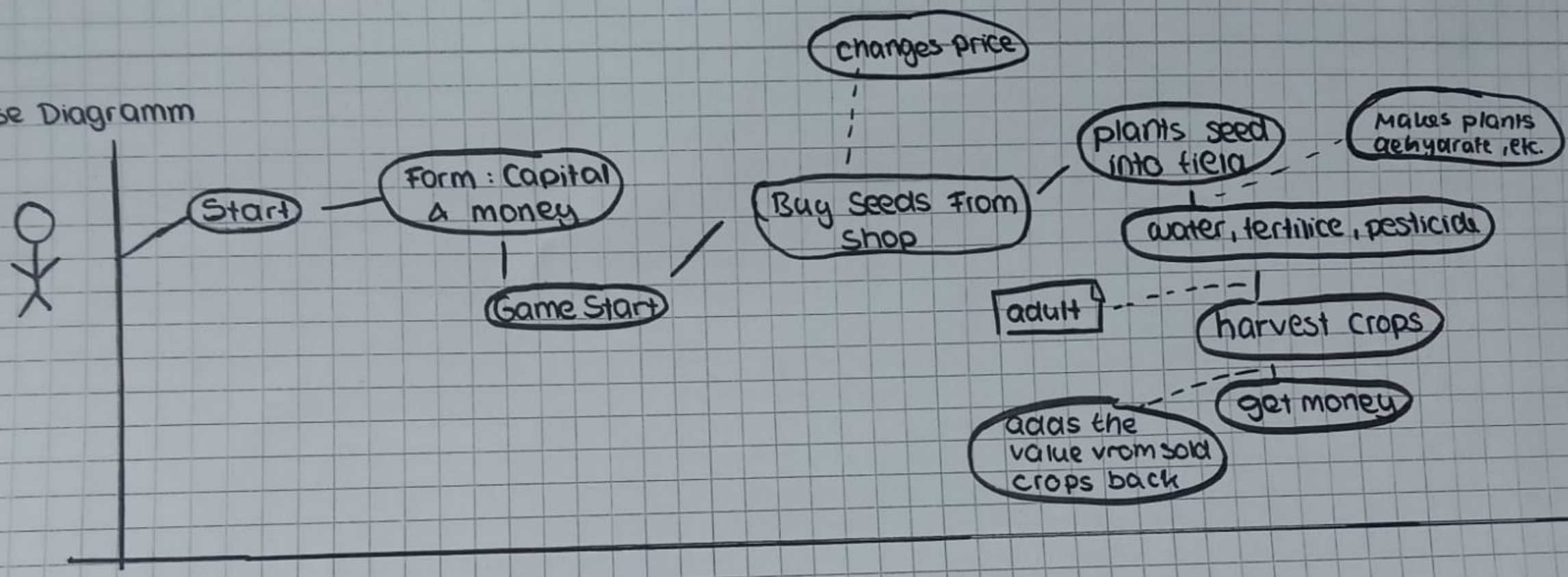
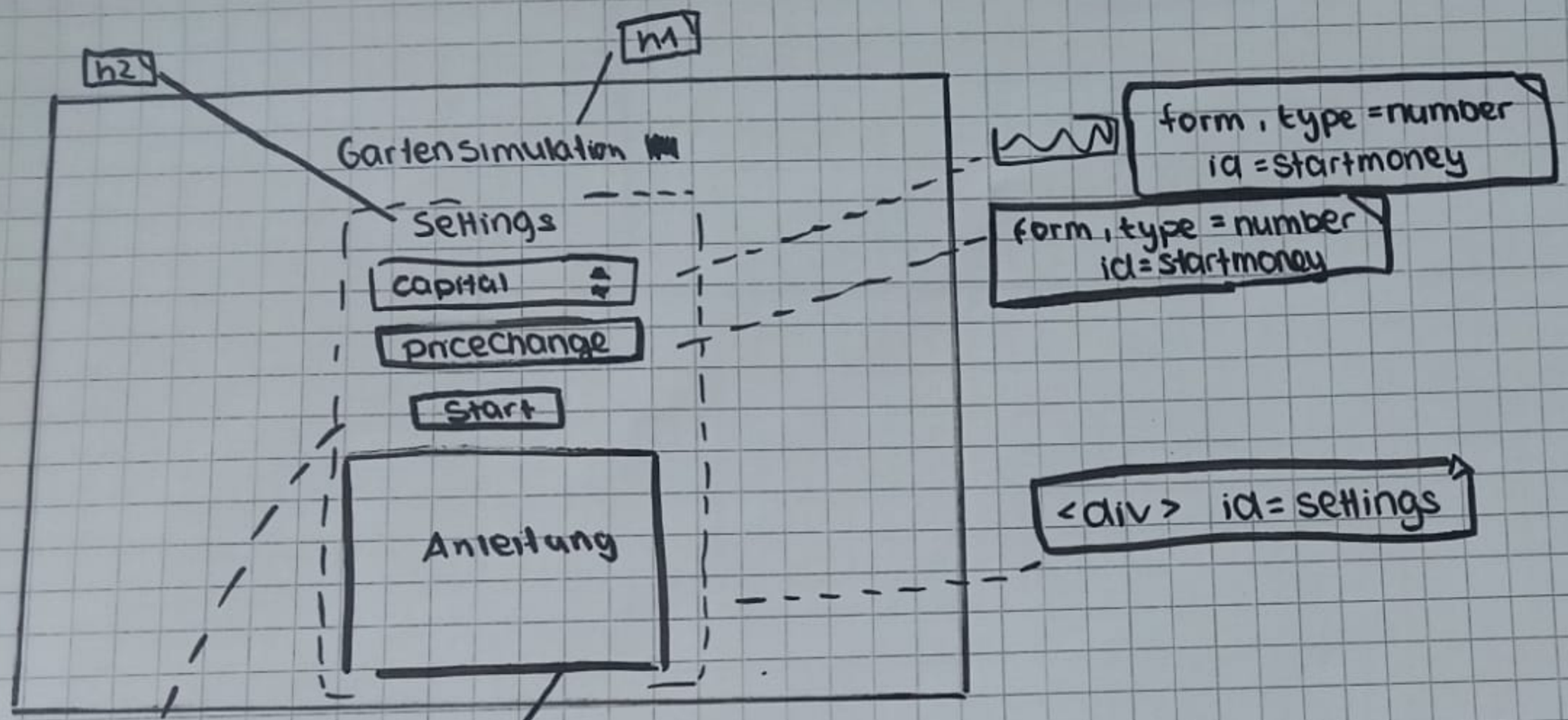
Use Case Diagramm





