Startseite.html

<html>

<html>
<header>

<h1> WILLKOMMEN IM INTERAKTIVEN UNTERWASSER-GAME </h1>

</header>

<main>

LET THE GAME BEGIN

<button>
mit Link zur
canvas.html</button>

</main>
</html>

index.html

KleineBlase
Math.random

Spielerfisch
Math.random

LilaFisch
Math.Random

<canvas width="1000" height="700" style="border: 1px solid white></canvas>

(850, 30)

grüner Fisch
Math.Random

PUNKTESTAND: 0

HIGHSCORES

LISA: 40

<h2>highscores</h2>

GroßeBlase
Math.random

stein
(620/620)

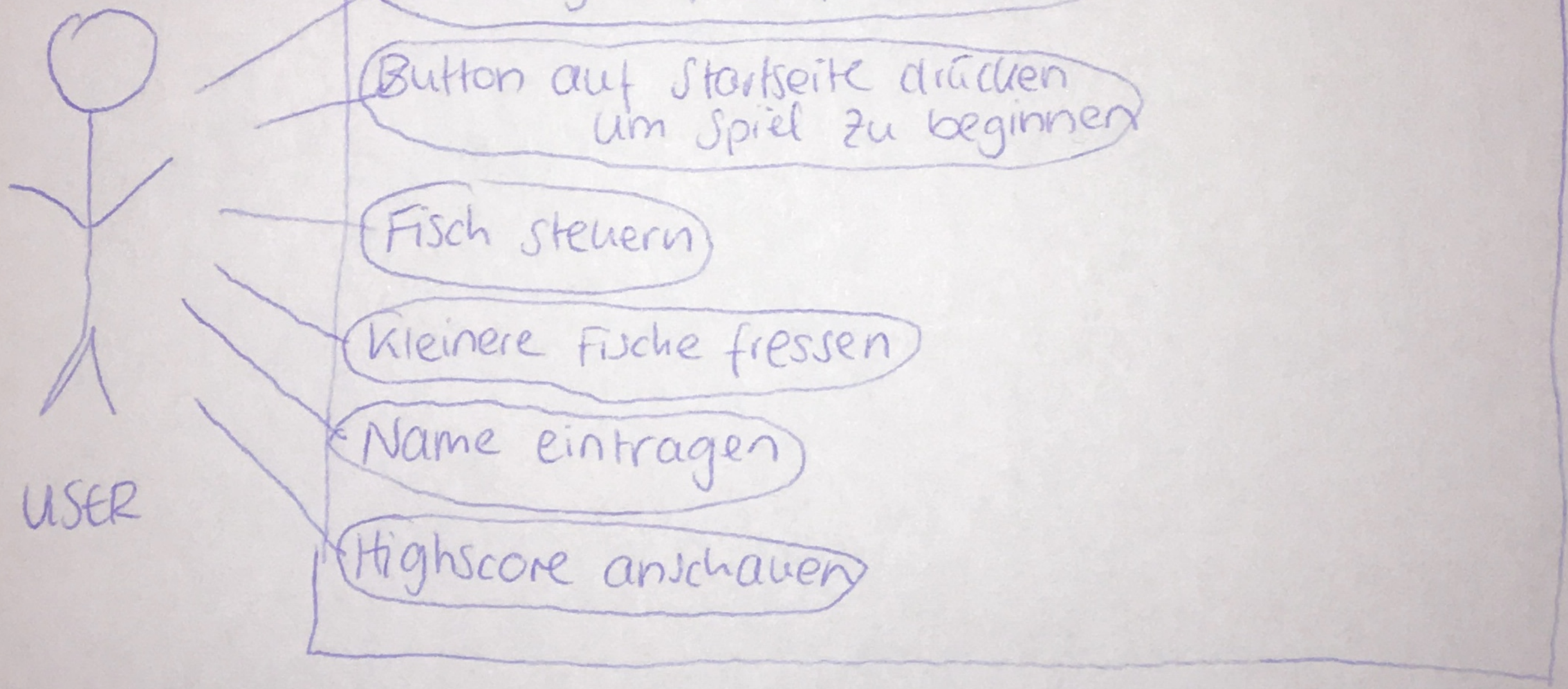
boden
(600, 1000, 100)

Gras (300,630)
Gras (400,630)
Gras (600, 630)
Gras (700, 630)
Gras (800, 630)
Gras (800, 630)

