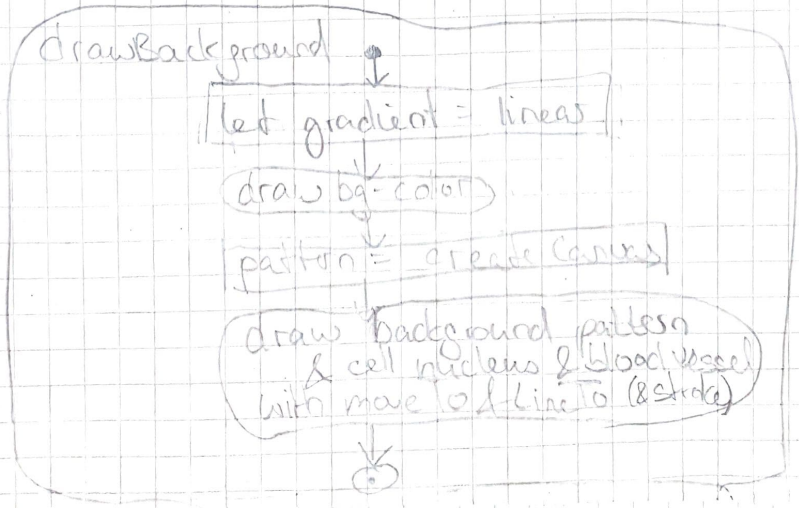# Activity Diagram Main virus-

```
    ●
    ↓
( install load listener )          [ ≥load ]
                                      ↓
┌──────────────────────┐        ( handleLoad ⋔ )
│ declare canvas,       │              ↓
│ renderingContext      │             ⊗
│ and Array "cells"     │
└──────────────────────┘
    ↓
   ⊗
```

```
┌─────────────────── event : Event ──────────────────────────┐
│ handleLoad                                                  │
│                          ↓                                   │
│                  ( give canvas and )                         │
│                  ( context values )                          │
│                          ↓                                   │
│                  ( drawBackground() )                        │
│                          ↓                                   │
│                  ( drawVirus (25) ⋔ )                        │
│                                                              │
│                          ↓                                   │
│                                                              │
│                  ( drawAntibody (10) )                       │
│                          ↓                                   │
│                  ( drawParticle (80) )                       │
│                          ↓                                   │
│          ( window.setInterval (update, 35) )                 │
│                          ↓                                   │
│                         ⊗                                    │
└──────────────────────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────────────────┐
│ drawBackground        ●                               │
│                       ↓                                │
│            ┌ let gradient = linear ┐                   │
│                       ↓                                │
│            ( draw bg-color )                           │
│            ┌ pattern = createCanvas ┐                  │
│                       ↓                                │
│            ( draw background pattern )                 │
│            (   & cell nucleus & blood vessel )         │
│            (  with moveTo & LineTo (&stroke) )         │
│                       ↓                                │
│                      ⊗                                 │
└─────────────────────────────────────────────────────┘
```

createVirus [nVirus : number]

◇ → ⊙

[i < nVirus; i++]

(create Vector with random x & y)

(create new corona with Vector)

(draw & push into ...Cells- Array)
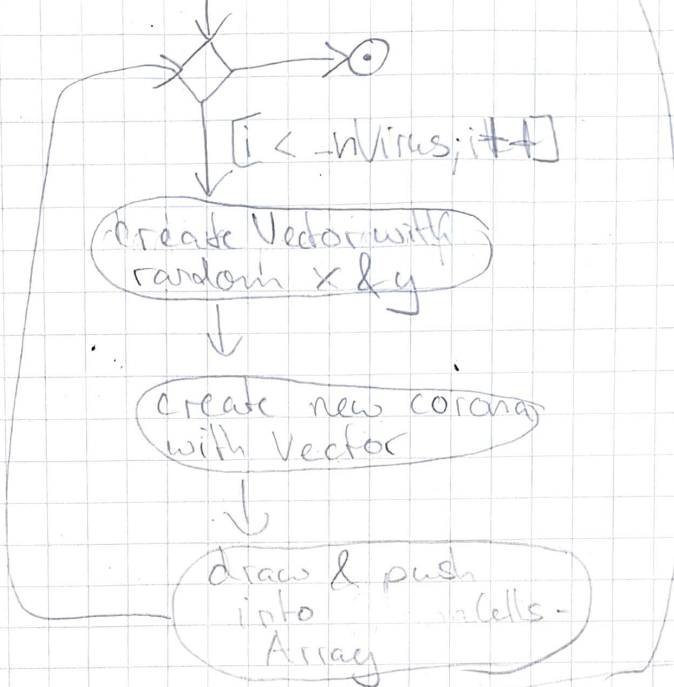
createAntibody [nAntibody : number]

◇ → ⊙

[i < nAntibody; i++]

(create Vector with random x & y)