form , type =number
id =startmoney

form , type = number
id=startmoney

 id= settings

<button>
id = startGame

div id = gametekt

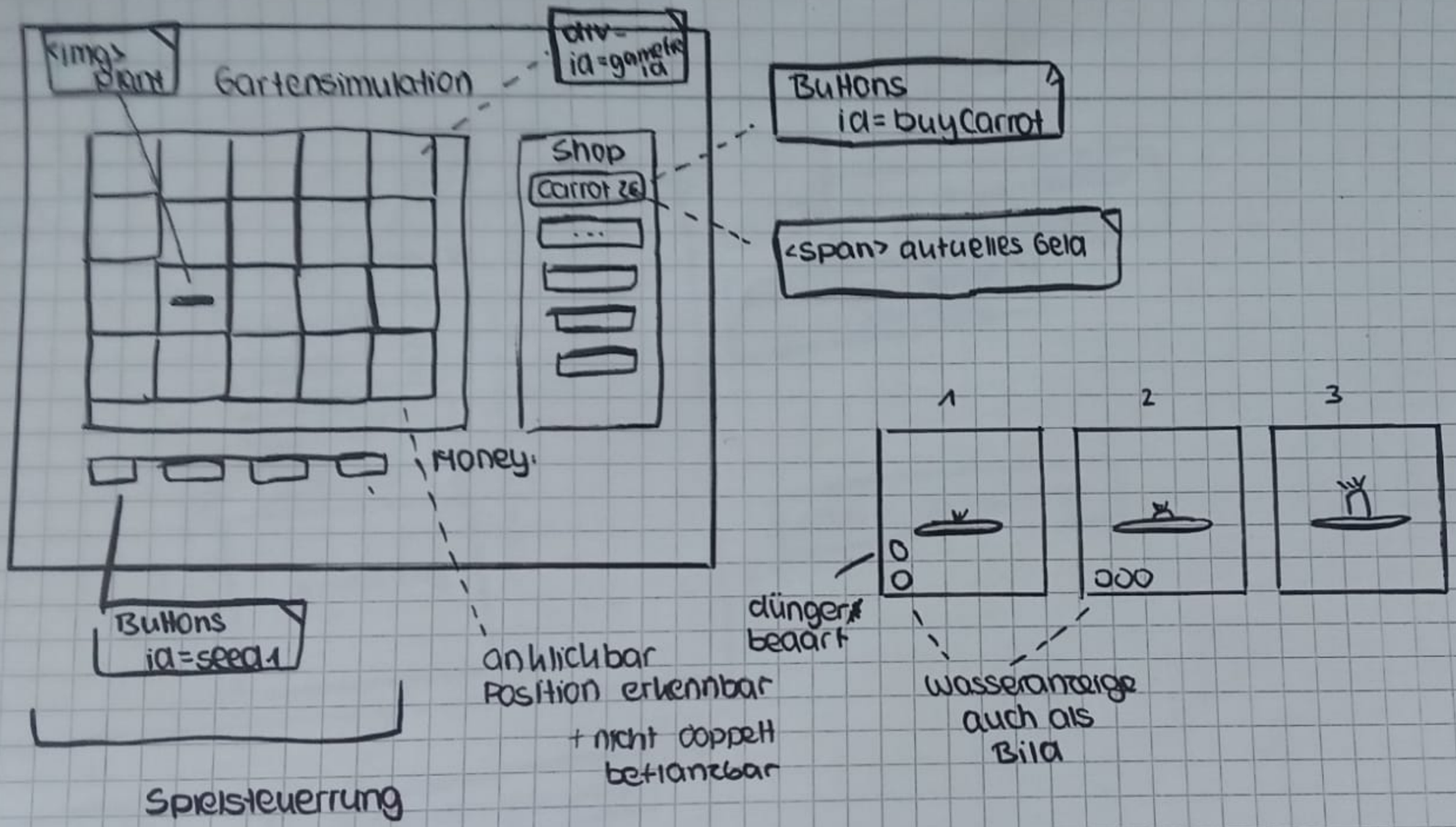
⇓

event Listener. click

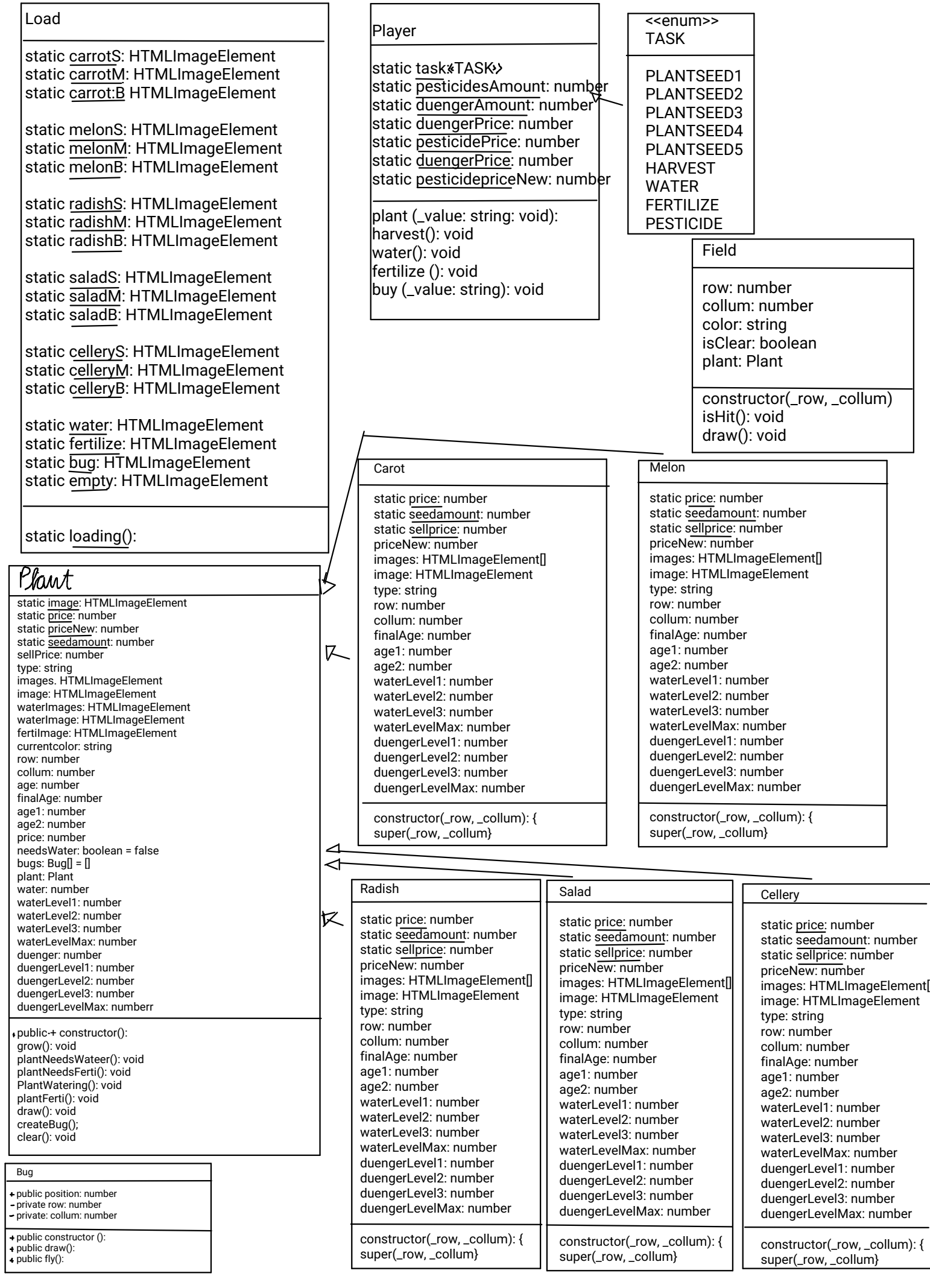
+

 id =settings. style (display , none)

↳ nach start verstecken des Kastens settings


Gartensimulation
Shop
Carrot 26
Money
Buttons
id=seed1
Spielsteuerung
Buttons
id=buyCarrot
 aktuelles Geld
1
2
3
delete
-> plant
dünger
beadrt
anklickbar
Position erkennbar
+ nicht doppelt
betätigbar
Wasseranzeige
auch als
Bild

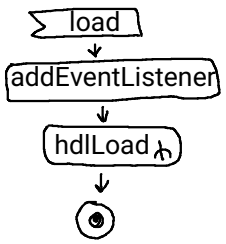
Class Diagram

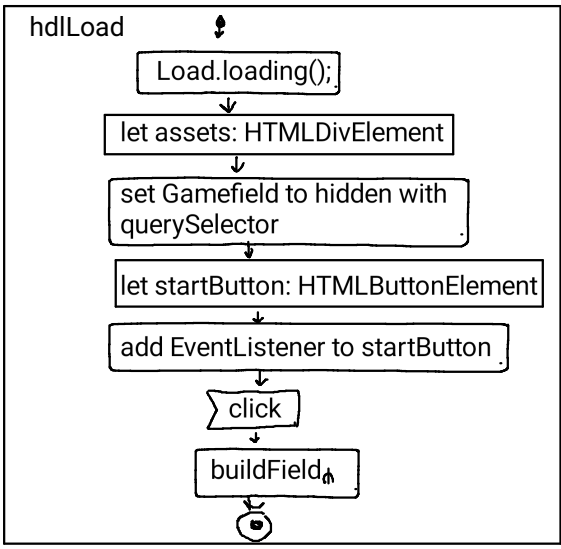


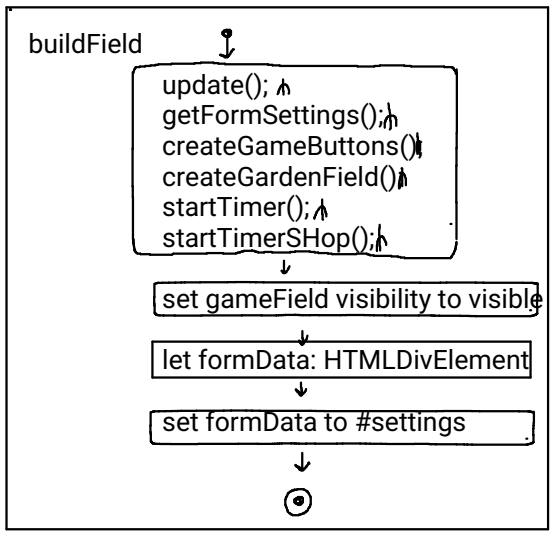
Acitivity-Diagram

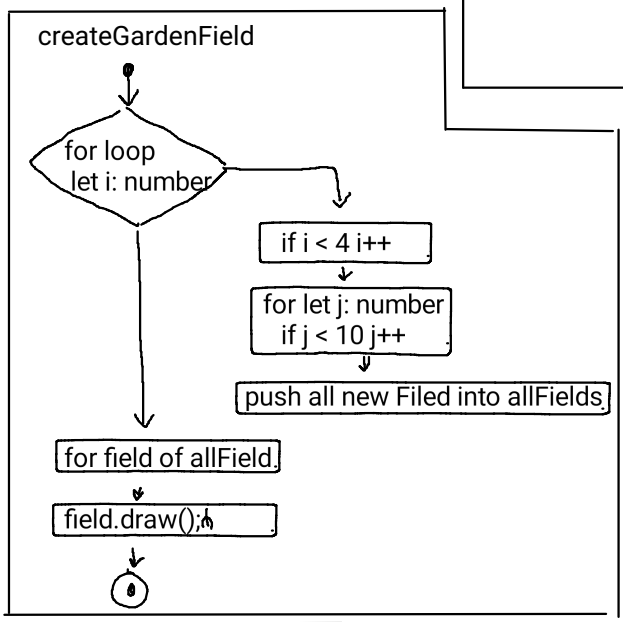
main

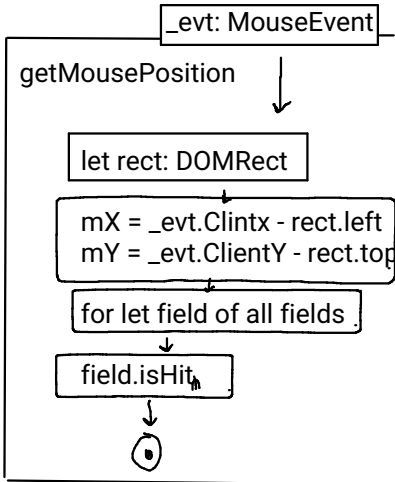
```
export let canvas: HTMLCanvasElement
export let cr2: CanvasRenderingContext2D
export let allFields: Field[] = []
export let allPlants: Plant[] = []
export let player: Player = new Player()
export let mX: number
export let mY: number
export let time: number
let gameField: HTMLDivElement
let formValues: FormData
export let money: number
let moneyChange: number
```

