Class Diagram

CRC2 Vegetable

> + position: Vector + harvestStatus: boolean

ripeStep: number

waterStep: number

fertilizerStep: number

minFertilizerPrice: number

maxFertilizerPrice: number

minPesticidePrice: number

maxPesticidePrice: number

minSeedlingPrice: number

maxSeedlingPrice: number

minVegetablePrice: number

maxVegetablePrice: number

+ draw(): void

+ start(): void

+ constructor(position?: Vector)

+ substractFertilizerFromCapital(): void

+ substractPesticideFromCapital(): void

+ calculateFertilizerPrice(): number

+ calculatePesticidePrice(): number

+ substractFromCapital(): void + addToCapital(): void

+ currentSeedlingPrice: number

+ currentFertilizerPrice: number

+ currentVegetablePrice: number

+ ripe: number + water: number + fertilizer: number Vector

Broccoli

harvestStatus = false

ripe = 10

ripeStep = 5

water = 30

waterStep= 2

fertilizer = 30

fertilizerStep= 2

minSeedlingPrice = minSeedlingPrice maxSeedlingPrice = maxSeedlingPrice minVegetablePrice = minVegetablePrice maxVegetablePrice = maxVegetablePrice minFertilizerPrice = minFertilizerPrice

maxFertilizerPrice = maxFertilizerPrice minPesticidePrice = minPesticidePrice

maxPesticidePrice = maxPesticidePrice currentSeedlingPrice = calculateSeedlingPrice()

currentVegetablePrice = calculateMarketPrice()

constructor(_position: Vector)

+ draw(): void

+ calculateSeedlingPrice(): number

+ calculateMarketPrice(): number

Cucumber

harvestStatus = false

ripe = 10

ripeStep = 15

water = 30

waterStep = 4 fertilizer = 30

fertilizerStep = 4

minSeedlingPrice = minSeedlingPrice

maxSeedlingPrice = maxSeedlingPrice

minVegetablePrice = minVegetablePrice

maxVegetablePrice = maxVegetablePrice

minFertilizerPrice = minFertilizerPrice

maxFertilizerPrice = maxFertilizerPrice

minPesticidePrice = minPesticidePrice

maxPesticidePrice = maxPesticidePrice

currentSeedlingPrice = calculateSeedlingPrice()

currentVegetablePrice = calculateMarketPrice()

constructor(position: Vector)

+ draw(): void

+ calculateSeedlingPrice(): number

calculateMarketPrice(): number

fertilizer = 50

minSeedlingPrice = minSeedlingPrice maxSeedlingPrice = maxSeedlingPrice

minVegetablePrice = minVegetablePrice

maxVegetablePrice = maxVegetablePrice

minPesticidePrice = minPesticidePrice

constructor(_position: Vector)

+ draw(): void

+ calculateSeedlingPrice(): number

calculateMarketPrice(): number

Tomato

harvestStatus = false

ripe = 10

ripeStep = 16

water = 50

waterStep = 1

fertilizerStep= 1

minFertilizerPrice = minFertilizerPrice

maxFertilizerPrice = maxFertilierPrice

maxPesticidePrice = maxPesticidePrice

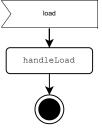
currentSeedlingPrice = calculateSeedlingPrice() currentVegetablePrice = calculateMarketPrice()

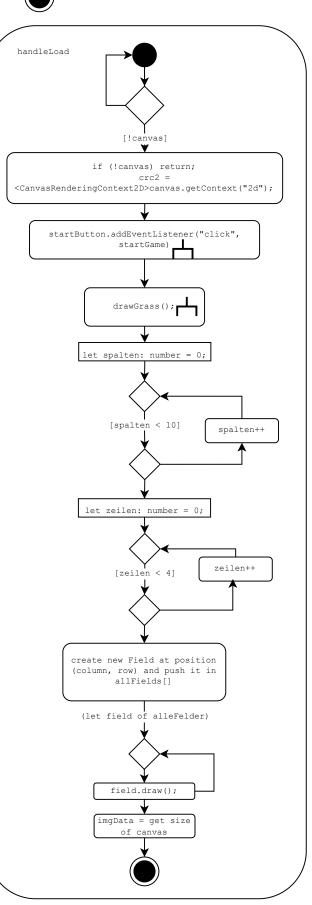
currentFertilizerPrice = calculateFertilizerPrice() currentPesticidePrice = calculatePesticidePrice()