(create new Antibody with Vector)

(draw & push into ...Cells- Array)
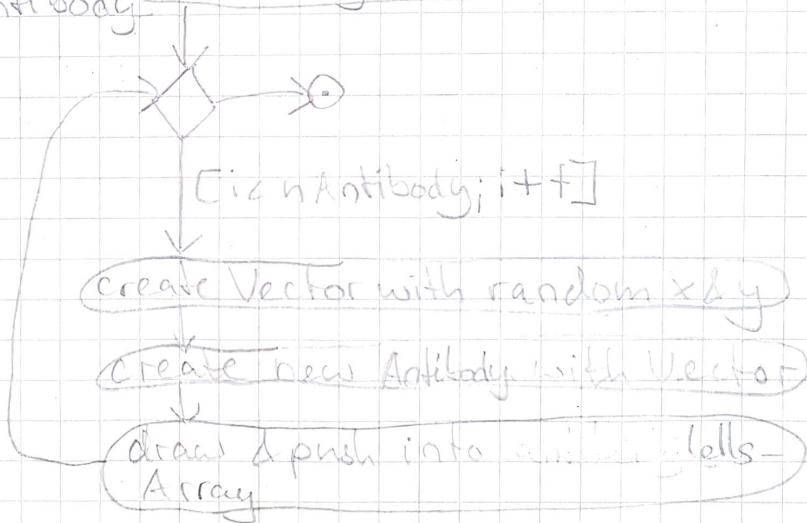
Create Particle [nParticle : number]

◇ → ⊙

[i < nParticle; i++]

(create Vector with random x & y)

(create new Particle with Vector)

(draw & push into ...Cells- Array)

update

putImageData

for cell of cells

[available]