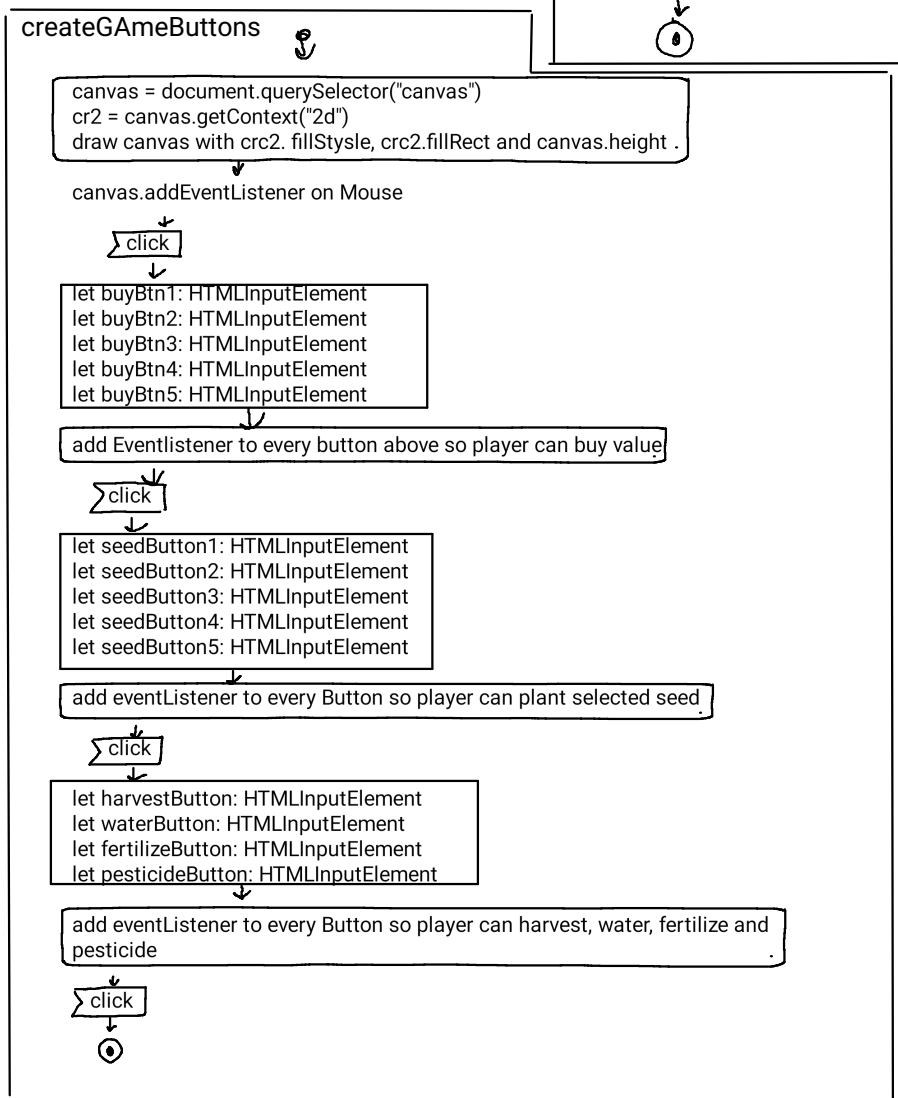


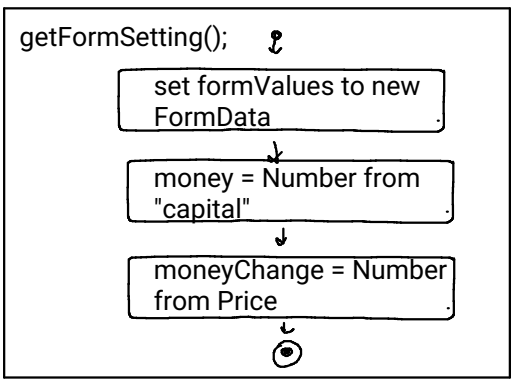


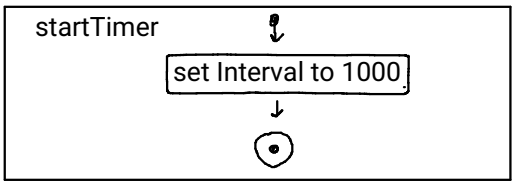


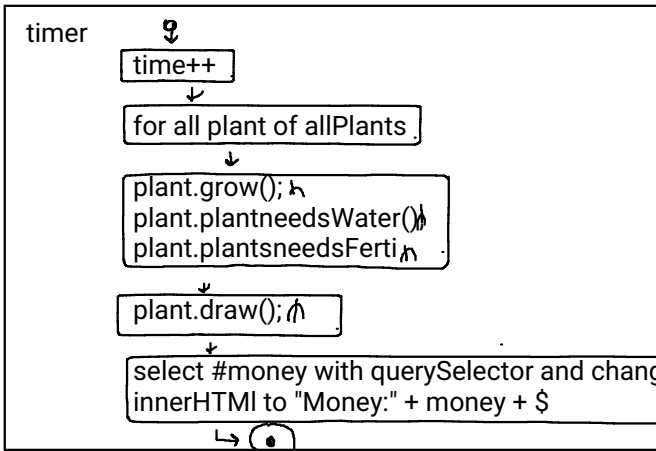


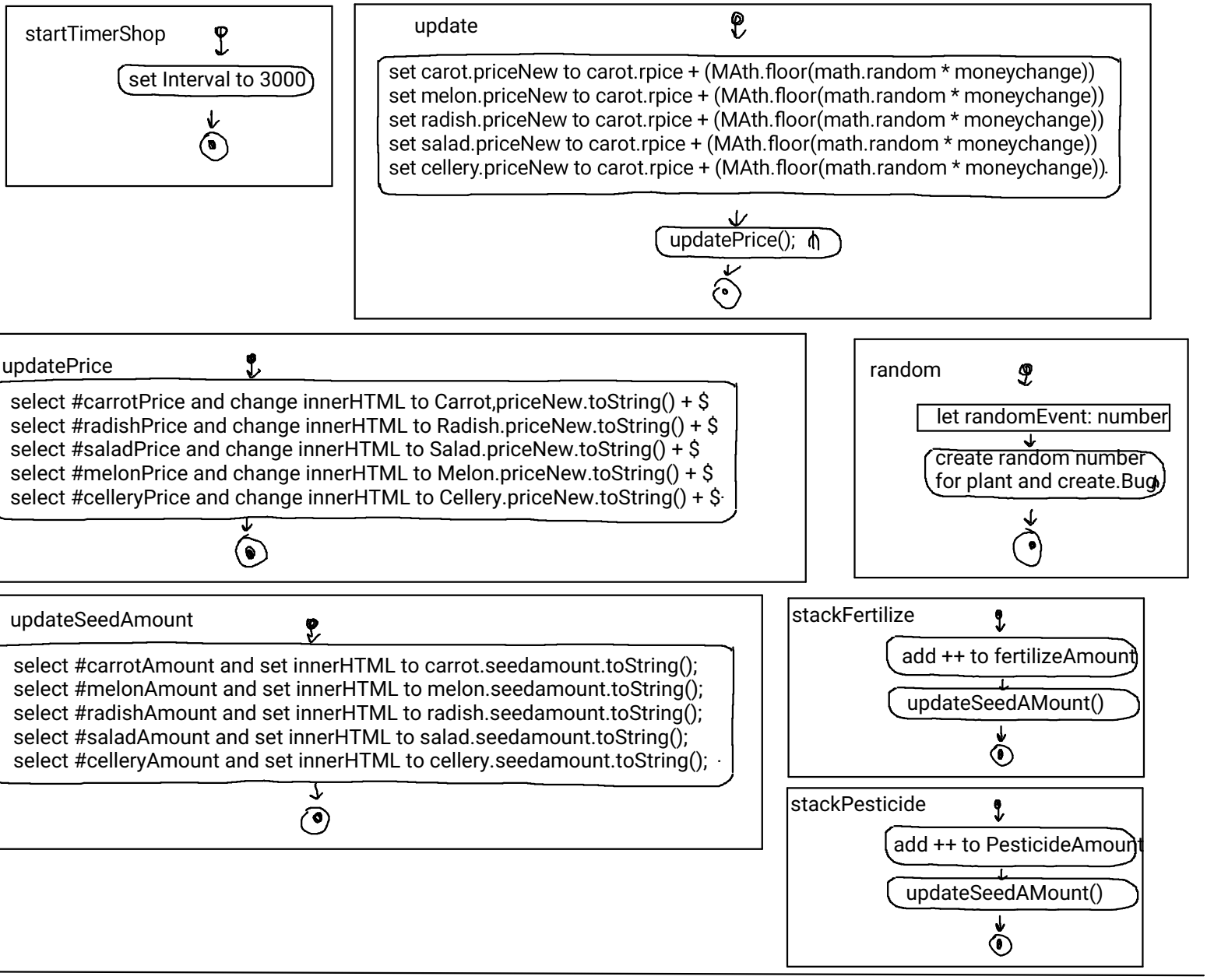












load

static carrotS: HTMLImageElement
static carrotM: HTMLImageElement
static carrot:B HTMLImageElement

