**sketch04.js**

// Seeking the target (mouse position)

// includes inelegant but effective lock into position

// al 12 November 2016

function setup() {

createCanvas(1000,600);

background("#fefefe")

t = new Thing;

}

function draw() {

t.update();

t.render();

}

function Thing() { // thing constructor

this.d = 50;

this.maxSpeed = 5;

// euclidean velocity - start in centre of canvas with a random velocity

this.pos = createVector(20,20);

this.vel = createVector(50,50);

this.acc = createVector(0,0);

this.update = function() {

// calculate vector to mouse

this.seekTarget();

if (this.acc.mag()<this.d\*0.05) {

this.acc.mult(0);

this.vel.mult(0);

}

this.vel.add(this.acc);

this.vel.normalize();

this.vel.mult(this.maxSpeed);

this.pos.add(this.vel);

} // update

this.render = function() {

background("#fefefe");

noStroke();

fill(255,0,0,150);

ellipse(this.pos.x,this.pos.y,this.d);

} // show

this.seekTarget = function() {

this.mouseNow = createVector(mouseX,mouseY);

this.acc = this.mouseNow.sub(this.pos);

} // render

} // Thing