move & draw

take next
Array object
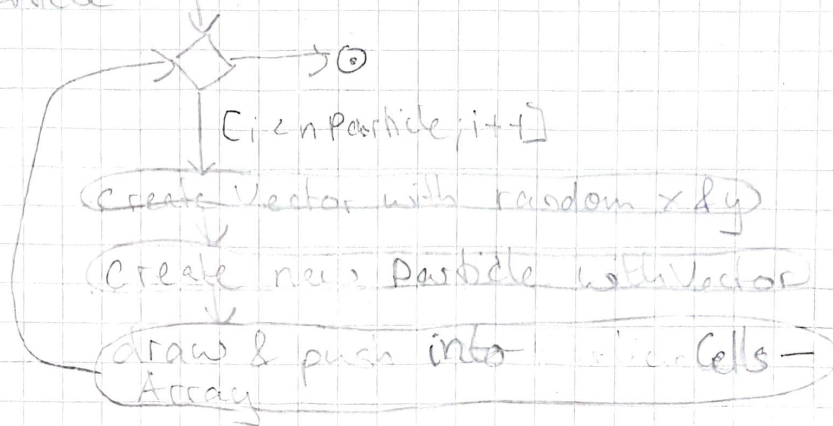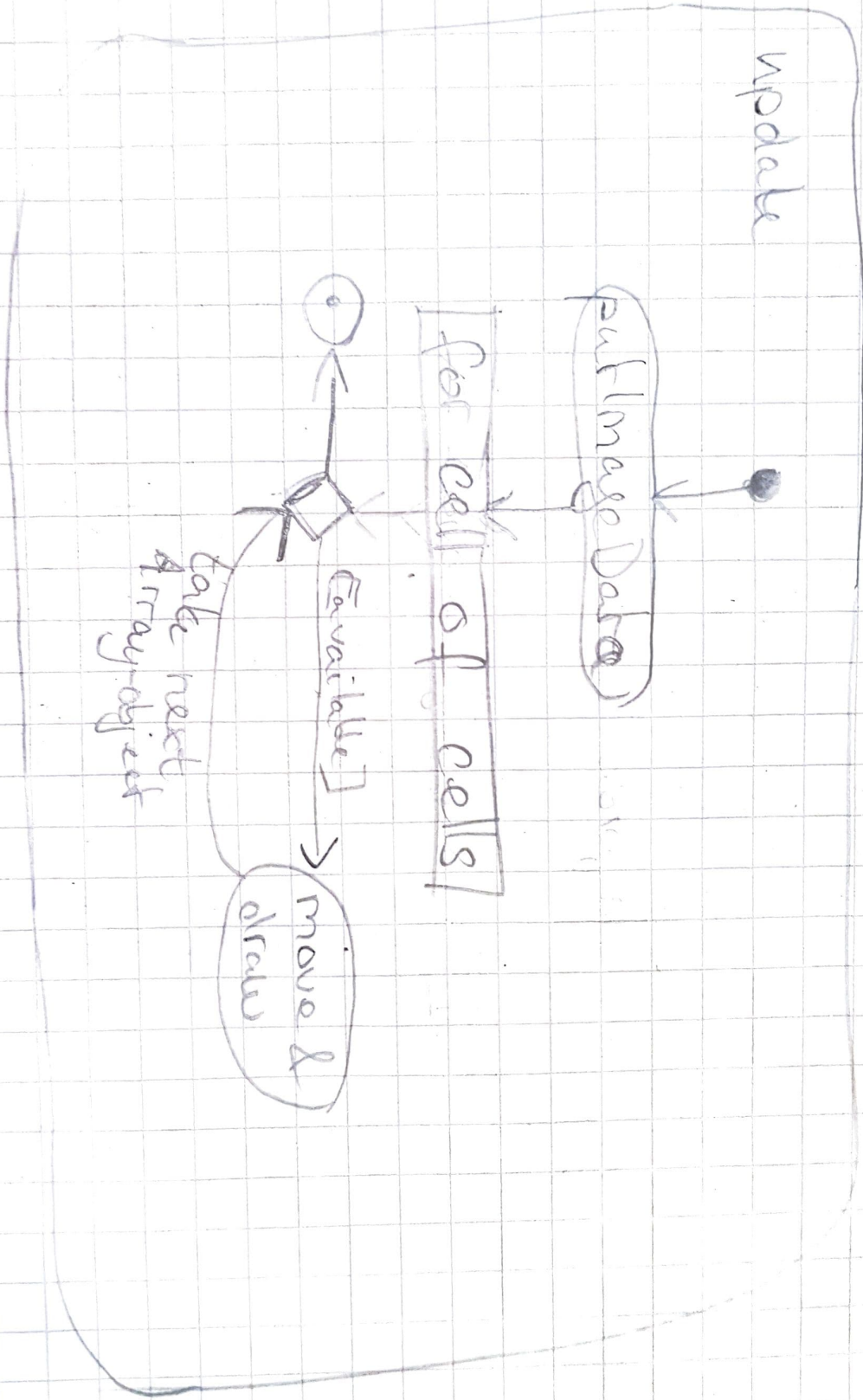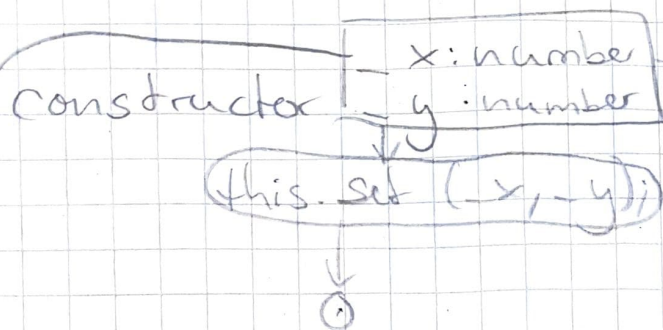
AD Vector
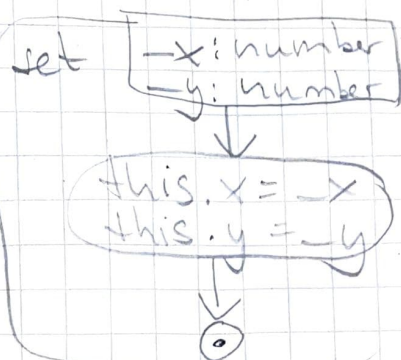
constructor — x:number — y:number

this.set (_x, _y);

⊙
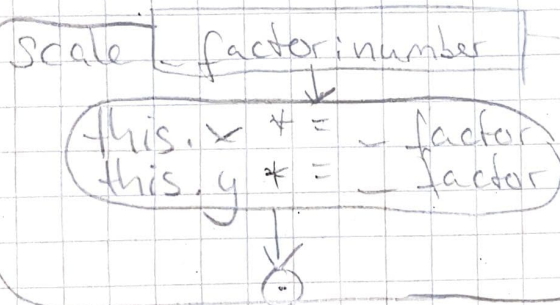
set — x:number — y:number

this.x = _x
this.y = _y

⊙
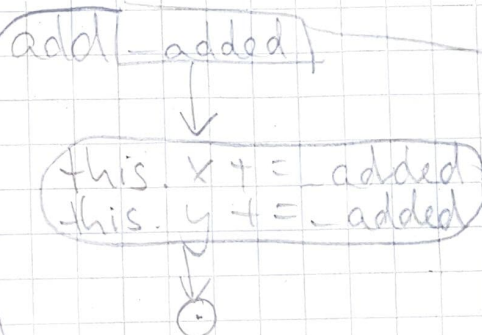
scale — factor:number

this.x *= _factor
this.y *= _factor

⊙

add(_added)

this.x += _added
this.y += _added

⊙

random — minLength:number — maxLength:number

length:number = _minLength + Math.random()* (_maxLength - _minLength)

direction:number = Math.random() *2* Math._el

this.set (Math.cos(direction), Math.sin(direction))
this.scale (length)

⊙