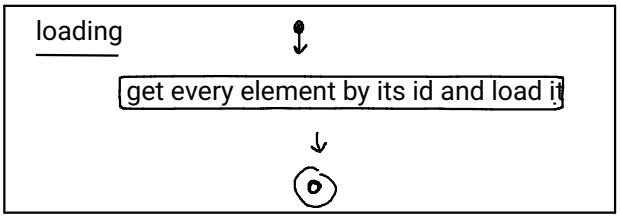
static melonS: HTMLImageElement
static melonM: HTMLImageElement
static melonB: HTMLImageElement

static radishS: HTMLImageElement
static radishM: HTMLImageElement
static radishB: HTMLImageElement

static saladS: HTMLImageElement
static saladM: HTMLImageElement
static saladB: HTMLImageElement

static celleryS: HTMLImageElement
static celleryM: HTMLImageElement
static celleryB: HTMLImageElement

static water: HTMLImageElement
static fertilize: HTMLImageElement
static bug: HTMLImageElement
static empty: HTMLImageElement

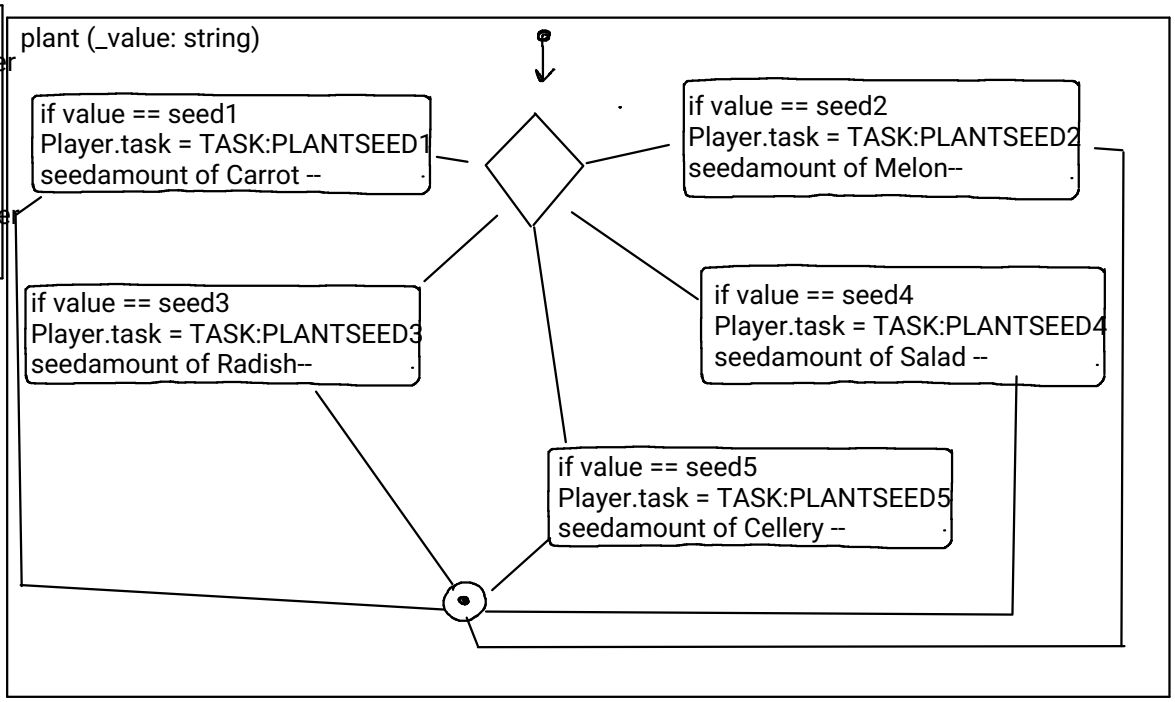


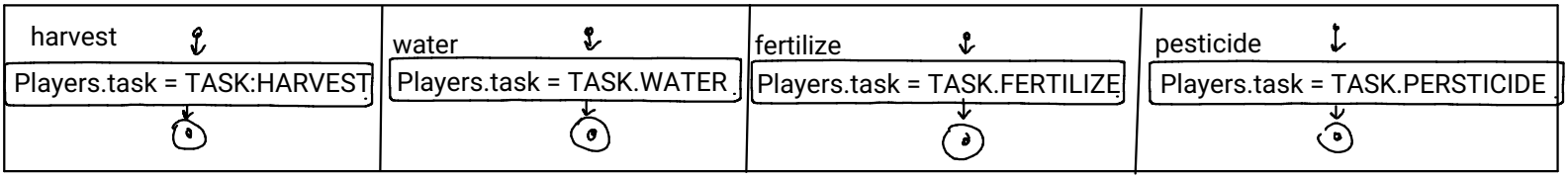
Player

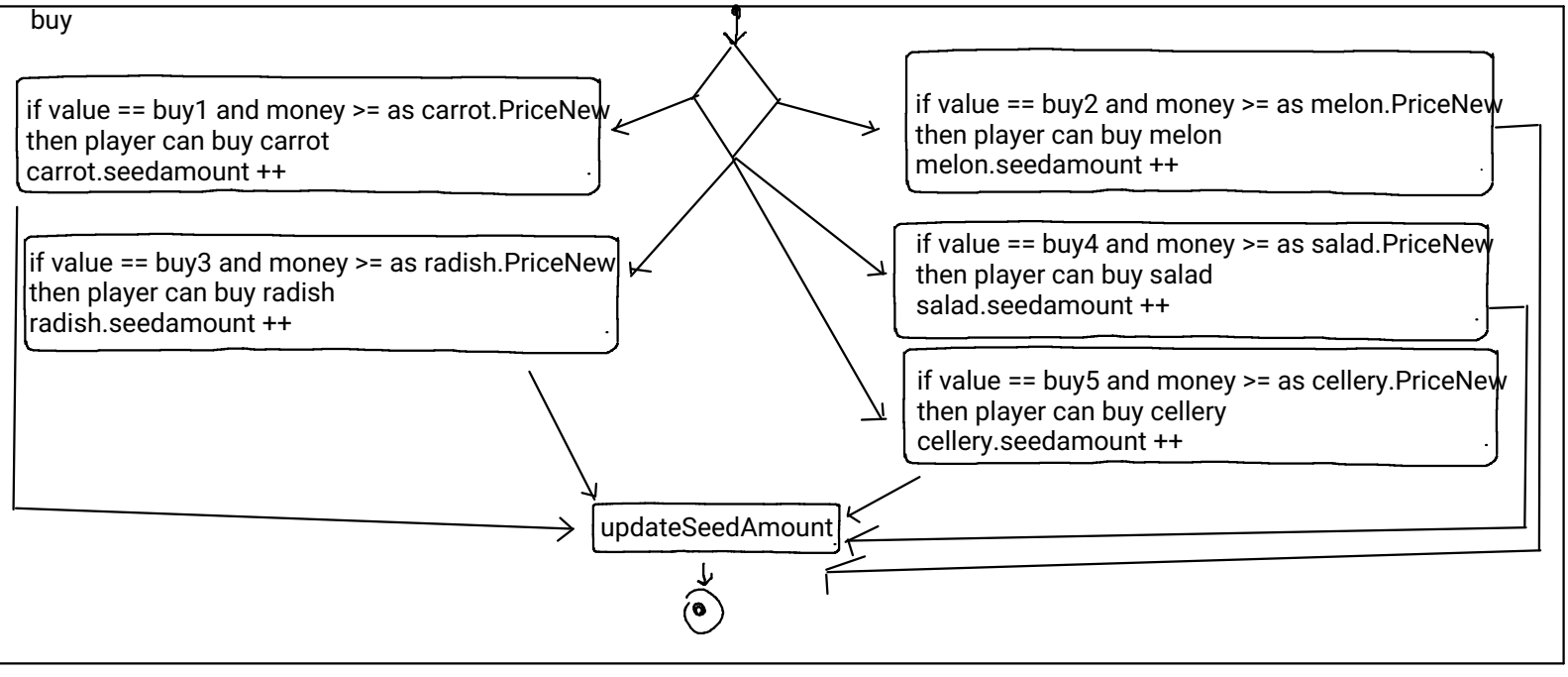
static task: TASK
static pesticidesAmount: number
static duengerAmount: number
static duengerPrice: number
static pesticidePrice: number
static duengerPrice: number
static pesticidepriceNew: number

