Konzept zu L10.2 Polymorphie

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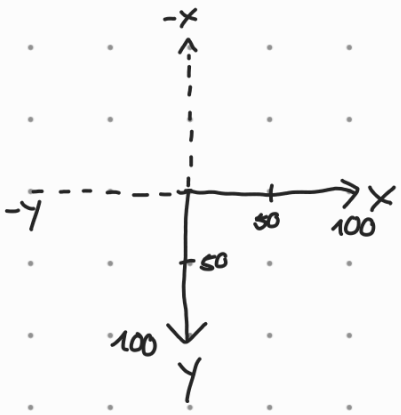
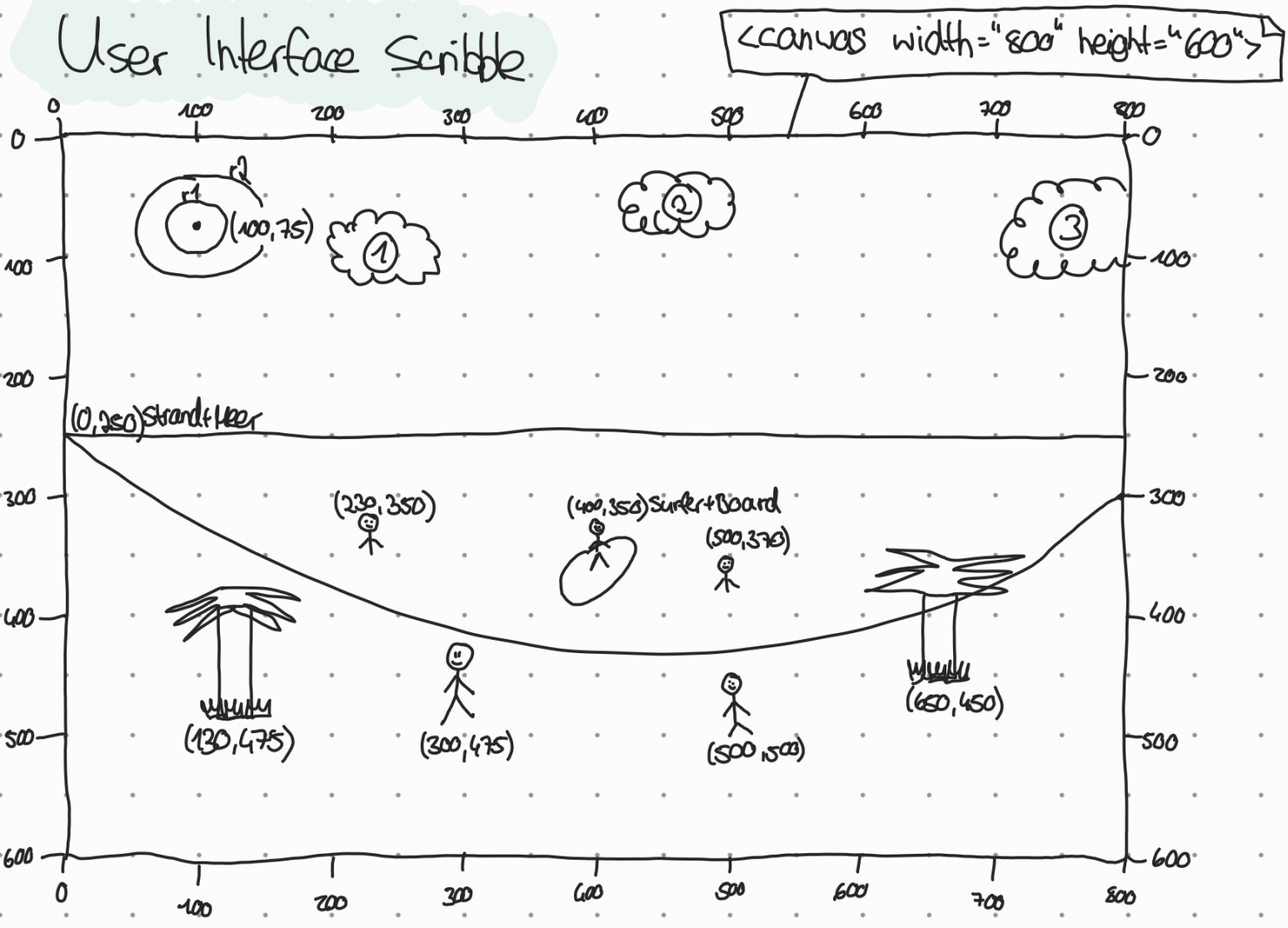
Koordinatensystem



User Interface Scribble



Background: Strand (800,300) Sonne r1: 30, r2: 150
Meer (800,400)
Himmel (800,250)

Größen

Koordinaten

Vegetation linke Palme von links nach rechts:

Links (120,475), Mitte (130,475), Rechts (140,475)

Vegetation rechte Palme von links nach rechts:

Links (635,450), Mitte (650,450), Rechts (665,450)