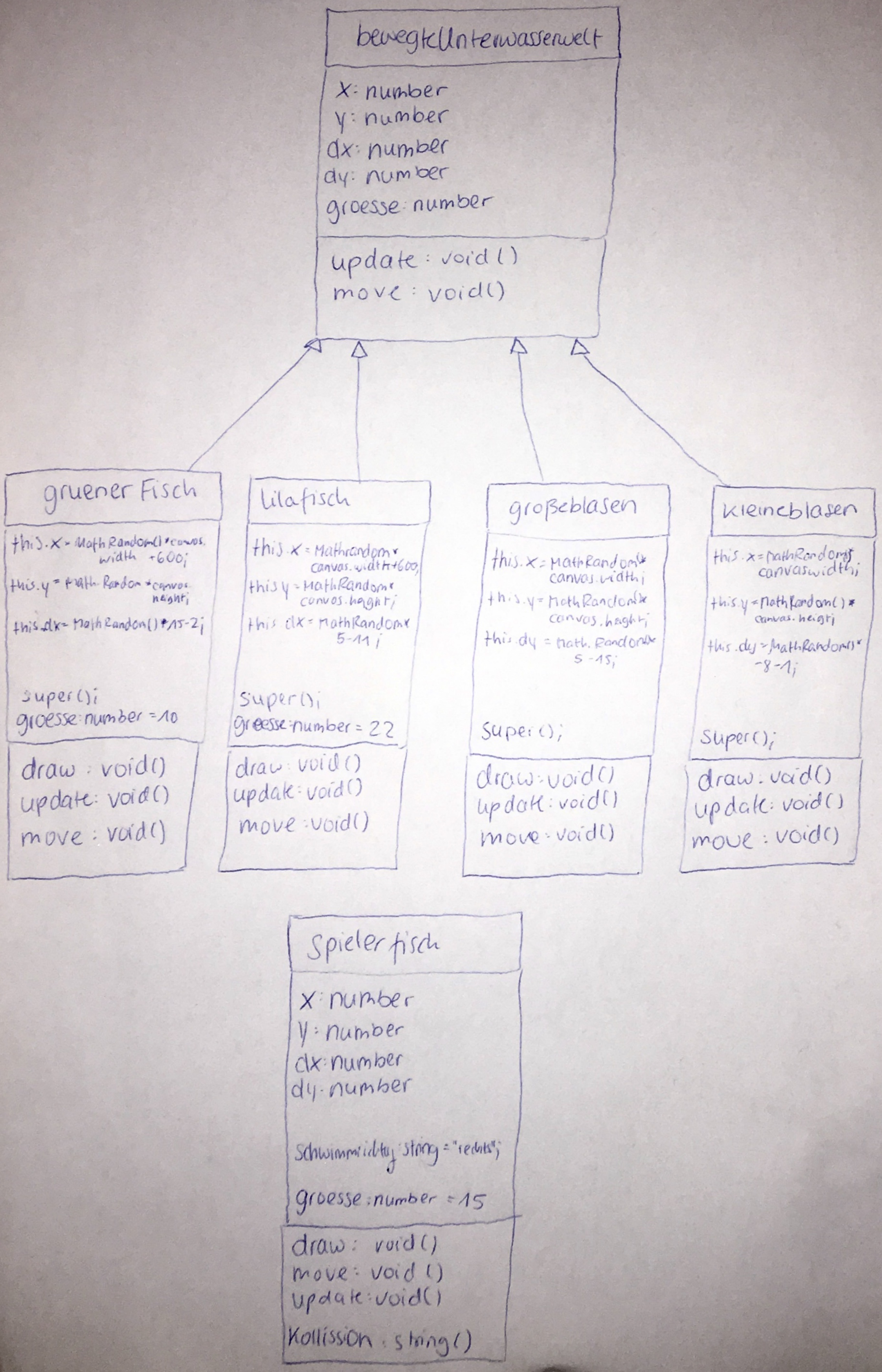
<audio></audio>
autoplay

0:00/

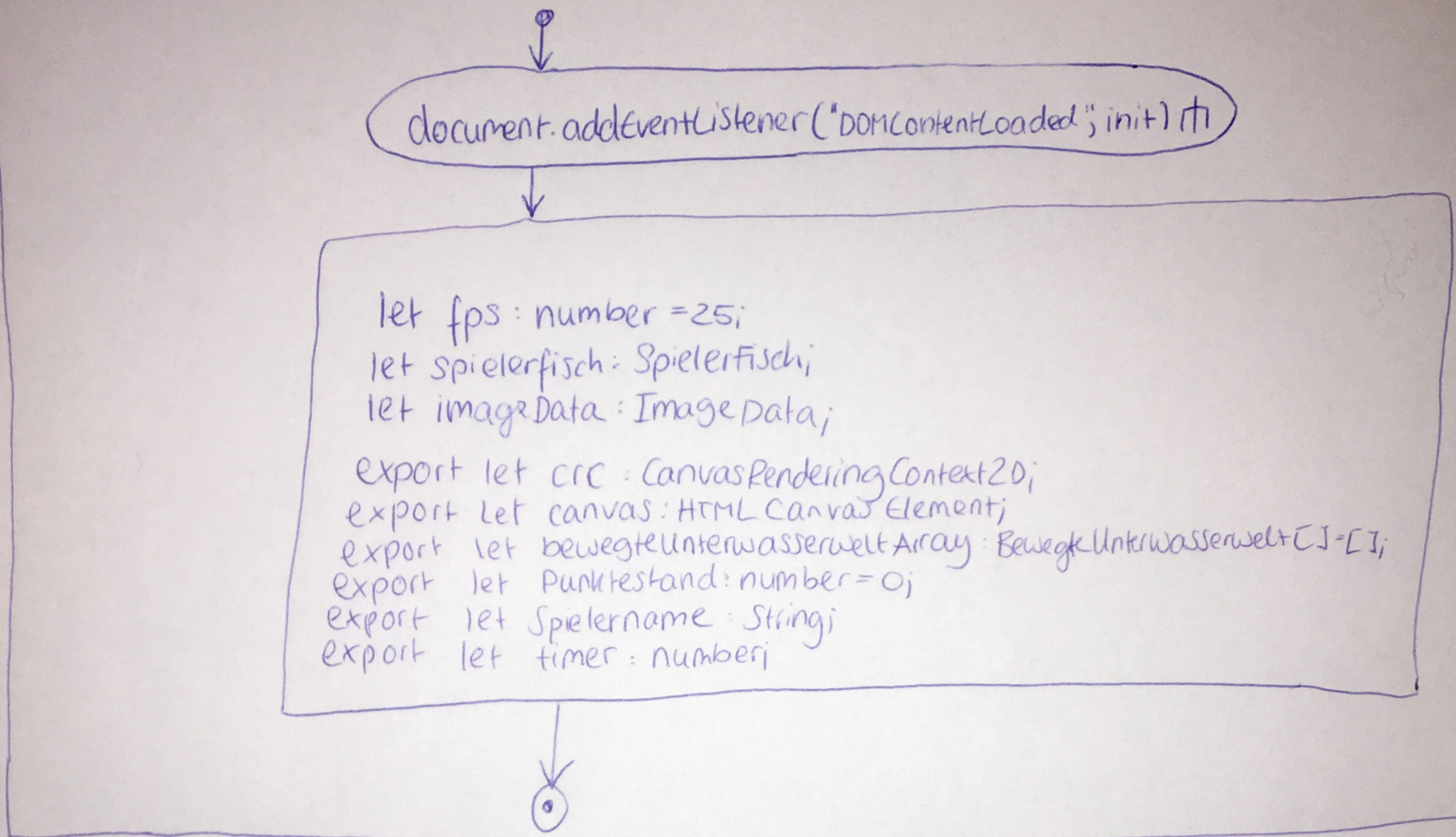
Anwendungsfalldiagramm

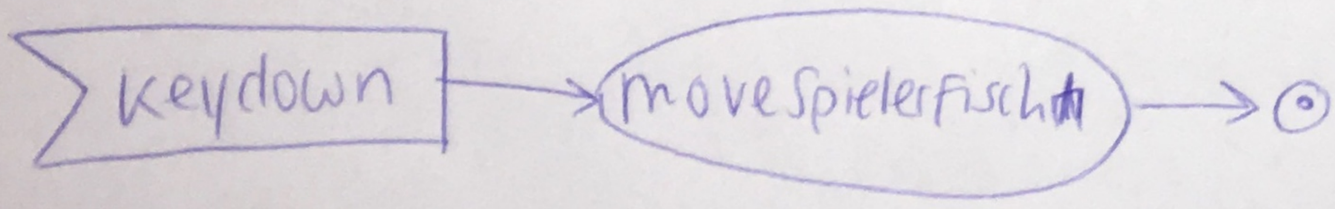


Klassendiagramme



Hauptprogramm





init

```
canvas = document.getElementByTagName("canvas")[0];
crc    = canvas.getContext("2D");
```

refresh()

zeichne Hintergrund()

```
imageData = crc.getImageData(0,0,canvas.width,canvas.height)
Spielerfisch = newSpielerFisch();
```

Spielerfisch.draw()

document.addEventListener("keydown",moveSpielerFisch)

let i:number = 0;

[i <= 7]

let gruen : GruenerFisch

gruen = new GruenerFisch()

bewegteUnterwasserweltArray.push(gruen)

gruen.draw()

i++

let i:number = 0;

[i<=7]

let lila : LilaFisch

lila = new LilaFisch()

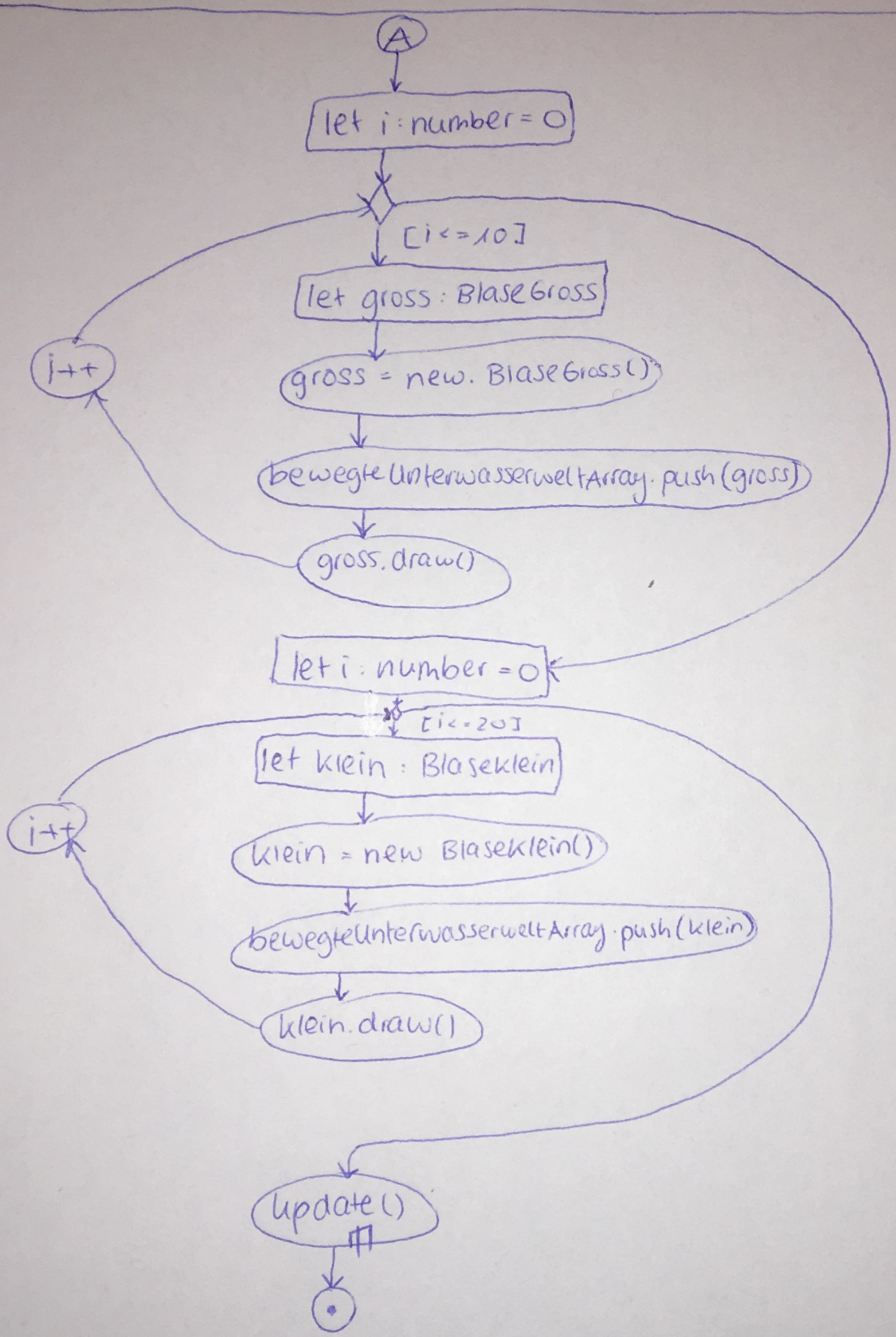
bewegteUnterwasserweltArray.push(lila)

lila.draw()

i++

A

init


A
let i:number=0
[i<=10]
let gross:BlaseGross
gross=new.BlaseGross()
bewegteUnterwasserweltArray.push(gross)
gross.draw()
i++
let i:number=0
[i<=20]
let klein:Blaseklein
klein=new Blaseklein()
bewegteUnterwasserweltArray.push(klein)
klein.draw()
i++
update()

update

timer = window.SetTimeout(update, 1000/fps)
crc.clearRect(0,0,canvas.width,canvas.height)
crc.putImageData(ImageData,0,0)

Spielerfisch.update()

let i: number = 0

[i<bewegteUnterwasserweltArray.length]

bewegteUnterwasserweltArray[i].update()

i++

[Spielerfisch.kollision(bewegteUnterwasserweltArray[i])="tot"]

[Spielerfisch.kollision(bewegteUnterwasserweltArray[i])=="essen"]

window.clearTimeout(timer)

alert("Du bist gestorben!")