<<enum>>
TASK

PLANTSEED1
PLANTSEED2
PLANTSEED3
PLANTSEED4
PLANTSEED5
HARVEST
WATER
FERTILIZE
PESTICIDE







Field

row: number
collum: number
color: string
isClear: boolean
plant: Plant

constructor

this.row = _row
this.collum = _collum

isHit

_mX, _mY

if _mX and _mY have special coordinates

switch to Player.task

case TASK.PlantSeed1

if carot.seedAmount >= 0 push all new carrots into this.row and this.collum
this plant = allPlants.length - 1

updateSeedAmount();

case TASK.PlantSeed4

if salad.seedAmount >= 0 push all new salad into this.row and this.collum
this plant = allPlants.length - 1

updateSeedAmount();

case TASK.PlantSeed2

if melon.seedAmount >= 0 push all new melons into this.row and this.collum
this plant = allPlants.length - 1

updateSeedAmount();

case TASK.PlantSeed1

if cellery.seedAmount >= 0 push all new cellery into this.row and this.collum
this plant = allPlants.length - 1

updateSeedAmount();

case TASK.PlantSeed3

if radish.seedAmount >= 0 push all new radish into this.row and this.collum
this plant = allPlants.length - 1

updateSeedAmount();

caste TASK.HARVESt

if this.plant reaches over age 2 and under final age

plant can be sold allPlants.slice (allPlants.findIndex e => e == this.plant)

timer ();
startTimerSHop();

case TASK.PESITIZIDE

if this.isClear == false

this.plant.plantkillBug();

case TASK.FERTILIZE

if this.isClear == false

this.plant.plantFertilize();

case TASK.WATER

if this.isClear == false

this.plant.plantWatering();

this.draw

for all Plants

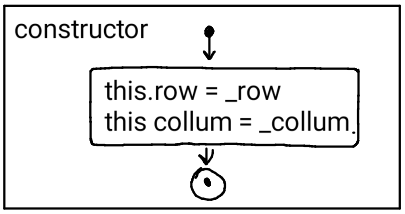
plant.draw();

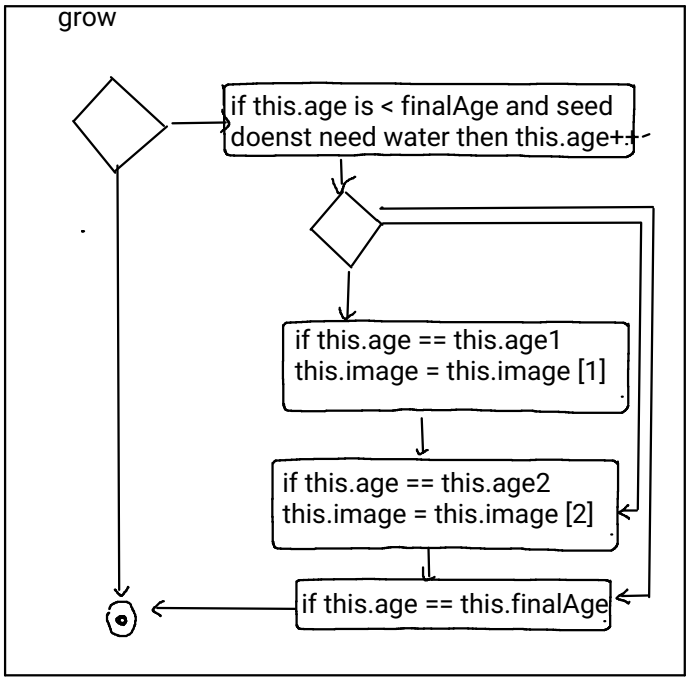
draw

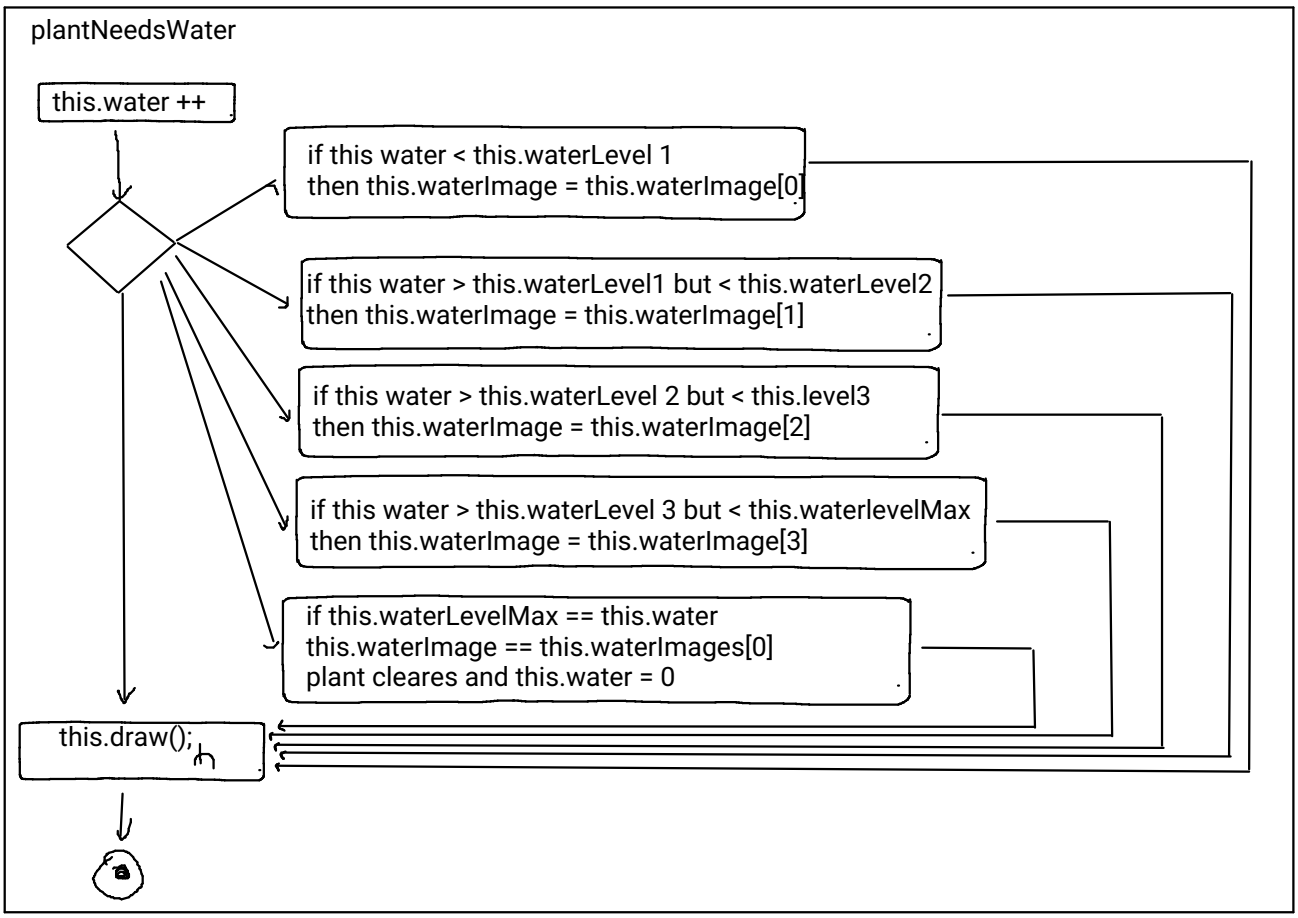
draw with crc2. resetTransform, crc2.fillStyle and crc2.fillRect

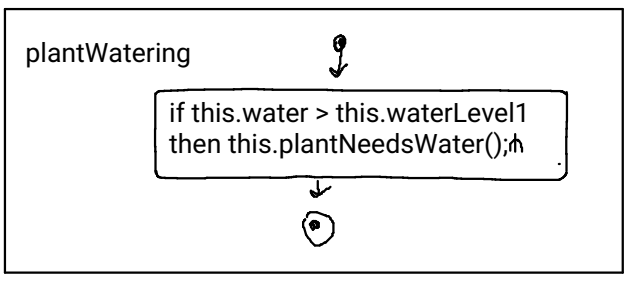
Plant

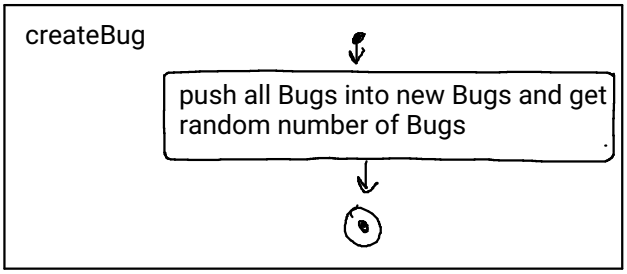
static image: HTMLImageElement
static price: number
static priceNew: number
static seedamount: number
sellPrice: number
type: string
images. HTMLImageElement
image: HTMLImageElement
waterImages: HTMLImageElement
waterImage: HTMLImageElement
fertiImage: HTMLImageElement
currentcolor: string
row: number
collum: number
age: number
finalAge: number
age1: number
age2: number
price: number
needsWater: boolean = false
bugs: Bug[] = []
plant: Plant
water: number
waterLevel1: number
waterLevel2: number
waterLevel3: number
waterLevelMax: number
duenger: number
duengerLevel1: number
duengerLevel2: number
duengerLevel3: number
duengerLevelMax: numberr