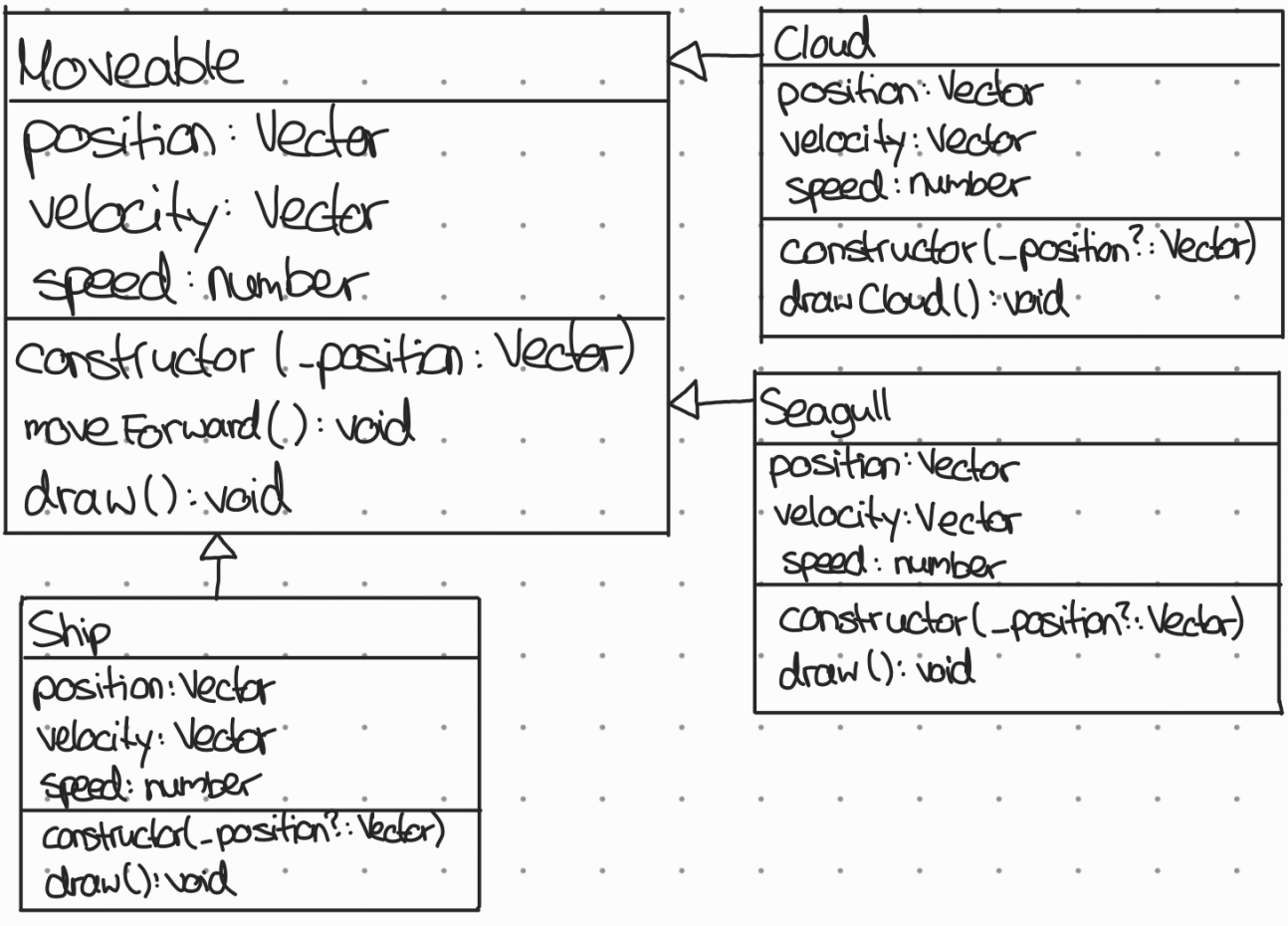
Freie Vegetation von links nach rechts:

Links (200,500), Mitte (350,480), Rechts (575,500)

Wolke:

(200,50) || (600,120)