Spielername = prompt
("Erreichte Punktzahl: " + Punktestand,
" Bitte Name eingeben")

insert()

refresh()

bewegteUnterwasserweltArray.splice(i,1)

[Punktestand == 80]

window.clearTimeout(timer

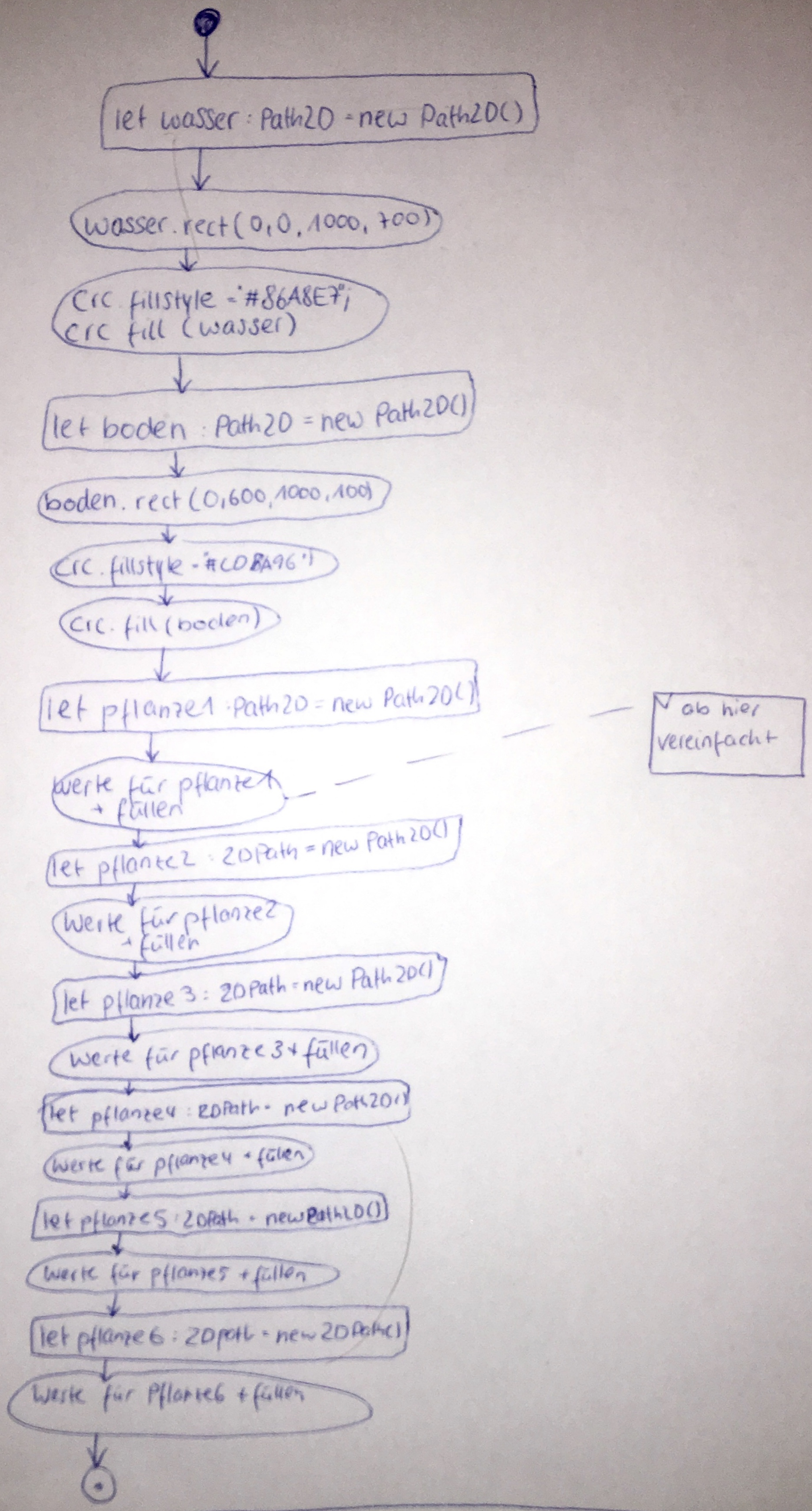
Spielername = prompt(
"Erreichte Punktzahl: " + Punktstand,
" Bitte Name eingeben")

insert()

refresh()

Punktestand darstellen mit vorgeg. Schriftgröße und Farbe, und Art und x+y koordinaten

Zeichne Hintergrund



moveSpielerfisch

e: keyboardEvent

[e.keyCode == 39]

[e.keyCode == 37]

[e.keyCode==40]

[e.keyCode==38]

Spielerfisch.x += 15;

Spielerfisch.y += 15

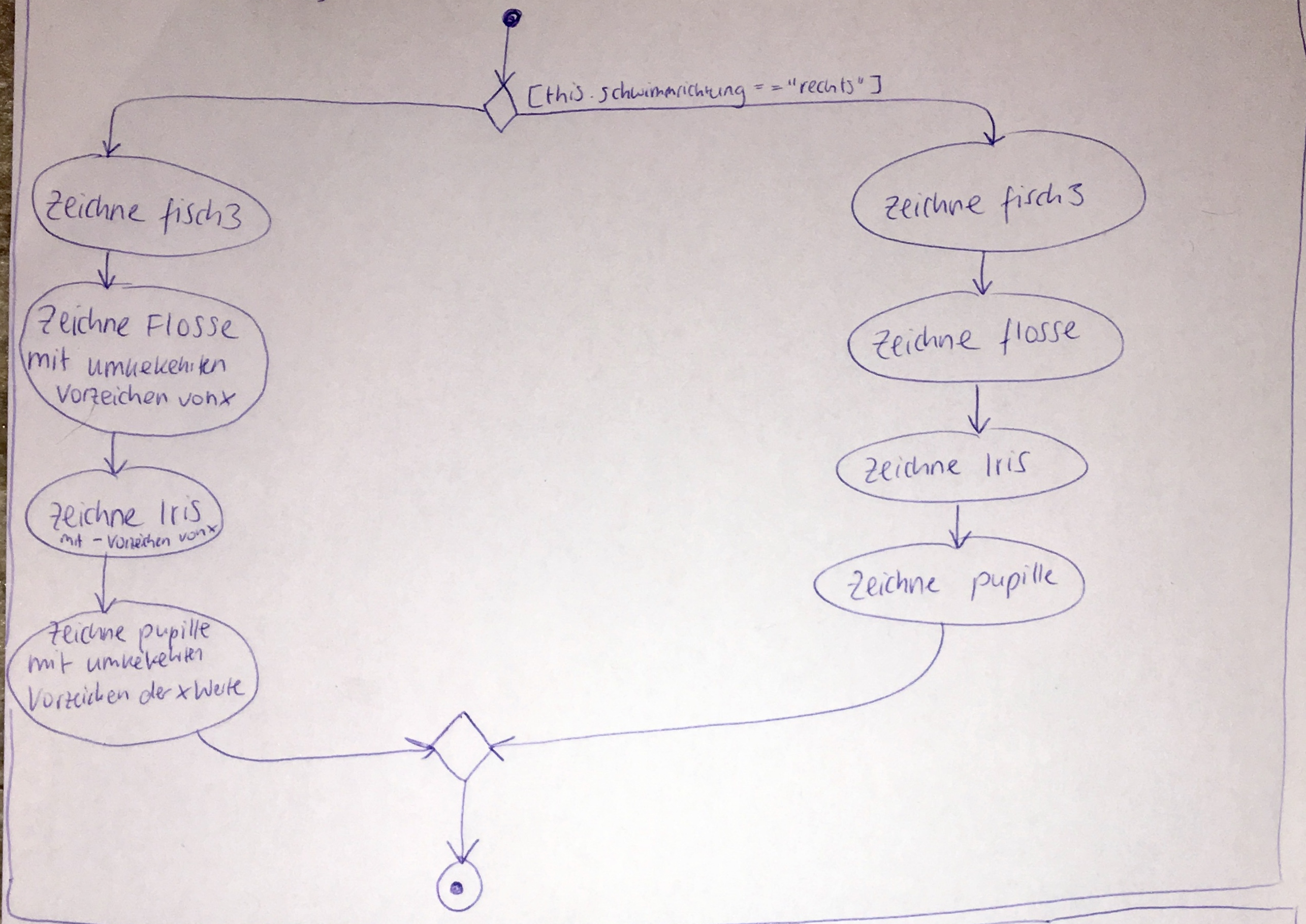
Spielerfisch.y -= 15;

Spielerfisch.x -= 15;