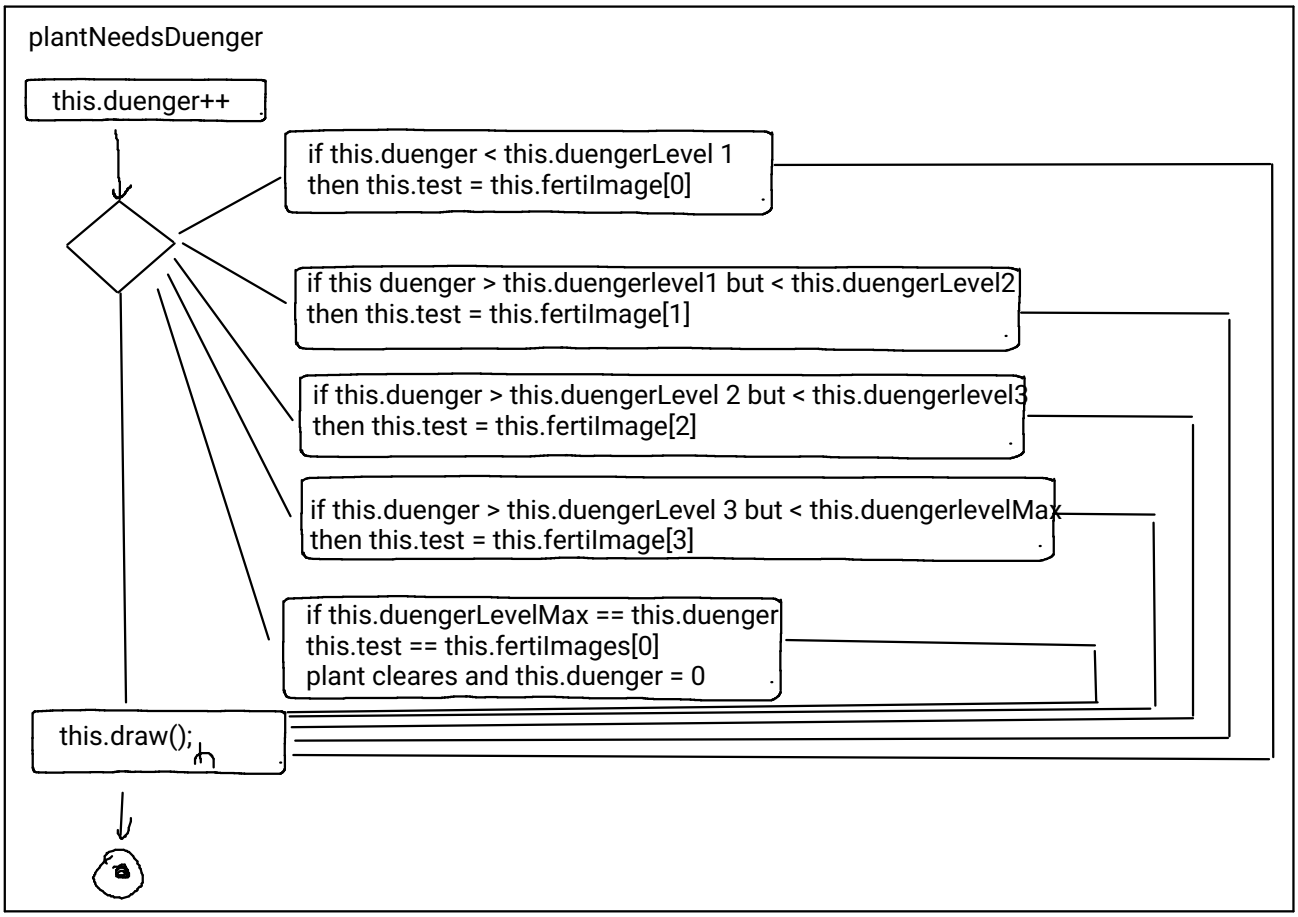


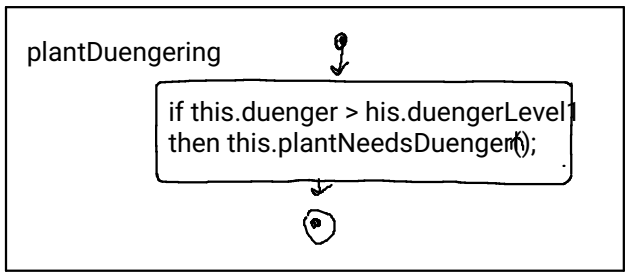


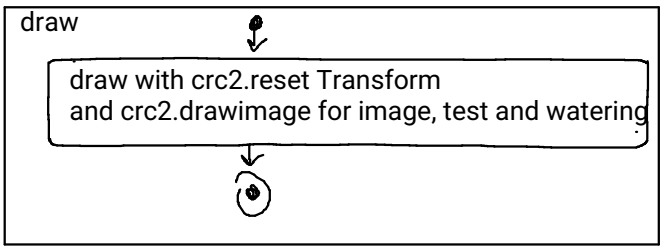


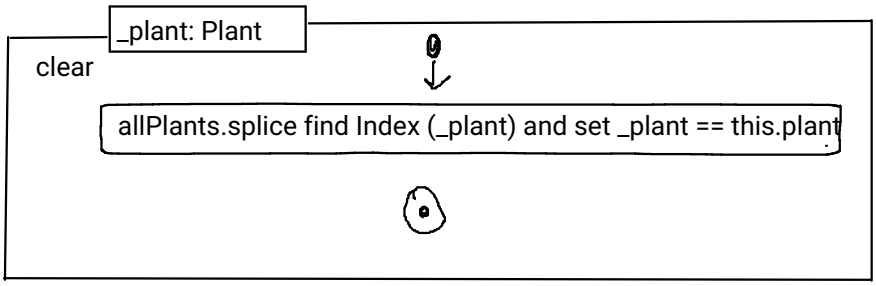


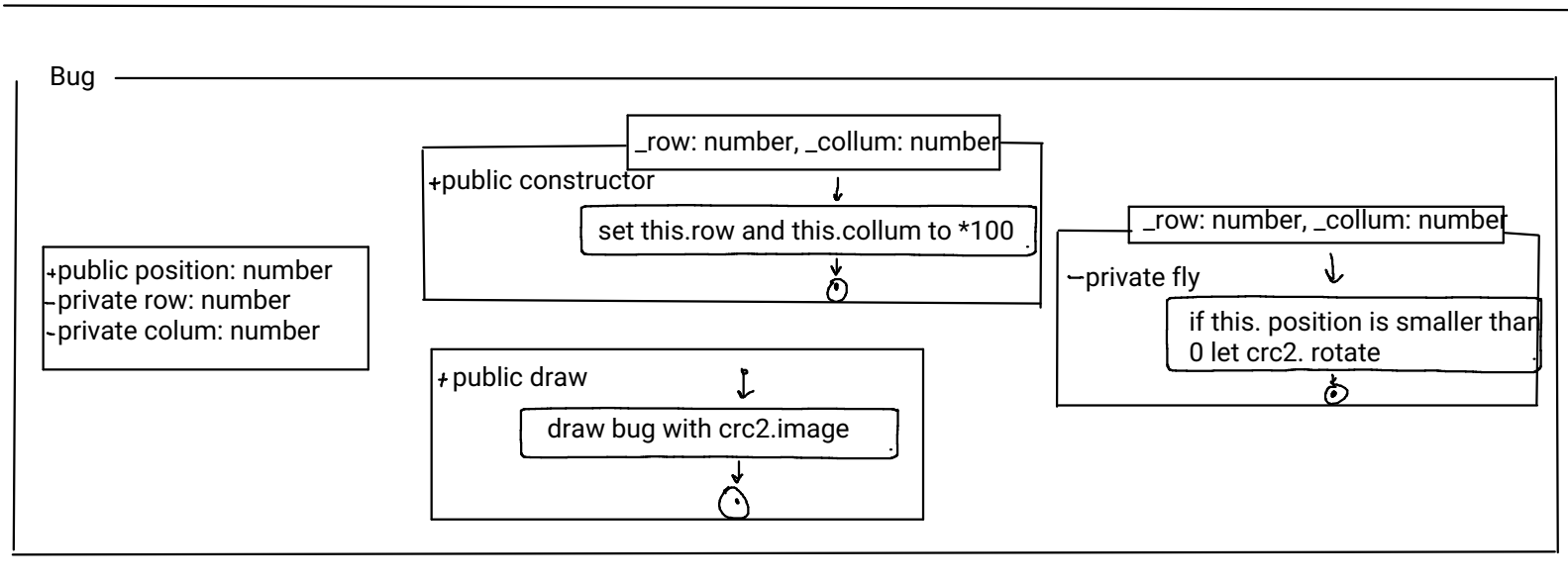


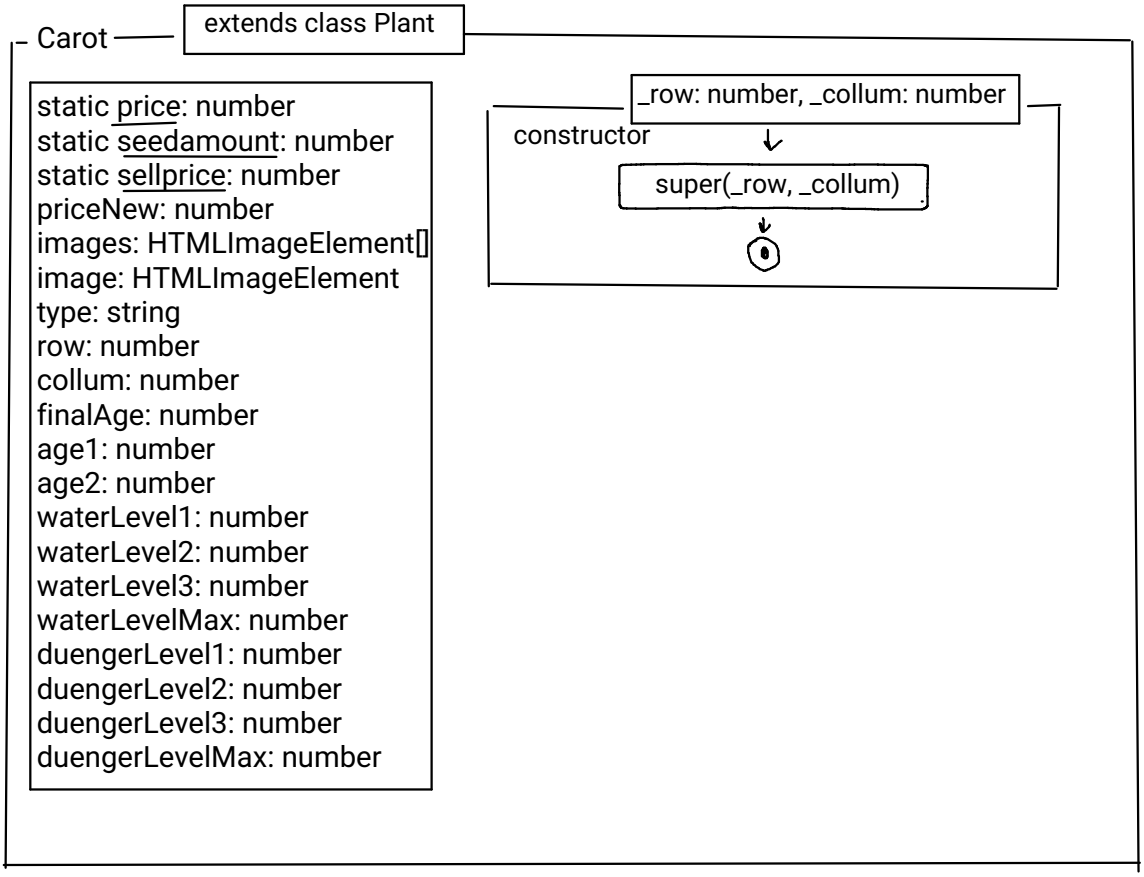

plantNeedsDuenger
this.duenger++
if this.duenger < this.duengerLevel 1
then this.test = this.fertiImage[0]
if this duenger > this.duengerlevel1 but < this.duengerLevel2
then this.test = this.fertiImage[1]
if this.duenger > this.duengerLevel 2 but < this.duengerlevel3