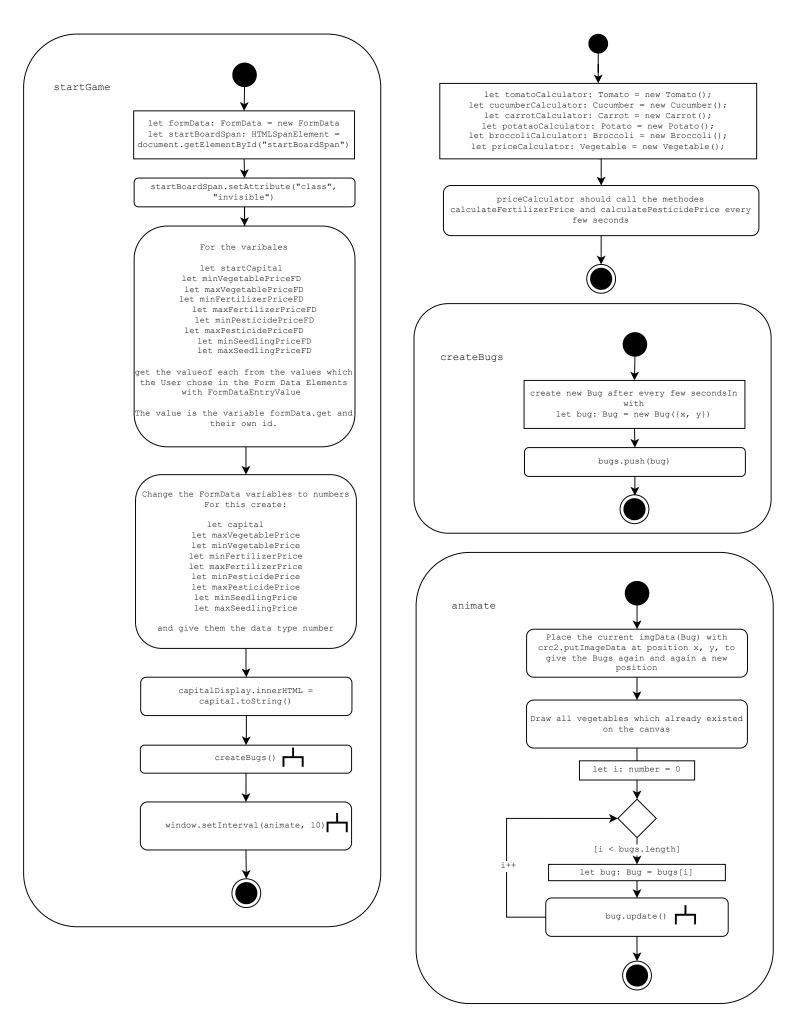
Vector	Potato		Carrot	
+ x: number + y: number	harvestStatus = false		harvestStatus = false	
constructor(_x: number, _y: number)	ripe = 10 ripeStep = 10 water = 30 waterStep = 5 fertilizer = 30 fertilizerStep: 5 minSeedlingPrice = minSee maxSeedlingPrice = maxSee minVegetablePrice = minVeg maxVegetablePrice = minFerti maxFertilizerPrice = minFerti maxFertilizerPrice = minPes maxPesticidePrice = maxPe currentSeedlingPrice = calci currentVegetablePrice = calci constructor(_position: Vecto + draw(): void	edlingPrice getablePrice egetablePrice ilizerPrice rtilizerPrice sticidePrice esticidePrice ulateSeedlingPrice() culateMarketPrice())	ripe = 10 ripeStep = 10 water = 30 waterStep = 3 fertilizer = 30 fertilizerStep = 3 minSeedlingPrice = minSee maxSeedlingPrice = calcurrentSeedlingPrice = calcurrentSeedlingPrice = calcurrentVegetablePrice = calcurrentVegetableP	eedlingPrice egetablePrice VegetablePrice rtilizerPrice ertilizerPrice esticidePrice culateSeedlingPrice() alculateMarketPrice()
	+ calculateSeedlingPrice(): nu + calculateMarketPrice(): nu		+ calculateSeedlingPrice(): + calculateMarketPrice(): n	
	CRC2 ◀	—Bug		Vector
- zeilenposition: nu - color: string - plantedField: boo - vegetable: Veget constructor(_spalte _zeilenposition: nu	- spaltenpostion: number - zeilenposition: number		etable ition: Vector)	
+ handleClicked(_mX: number, _mY: number, _event: MouseEvent) - clear(): void - visualize(): void - clearCanvas(): void		+ move(_timeslice: + update(): void + updateTask(): voi + setRandomVege: + attack(): void	,	

