0){
  this.vel.x = -this.vel.x
  }

  if(this.loc.x>width){
  this.vel.x = -this.vel.x
  }

  if(this.loc.y<0){
  this.vel.y = -this.vel.y
  }
```

```
  if(this.loc.y>height){
  this.vel.y = -this.vel.y
  }
}

update(){
  this.vel.limit(5)
  this.vel.add(this.acc);
  this.loc.add(this.vel);
}

render(){
  fill(this.clr);
  ellipse(this.loc.x, this.loc.y, 50, 50);
  }
}
```