then this.test = this.fertiImage[2]
if this.duenger > this.duengerLevel 3 but < this.duengerlevelMax
then this.test = this.fertiImage[3]
if this.duengerLevelMax == this.duenger
this.test == this.fertiImages[0]
plant cleares and this.duenger = 0
this.draw();

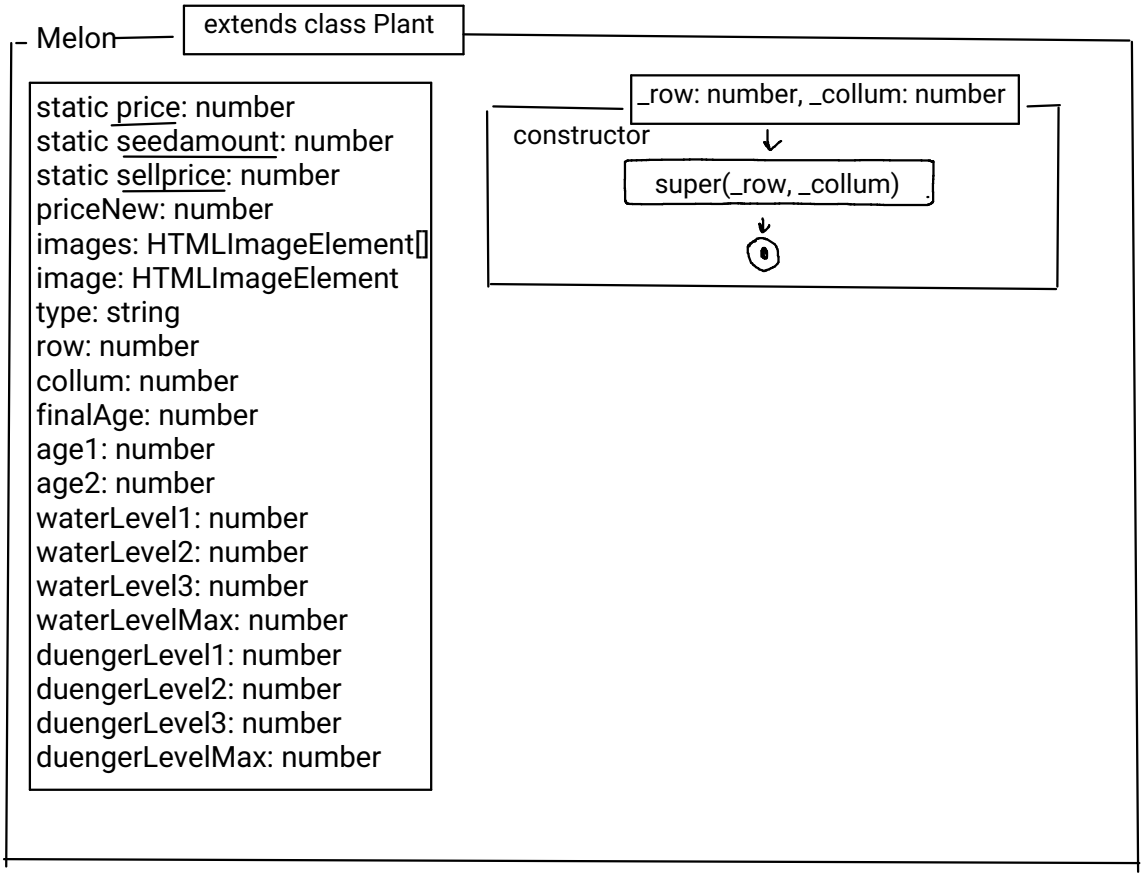

plantDuengering
if this.duenger > his.duengerLevel1
then this.plantNeedsDuenger();

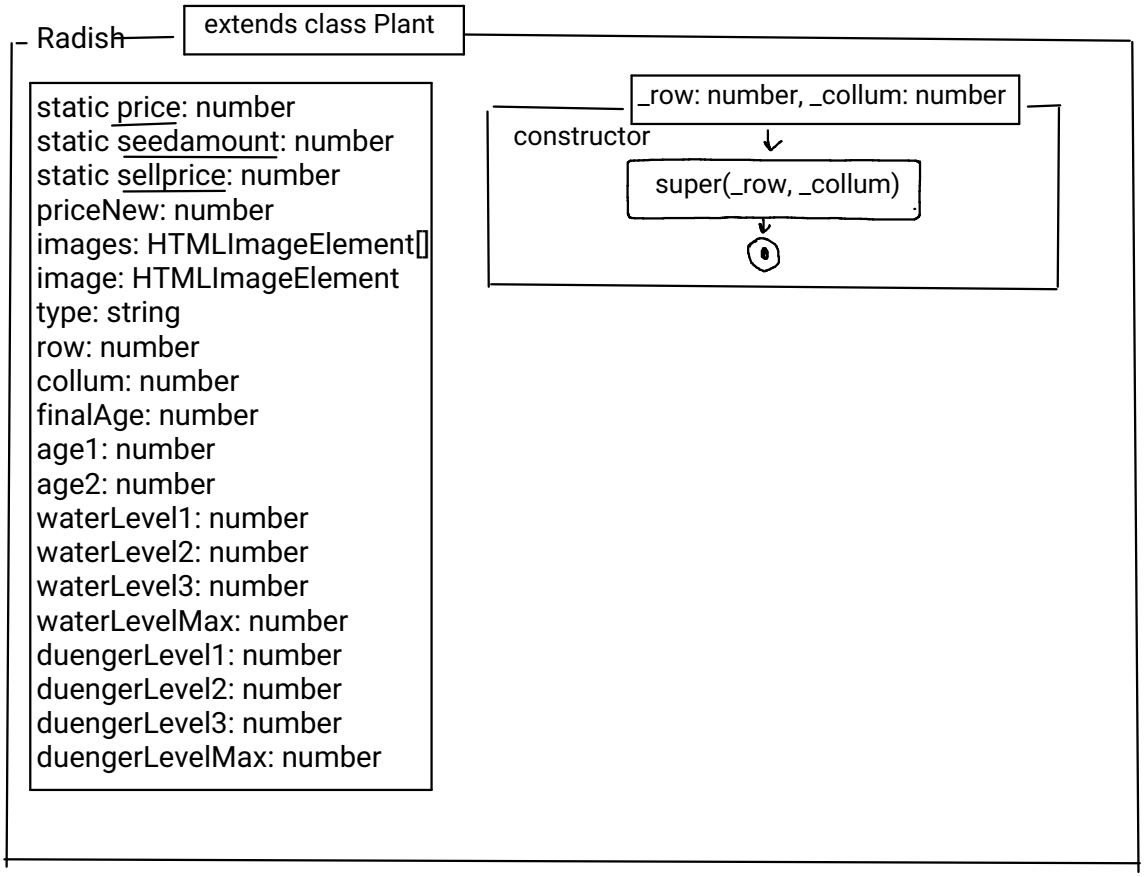

draw
draw with crc2.reset Transform
and crc2.drawimage for image, test and watering