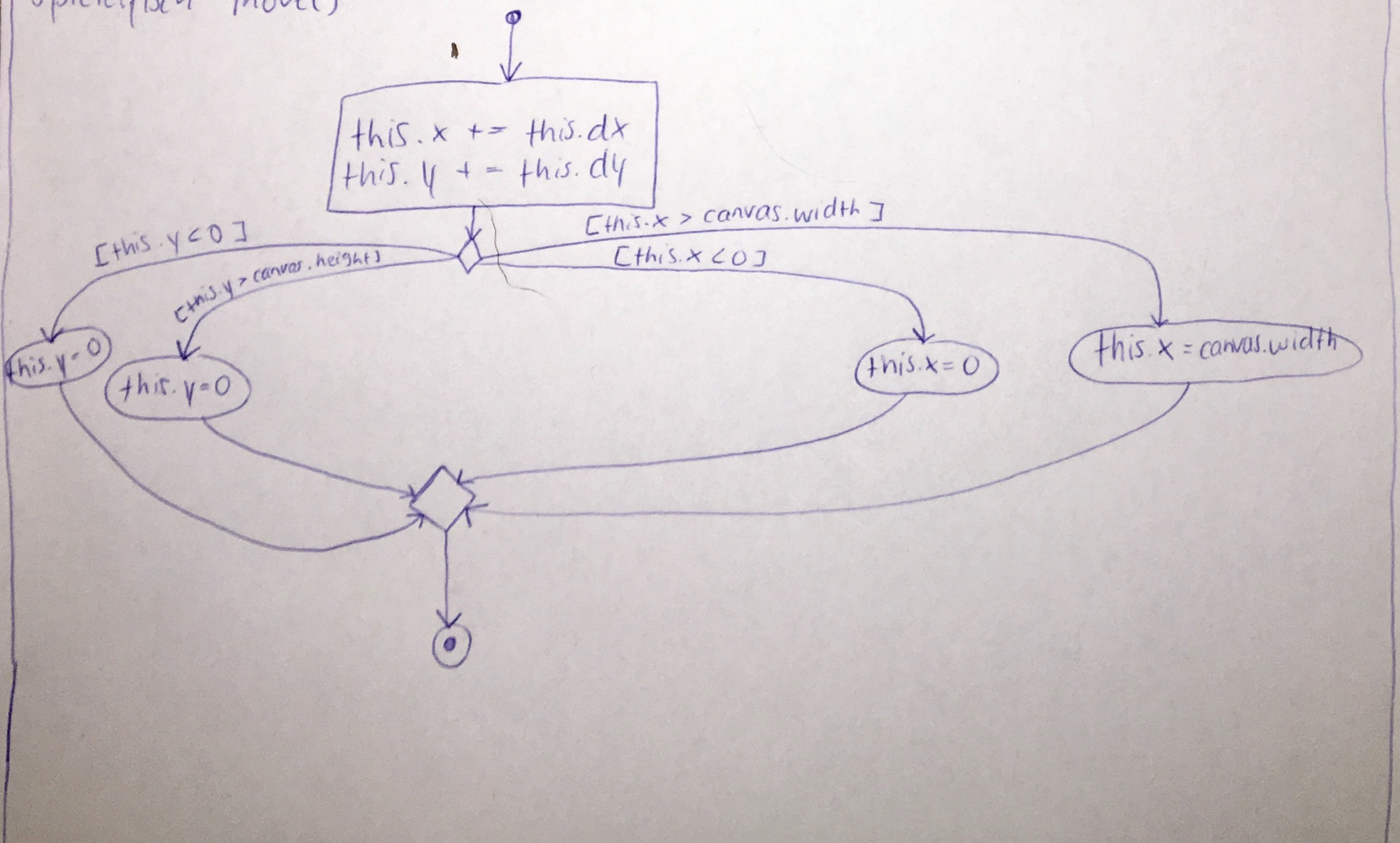
Spielerfisch.schwimmrichtung = "rechts";

Spielerfisch.schwimmrichtung = "links";

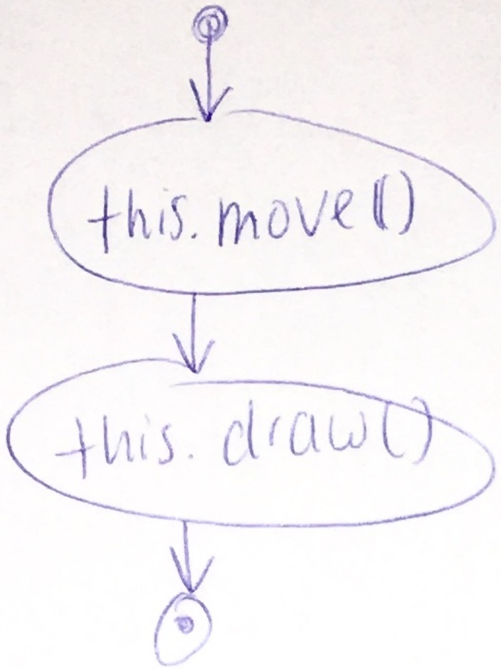
Spielerfisch draw()



Spielerfisch move()



Spieleigtisch update()



Kollision

fisch: BewegteUnbekannteEinheit = string

[((fish instanceof Blasenfisch) && !(fish instanceof Blobfisch))]

let xDistanz: number = Math.abs(this.x - fisch.x)
let yDistanz: number = Math.abs(this.y - fisch.y)

[Math.sqrt(Math.pow(xDistanz,2) + Math.pow(yDistanz,2)) < 80]

[this.groesse > fisch.groesse]

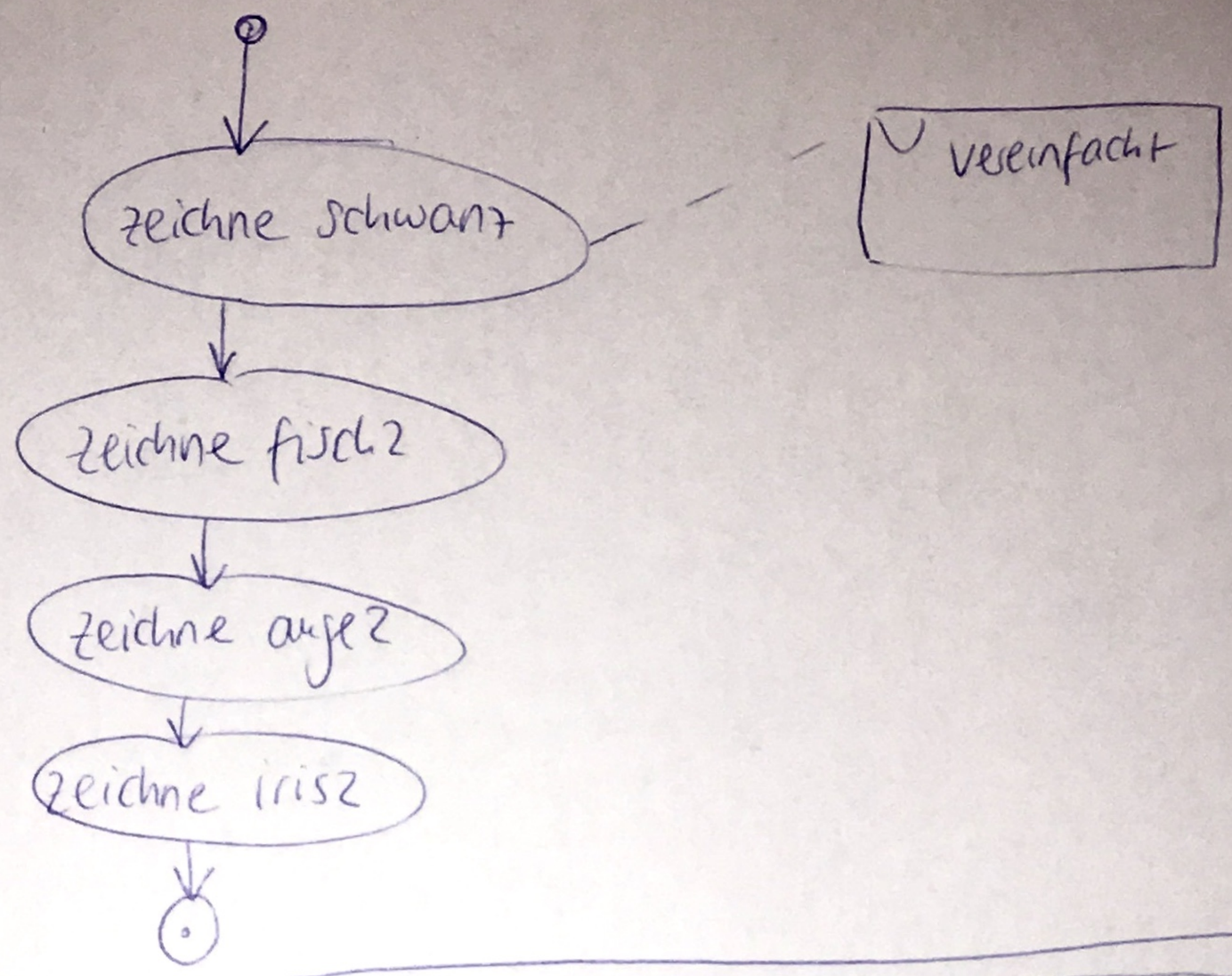
this.groesse ++;
Punktestand += 5

"nichts"

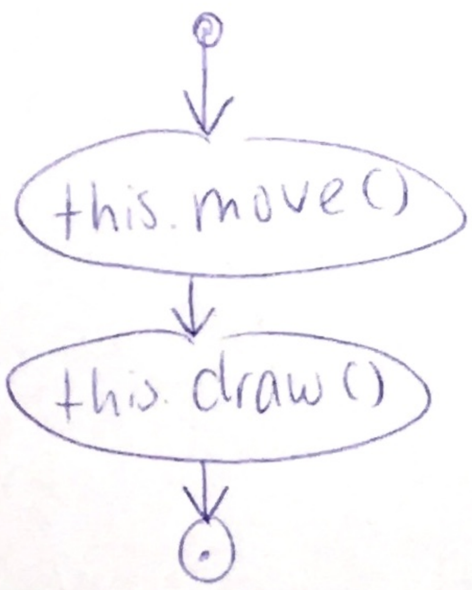
"tot"