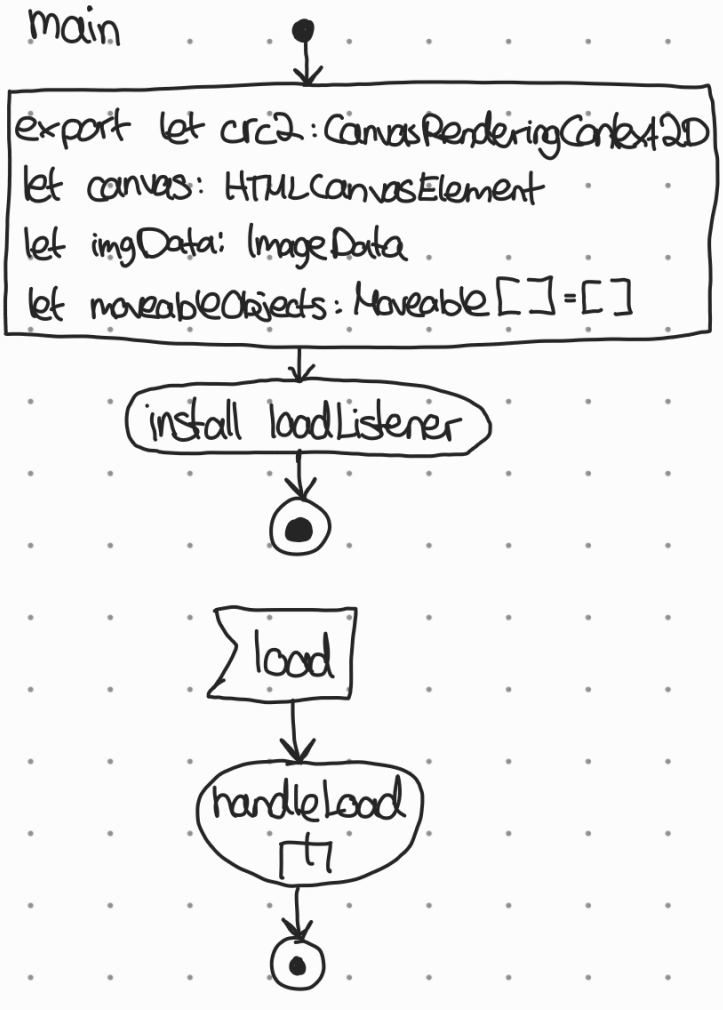
Classes

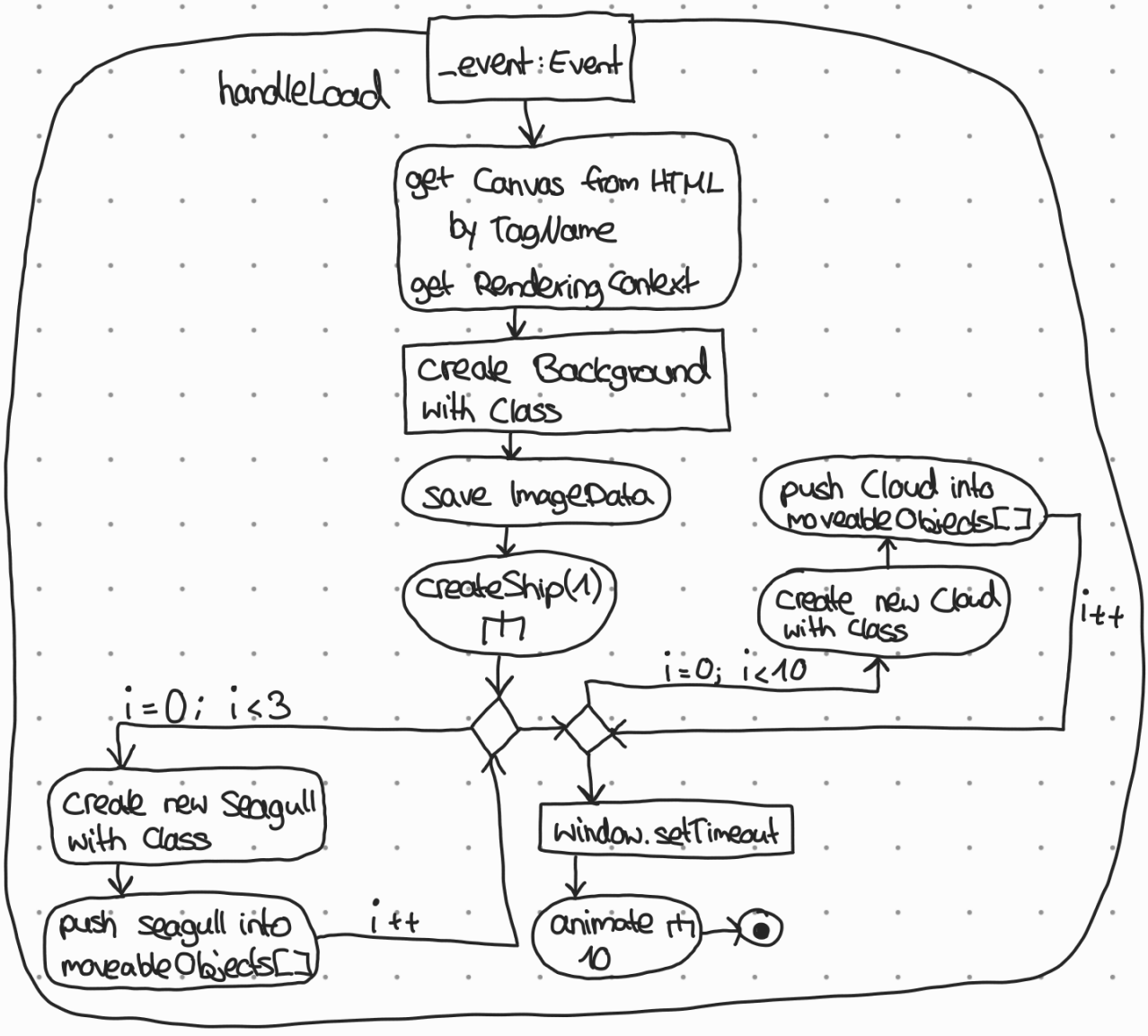


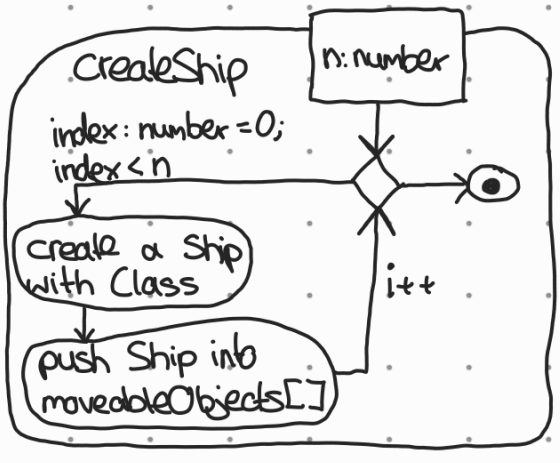
Vector
x: number y: number
constructor(_x: number, _y: number) set(_x: number, _y: number): void scale(_factor: number): void add(_addend: Vector): void random(_minLength: number, _maxLength: number): void copy(): Vector

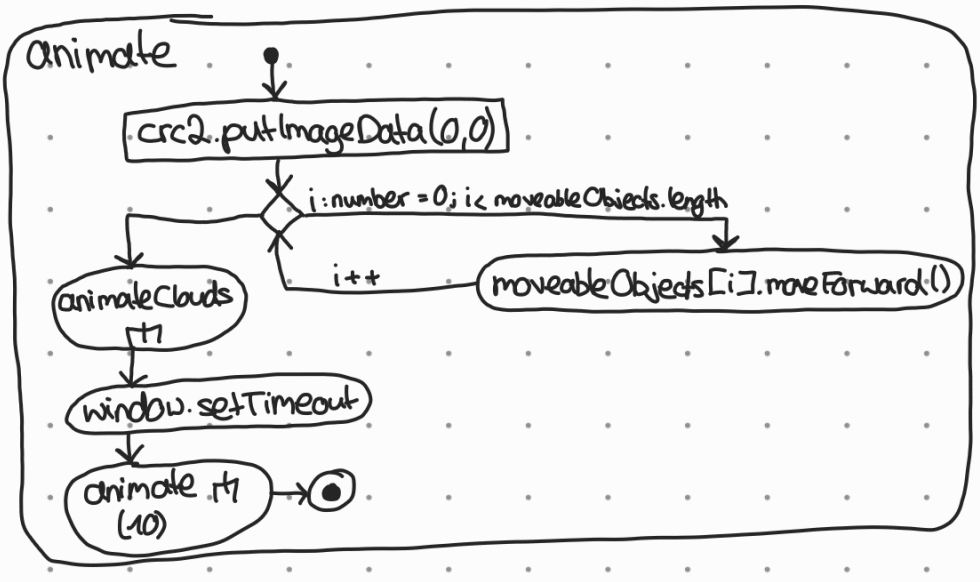
Background
constructor() drawBackground(): void drawSun(_x: number, _y: number): void drawBeach(_x: number, _y: number): void drawUrlauberi(_x: number, _y: number): void drawSurfboard(_x: number, _y: number): void drawSurfer(_x: number, _y: number): void drawSwimmer(_x: number, _y: number): void drawPalmtrees(_x: number, _y: number): void drawVegetation(_x: number, _y: number): void