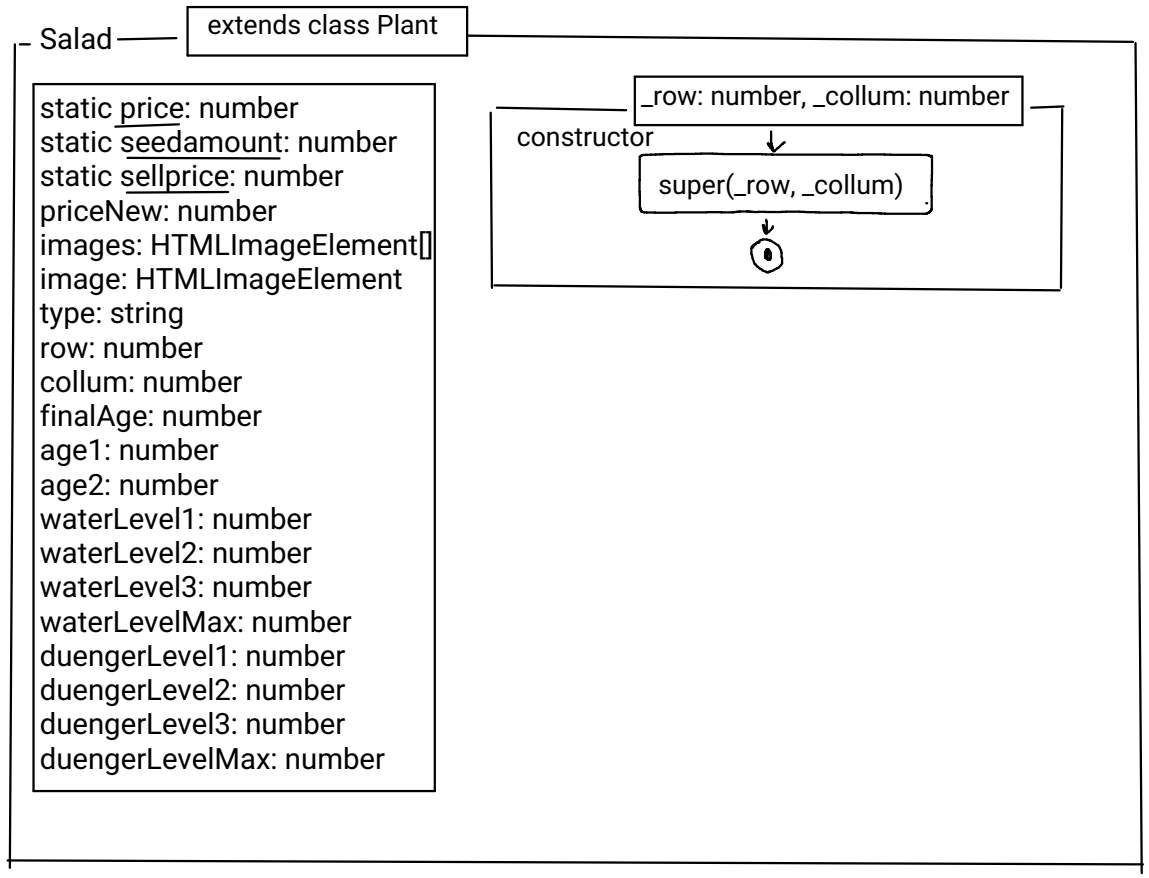

_plant: Plant
clear
allPlants.splice find Index (_plant) and set _plant == this.plant

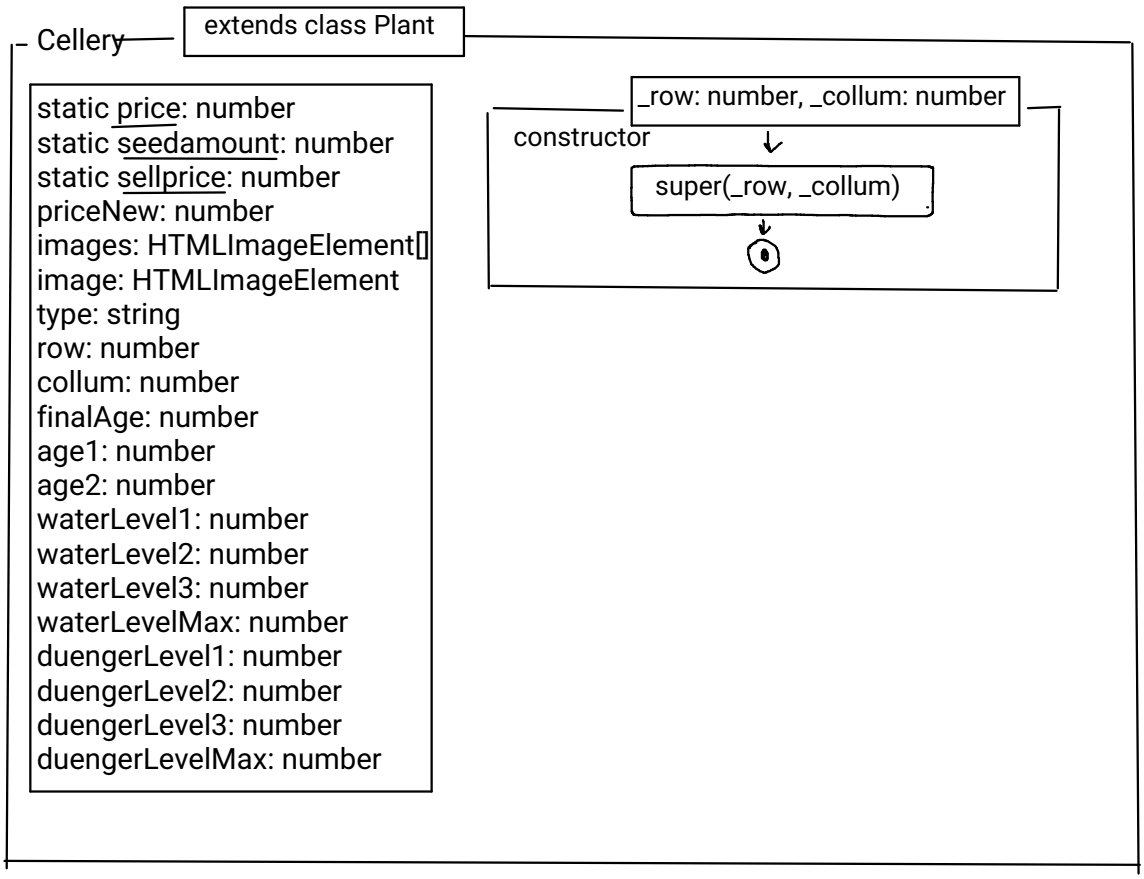

Bug
+public position: number
-private row: number
-private colum: number
_row: number, _collum: number
+public constructor
set this.row and this.collum to *100
_row: number, _collum: number
-private fly
if this. position is smaller than
0 let crc2. rotate
+ public draw
draw bug with crc2.image


Carot
extends class Plant
static price: number
static seedamount: number
static sellprice: number
priceNew: number
images: HTMLImageElement[]
image: HTMLImageElement
type: string
row: number
collum: number
finalAge: number
age1: number
age2: number
waterLevel1: number
waterLevel2: number
waterLevel3: number
waterLevelMax: number
duengerLevel1: number
duengerLevel2: number
duengerLevel3: number
duengerLevelMax: number
_row: number, _collum: number
constructor
super(_row, _collum)


Melon
extends class Plant
static price: number
static seedamount: number
static sellprice: number
priceNew: number
images: HTMLImageElement[]
image: HTMLImageElement
type: string
row: number
collum: number
finalAge: number
age1: number
age2: number
waterLevel1: number
waterLevel2: number
waterLevel3: number
waterLevelMax: number
duengerLevel1: number
duengerLevel2: number
duengerLevel3: number
duengerLevelMax: number
_row: number, _collum: number
constructor
super(_row, _collum)


Radish
extends class Plant
static price: number
static seedamount: number
static sellprice: number
priceNew: number
images: HTMLImageElement[]
image: HTMLImageElement
type: string
row: number
collum: number
finalAge: number
age1: number
age2: number
waterLevel1: number
waterLevel2: number
waterLevel3: number
waterLevelMax: number
duengerLevel1: number
duengerLevel2: number
duengerLevel3: number
duengerLevelMax: number
_row: number, _collum: number
constructor
super(_row, _collum)


Salad
extends class Plant
static price: number
static seedamount: number
static sellprice: number
priceNew: number
images: HTMLImageElement[]
image: HTMLImageElement
type: string
row: number
collum: number
finalAge: number
age1: number
age2: number
waterLevel1: number
waterLevel2: number
waterLevel3: number
waterLevelMax: number
duengerLevel1: number
duengerLevel2: number
duengerLevel3: number
duengerLevelMax: number
_row: number, _collum: number
constructor
super(_row, _collum)


Cellery
extends class Plant
static price: number
static seedamount: number
static sellprice: number
priceNew: number
images: HTMLImageElement[]
image: HTMLImageElement
type: string
row: number
collum: number
finalAge: number
age1: number
age2: number
waterLevel1: number
waterLevel2: number
waterLevel3: number
waterLevelMax: number
duengerLevel1: number
duengerLevel2: number
duengerLevel3: number
duengerLevelMax: number
_row: number, _collum: number
constructor
super(_row, _collum)

Anleitung Garten-Simulator

1. Stelle dein Kapital und die Preisschwankung ein und drücke auf Start
2. Kaufe dir beliebig viele Samen aus dem Shop

   ! Achtung: Der Preis ändert sich ständig
3. Pflanze eine (oder mehrere) Pflanzen auf einen der Felder
4. Wenn ein Wasserzeichen erscheint: Bewässer die Pflanze
5. Wenn ein brauner Tropfen erscheint: Füge der Pflanze Dünger hinzu
6. Wenn ein Schädling erscheint: Töte ihn mit Pestiziden
7. Wenn die Pflanze ausgewachsen ist, kannst du sie ernten und kriegst Geld dafür
8. Von dem erhaltenen Geld kannst du neue Saaten kaufen und Pflanzen pflanzen