"essen"

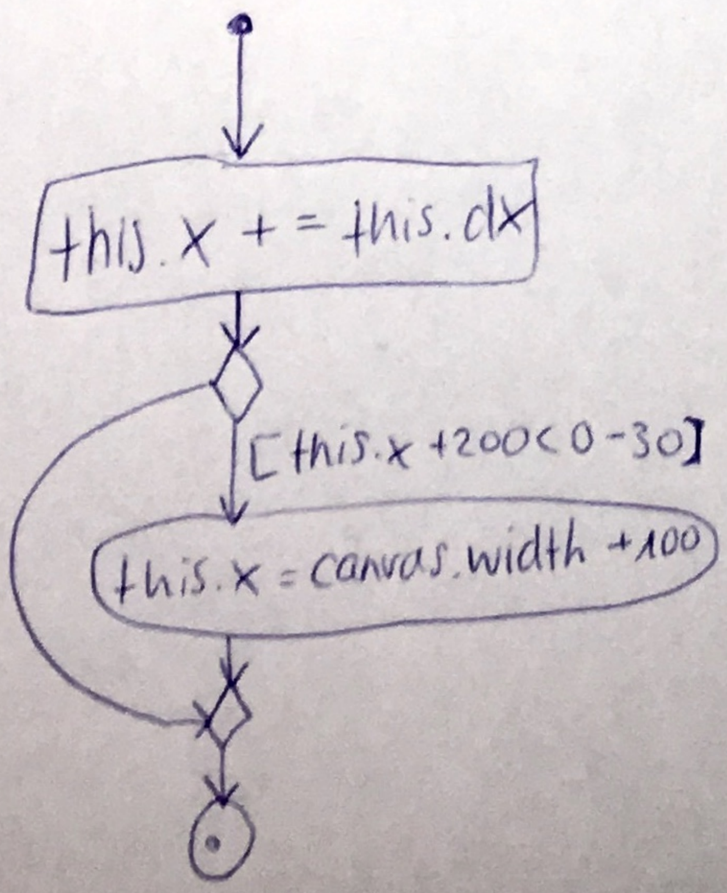
lilafisch draw()



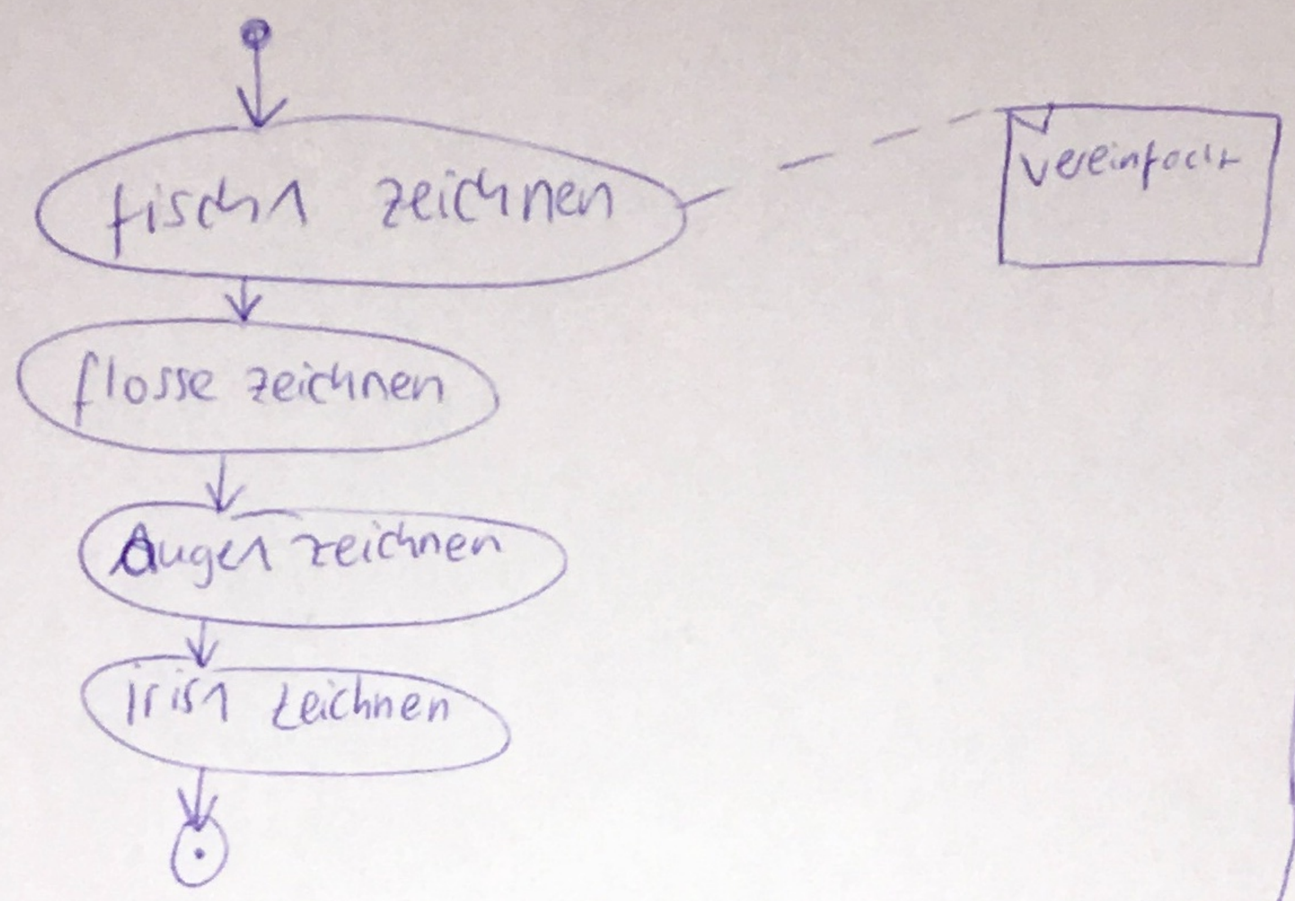
lilafisch update()



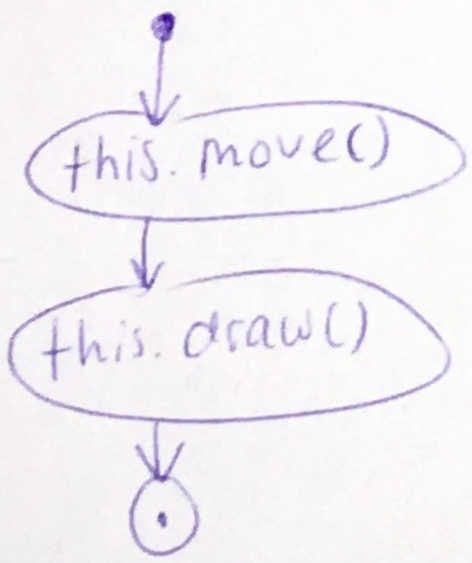
Lilafisch move()



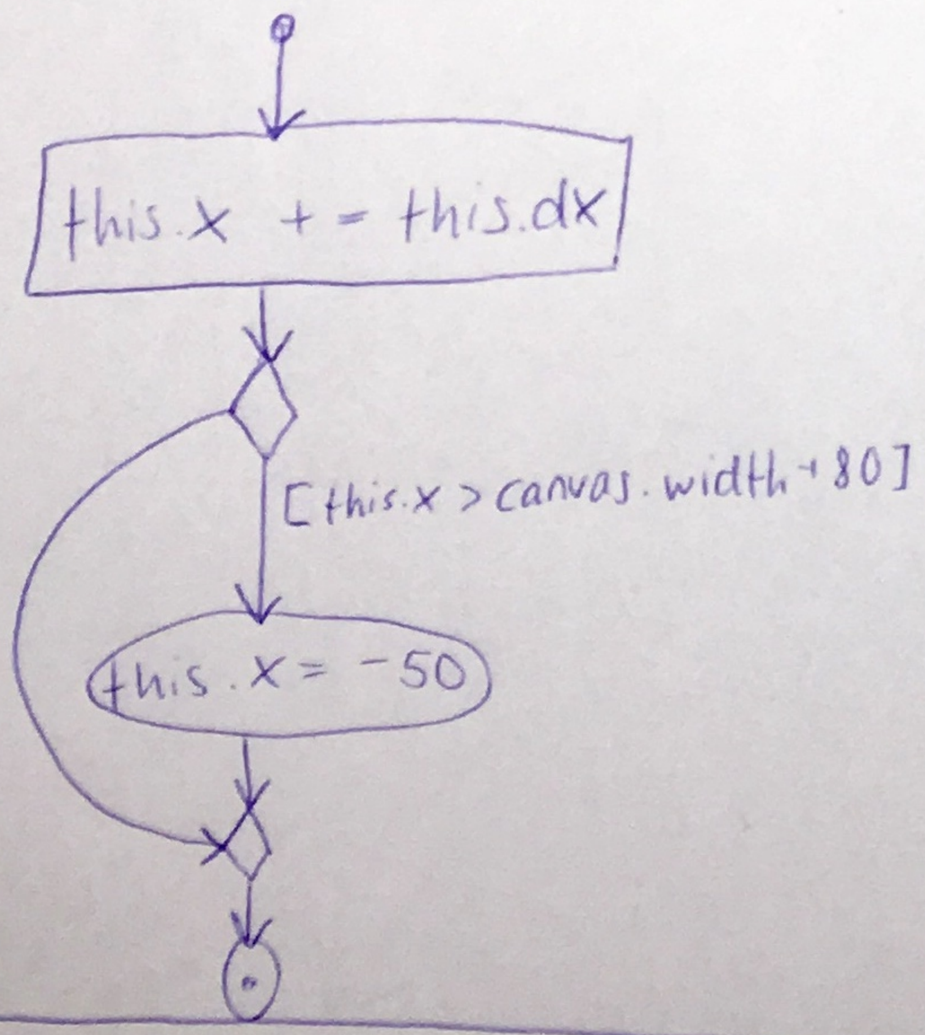
gruenerfisch.draw()