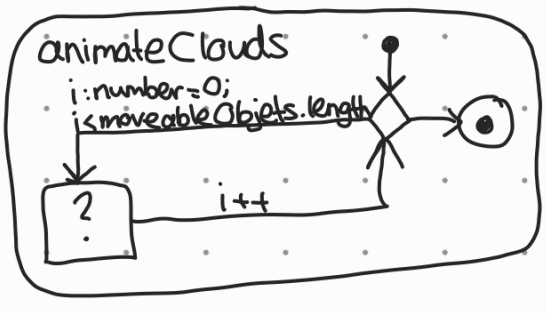
Activity Diagramm - System

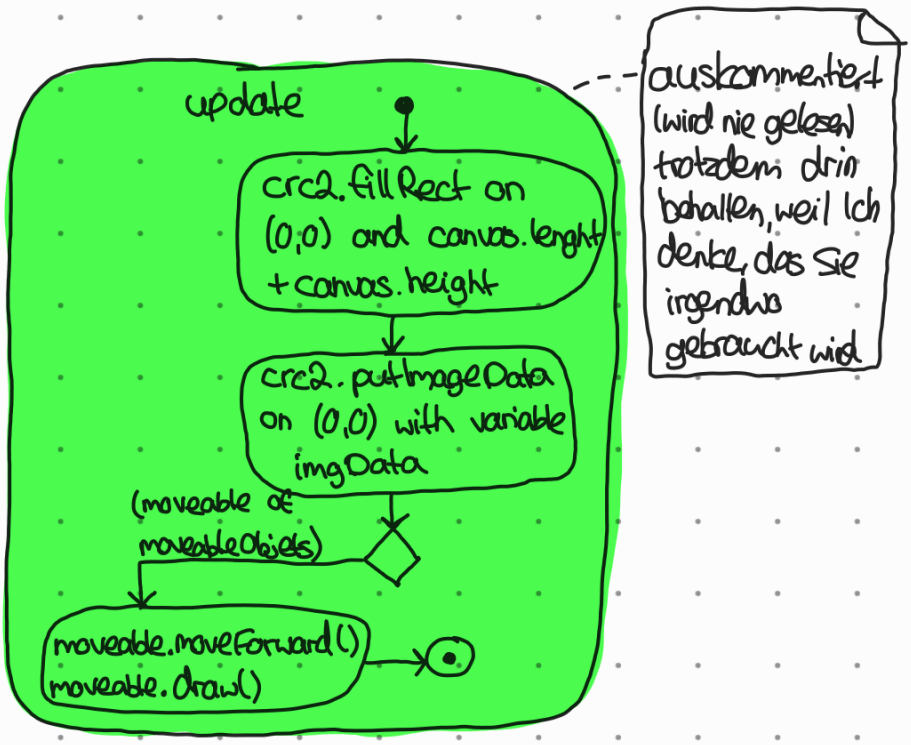



handleLoad
_event: Event
get Canvas from HTML by TagName
get RenderingContext
create Background with Class
save ImageData
createShip(1)
i=0; i<3
create new Seagull with Class
push seagull into moveableObjects[]
i++
push Cloud into moveableObjects[]
create new Cloud with class
i=0; i<10
i++
window.setTimeout
animate
10


createShip
n: number
index: number = 0;
index < n
create a Ship with Class
push Ship into moveableObjects[]
i++

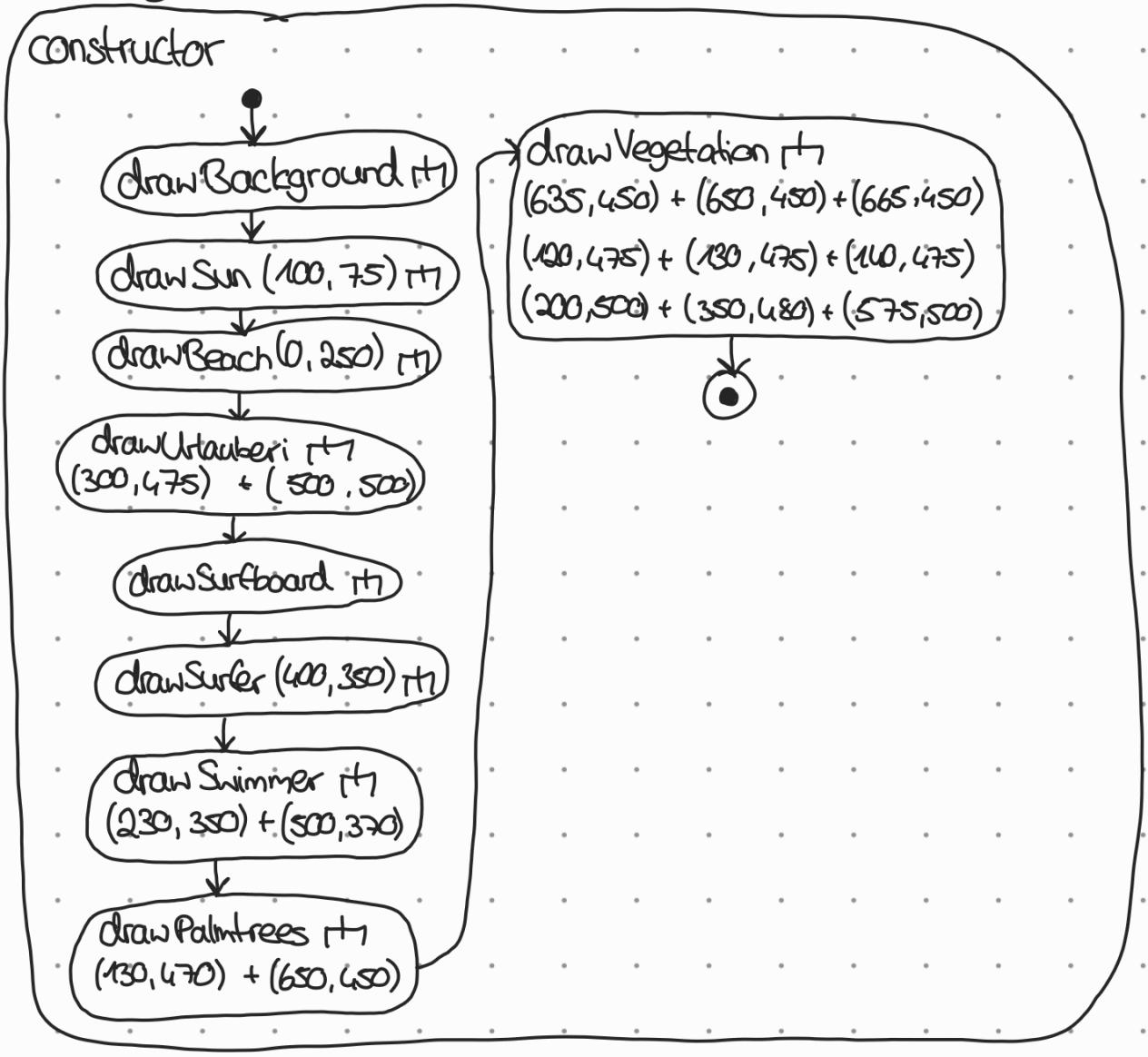

animate
crc2.putImageData(0,0)
i: number = 0; i< moveableObjects.length
moveableObjects[i].moveForward()
i++
animateClouds
window.setTimeout
animate
(10)

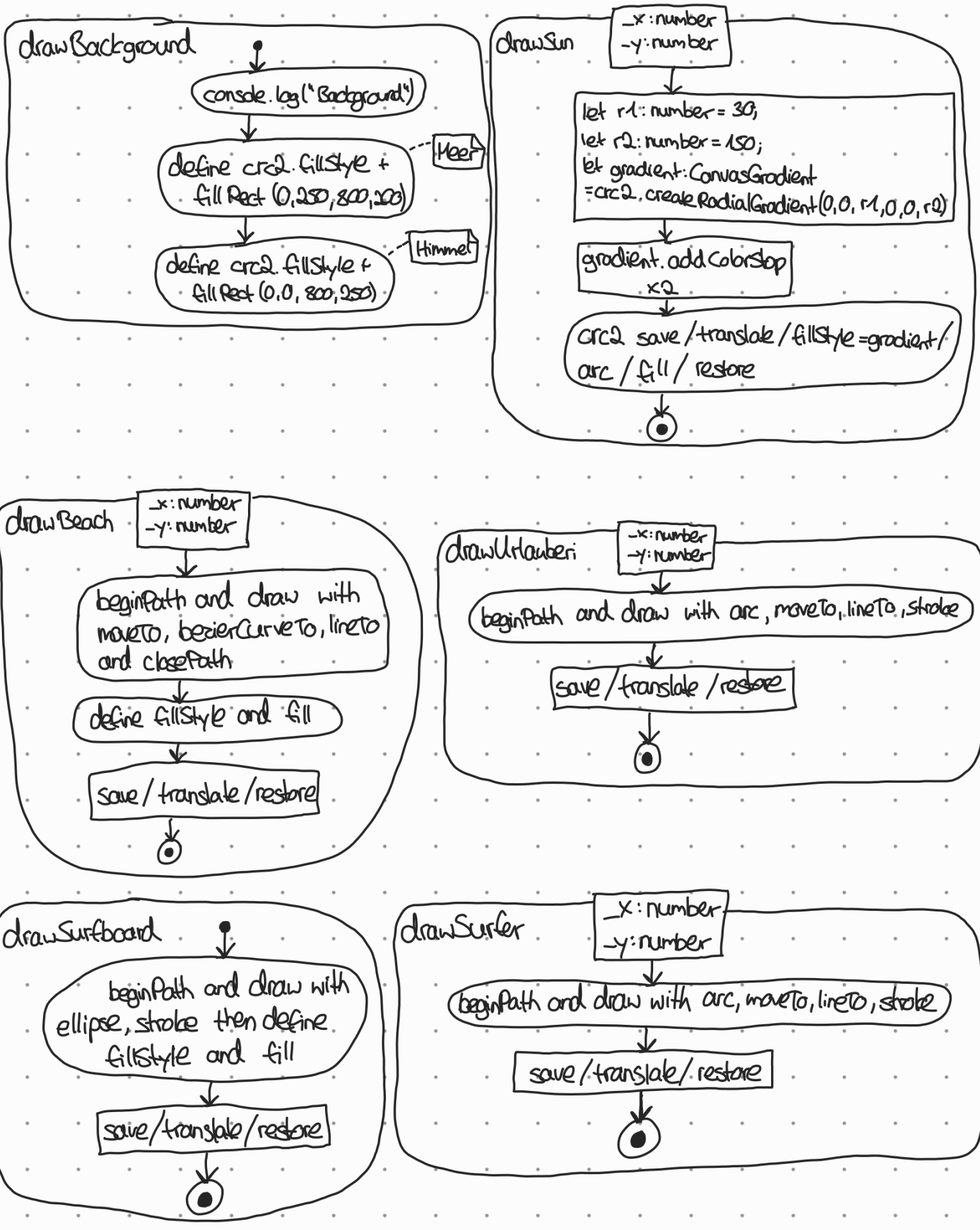

animateClouds
i: number = 0;
i<moveableObjects.length
?
i++

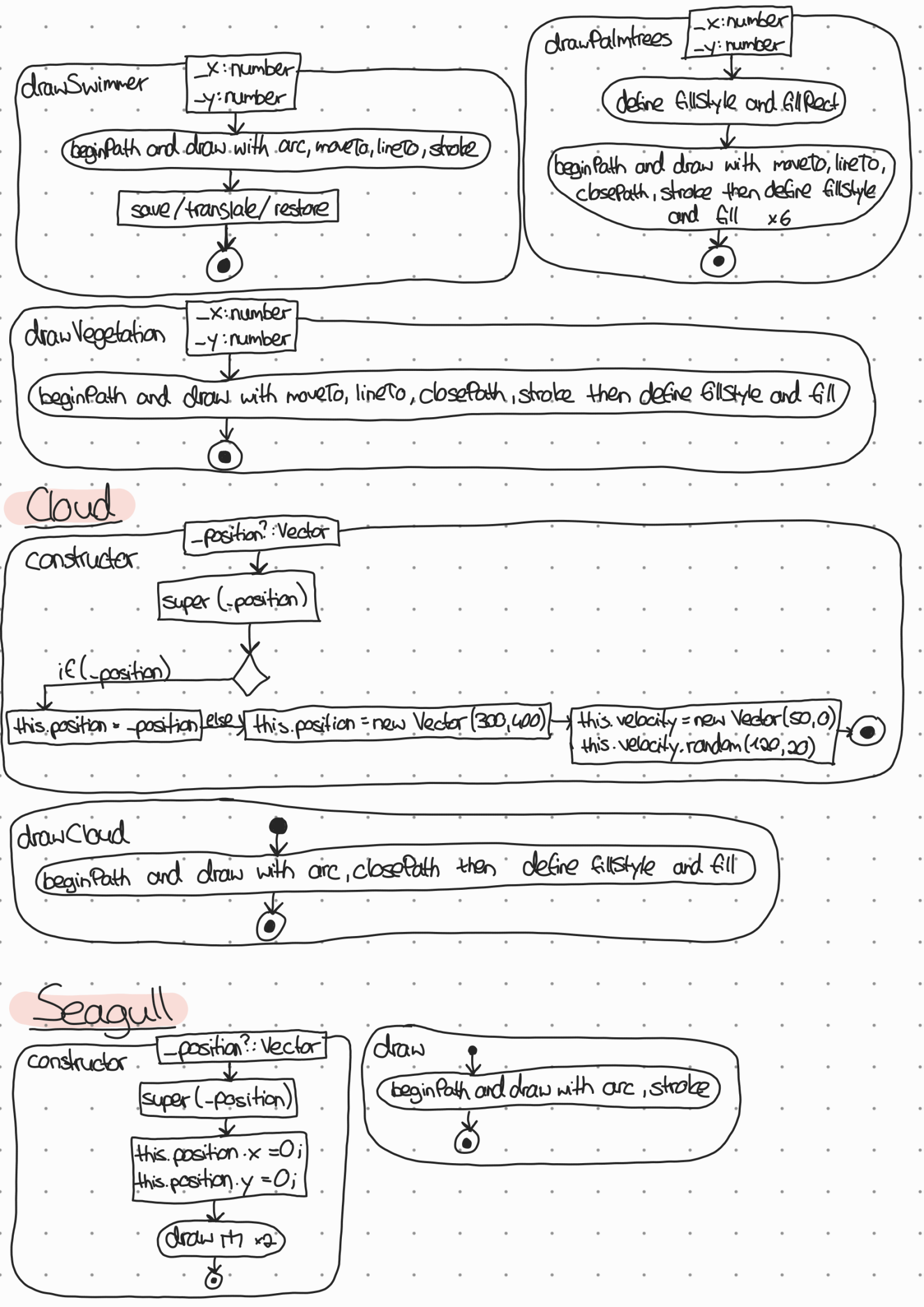


Activity Diagram - Classes

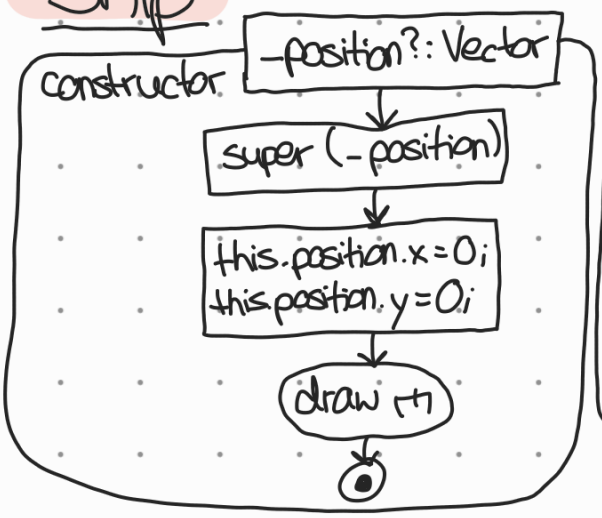
Background

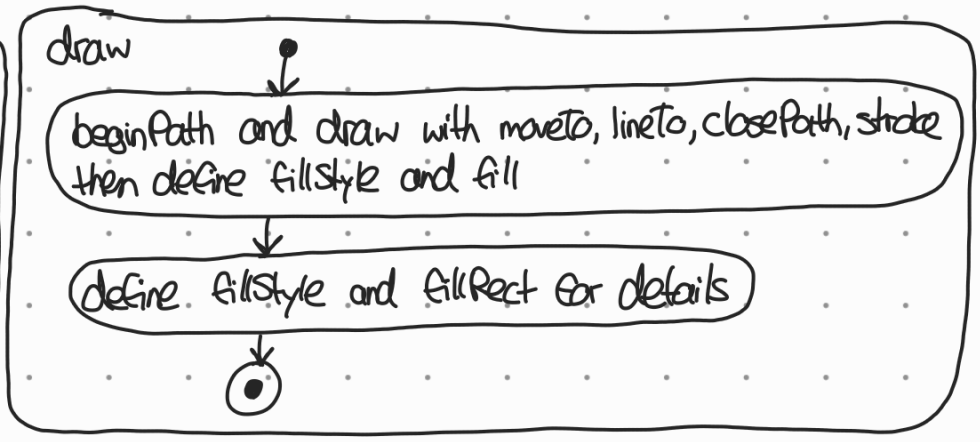



drawBackground
console.log("Background")
define crc2.fillStyle + fillRect(0,250,800,200)
Meer
define crc2.fillStyle + fillRect(0,0,800,250)
Himmel
drawSun
_x:number
_y:number
let r1:number = 30;
let r2:number = 150;
let gradient:CanvasGradient =crc2.createRadialGradient(0,0,r1,0,0,r2)
gradient.addColorStop x2
crc2 save/translate/fillStyle=gradient/ arc/fill/restore
drawBeach
_x:number
_y:number