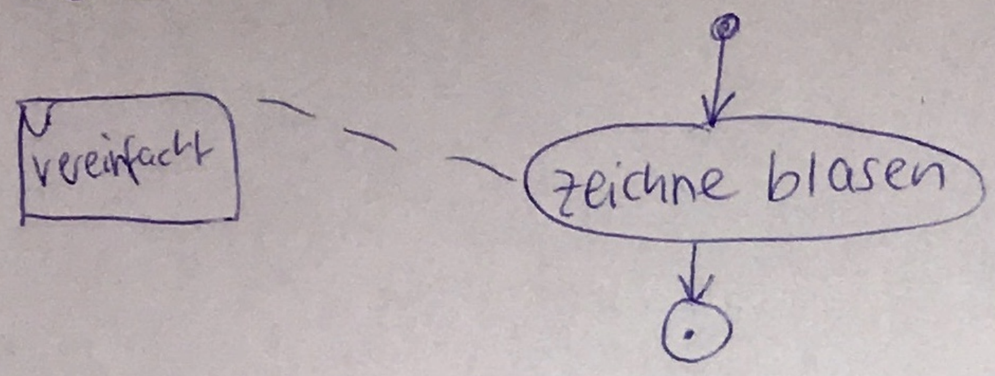
gruenerfisch.update()



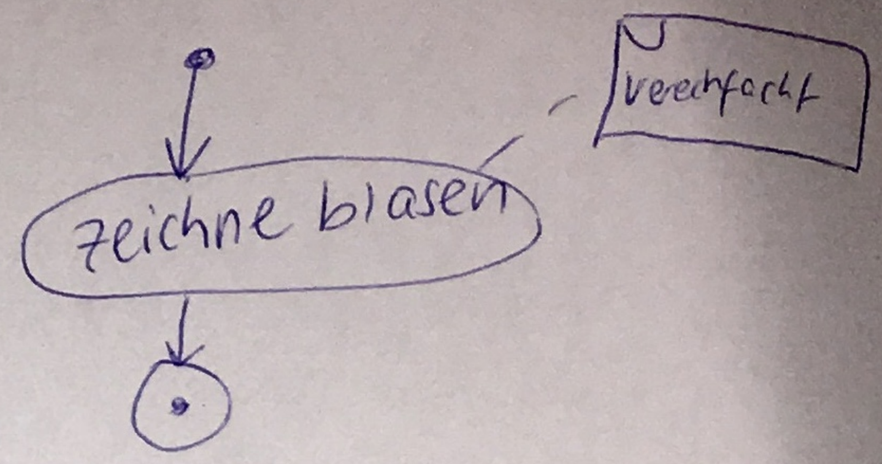
gruenerfisch.move()



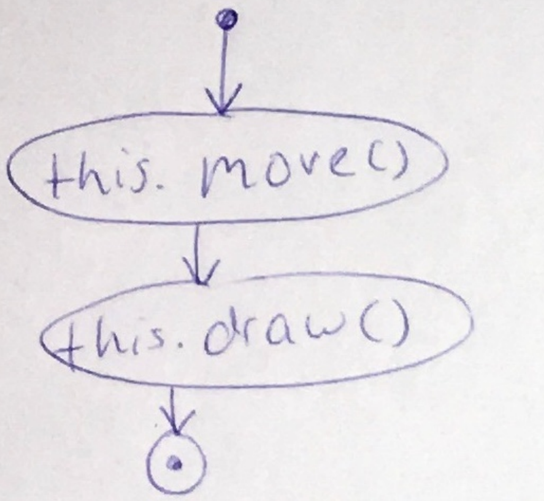
BlaseGross.draw()



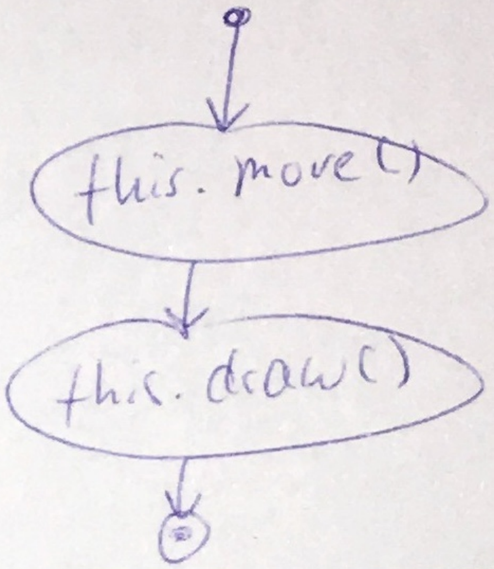
BlaseKlein.draw()



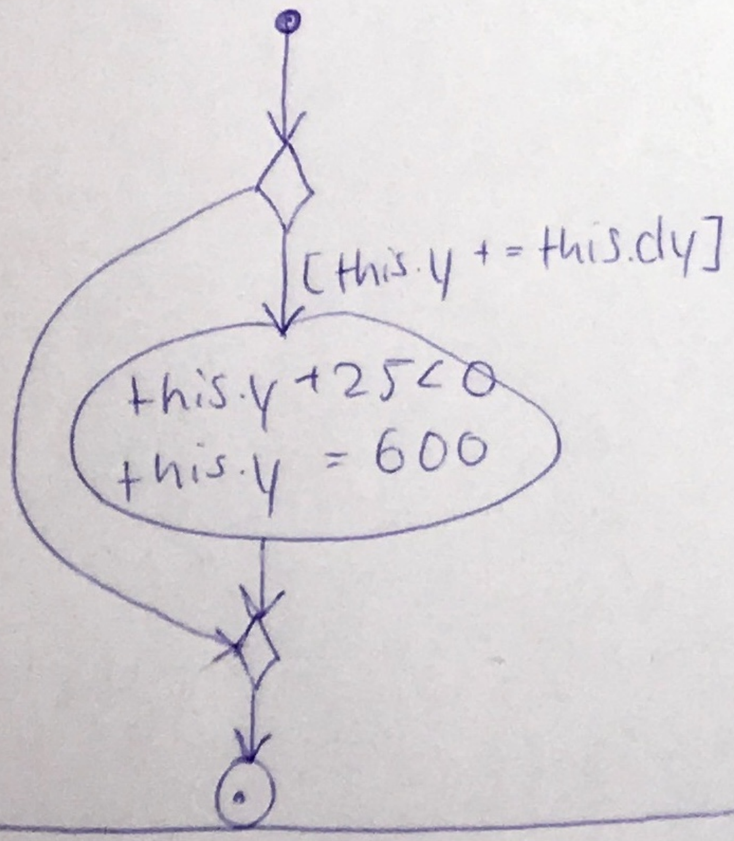
BlaseGross.update()



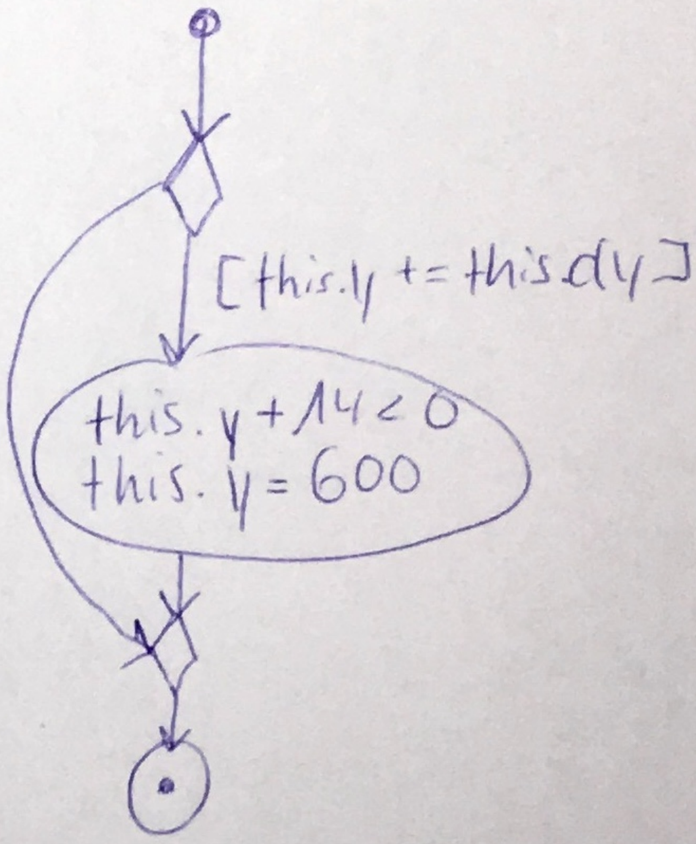
BlaseKlein update()