beginPath and draw with moveTo, bezierCurveTo, lineTo and closePath
define fillStyle and fill
save/translate/restore
drawUrlauberi
_x:number
_y:number
beginPath and draw with arc, moveTo, lineTo, stroke
save/translate/restore
drawSurfboard
beginPath and draw with ellipse, stroke then define fillStyle and fill
save/translate/restore
drawSurfer
_x:number
_y:number
beginPath and draw with arc, moveTo, lineTo, stroke
save/translate/restore

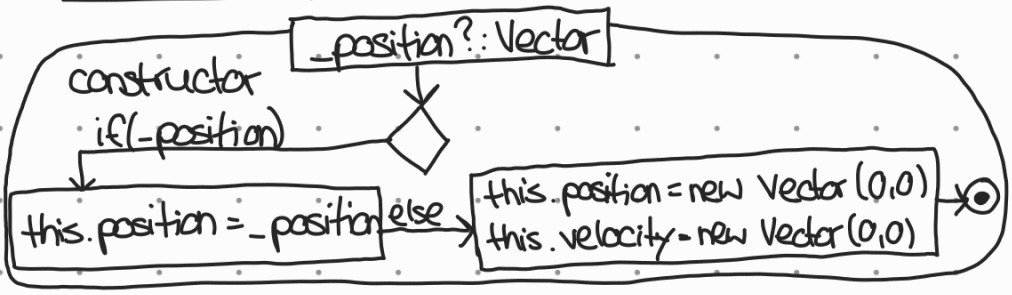

drawSwimmer
_x:number
_y:number
beginPath and draw with arc, moveTo, lineTo, stroke
save/translate/restore
drawPalmtrees
_x:number
_y:number
define fillStyle and fillRect
beginPath and draw with moveTo, lineTo, closePath, stroke then define fillStyle and fill x6
drawVegetation
_x:number
_y:number
beginPath and draw with moveTo, lineTo, closePath, stroke then define fillStyle and fill
Cloud
constructor
_position?:Vector
super(_position)
if(_position)
this.position = _position
else
this.position = new Vector(300,400)
this.velocity = new Vector(50,0)
this.velocity.random(120,20)
drawCloud
beginPath and draw with arc, closePath then define fillStyle and fill
Seagull
constructor
_position?:Vector
super(_position)
this.position.x = 0;
this.position.y = 0;
draw rt x2
draw
beginPath and draw with arc, stroke

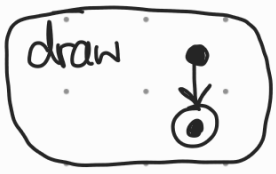
Ship

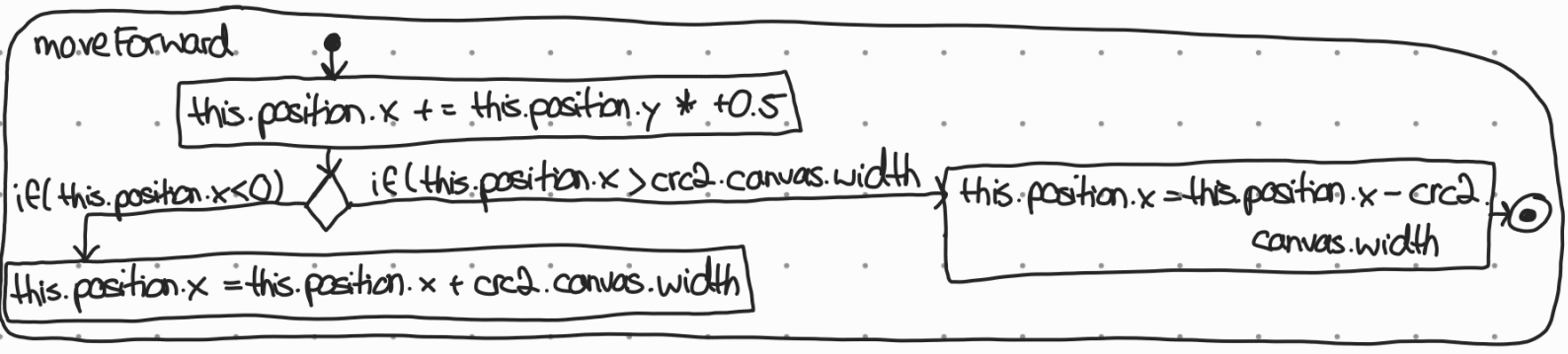




Moveable







Vector