Blase Gross move()



BlaseKlein move()



USER

CLIENT

SERVER

DATENBANK

Spielername eingeben

[illegible] nimmt Name + Punkte an

erstellt draus GET URL

Sendet request an Server

empfängt request

Daten aus Request verarbeiten

Json Objekt erstellen

Name + erreichte Punkte in Collection schreiben

erstellt response

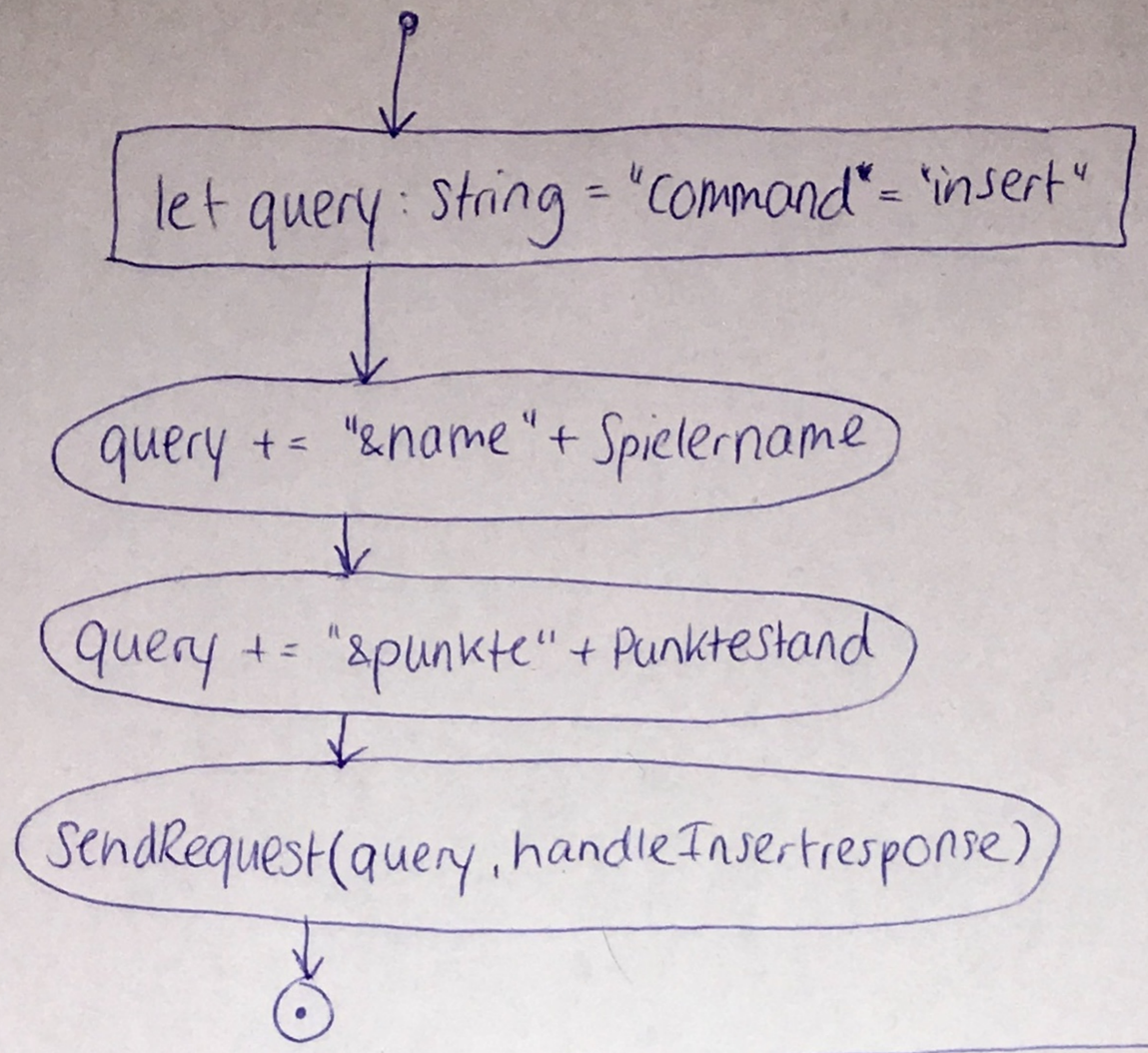
empfängt response

versendet response

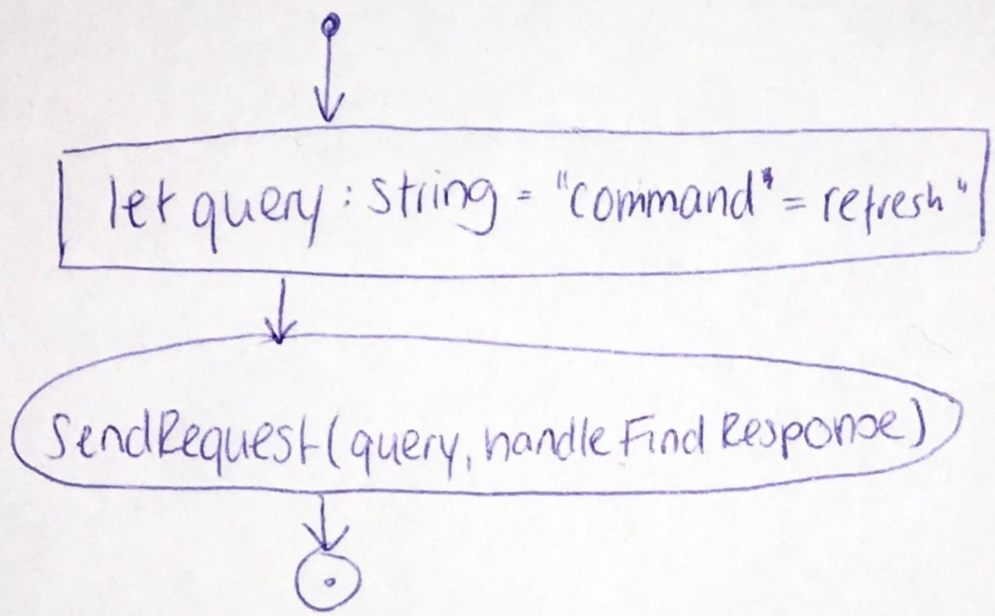
Zeigt Nachricht „storing data" an

eingibt Name + erreichte Punkte in Highscore anschauen

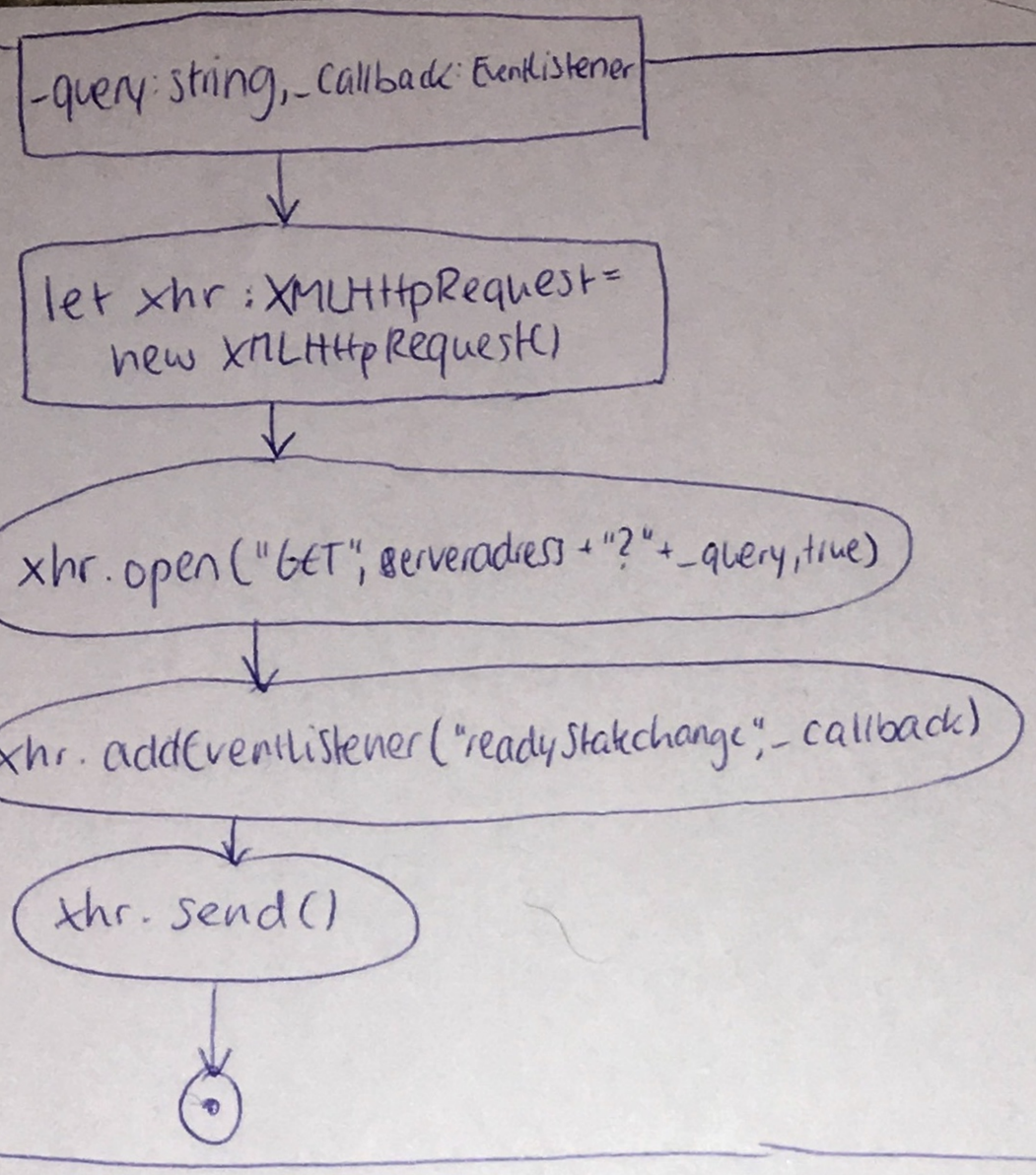
DB Client insert



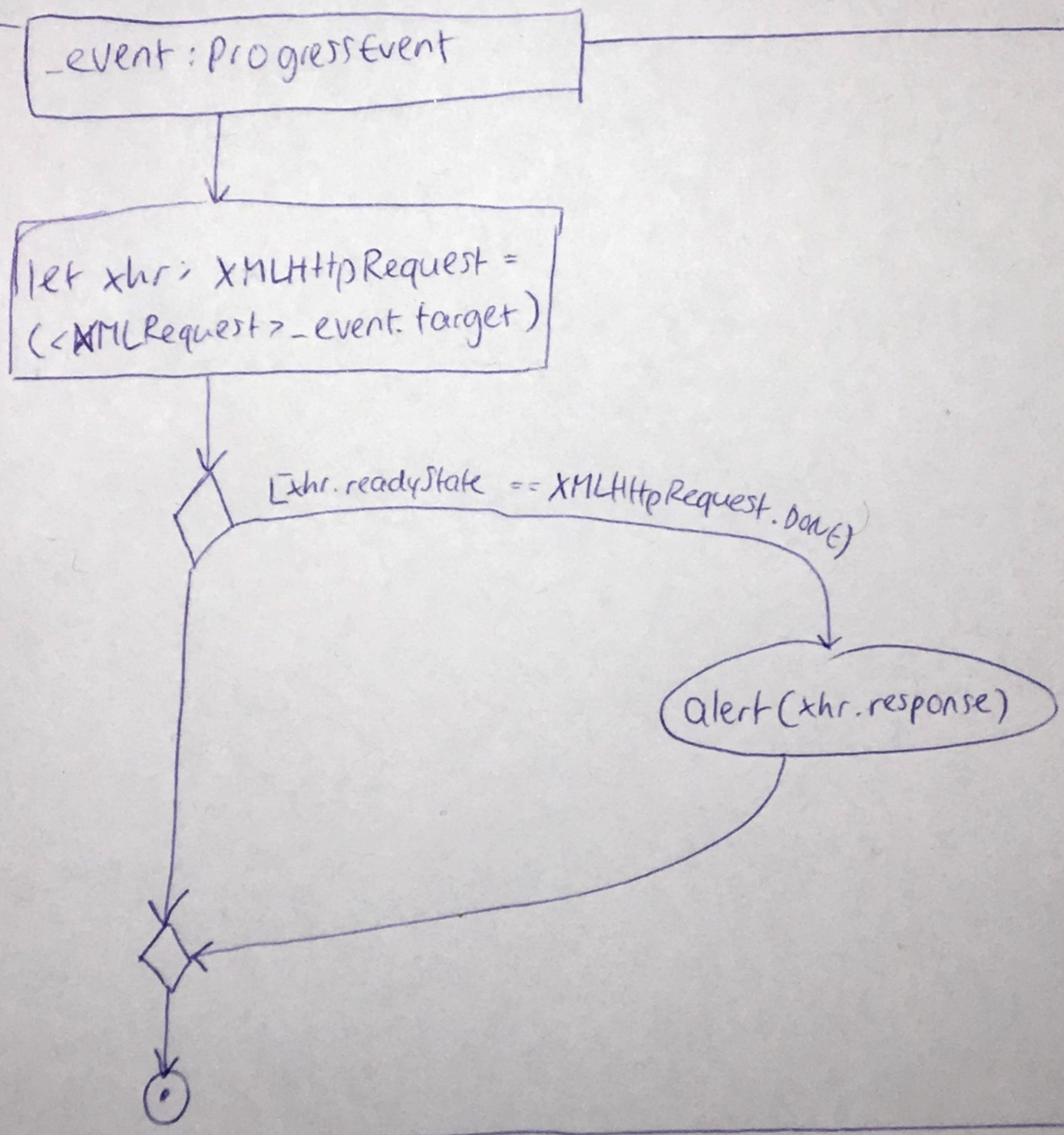
DB Client refresh



sendRequest



handleInsertResponse



handleFindResponse

event: ProgressEvent

let xhr: XMLHttpRequest =
(<XMLHttpRequest>_event.target)

[xhr.readyState == XMLHttpRequest.DONE]

let SpielerArray: Spieler[] = JSON.parse(xhr.response)

document.getElementById("NameID").innerHTML = "";
document.getElementById("PunkteID").innerHTML = "";

[i < SpielersArray.length]

let i:number=0

document.getElementById("NameId").innerHTML +=
`<div>${SpielersArray[i].name}: ${SpielerArray[i].punkte}</div>`

i++

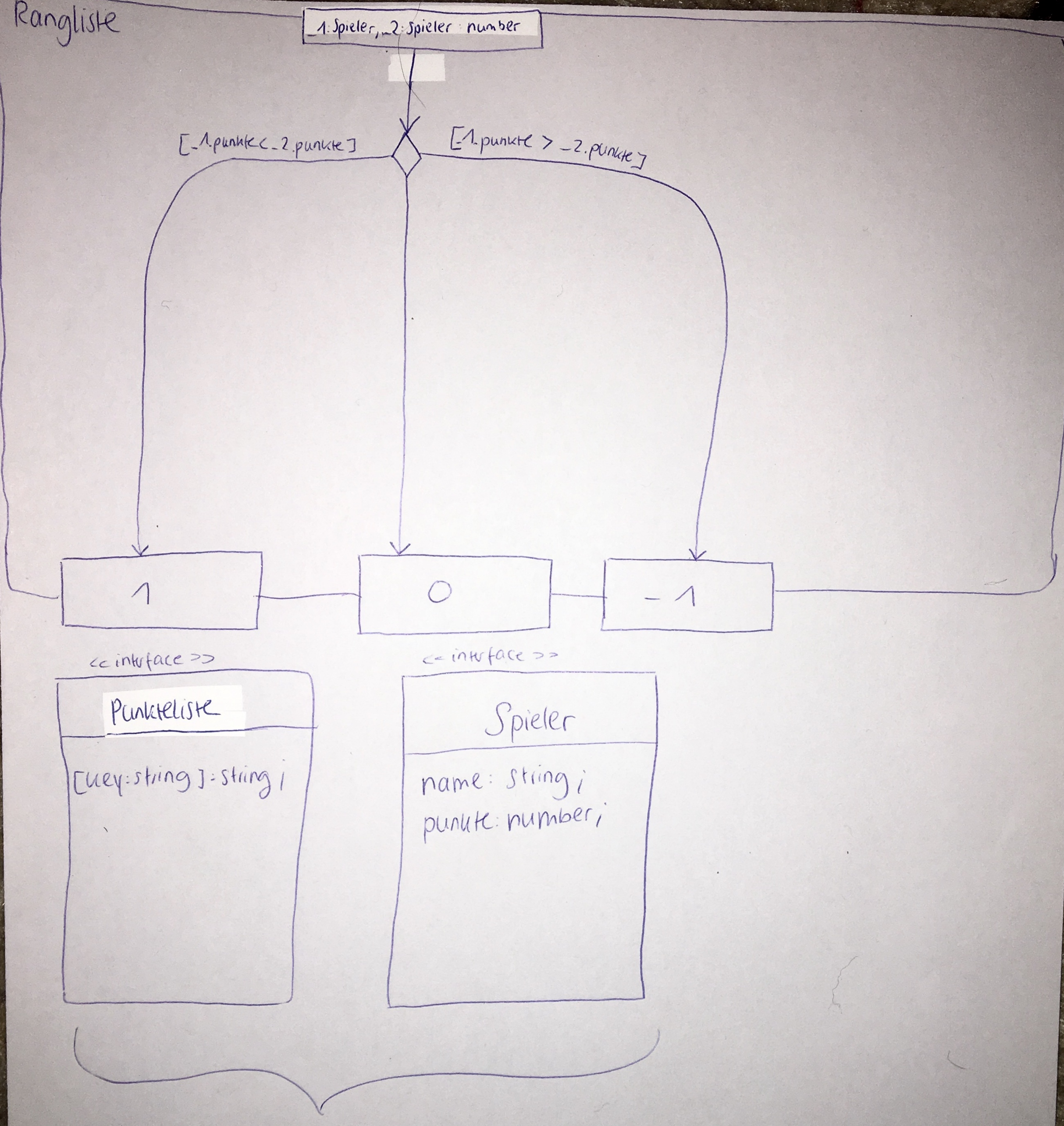
[i<10]

let i:number=0

i++

SpielerArray.sort(Rangliste)

Rangliste



types.ts