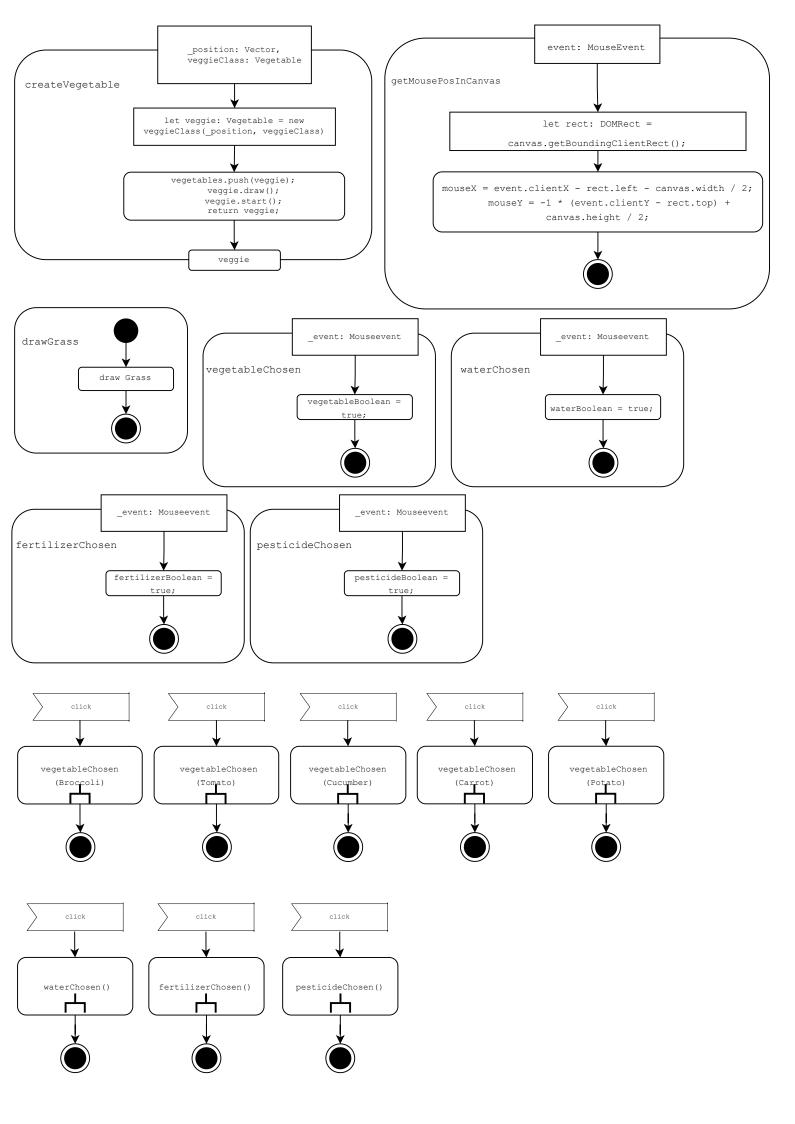
Activity Diagram

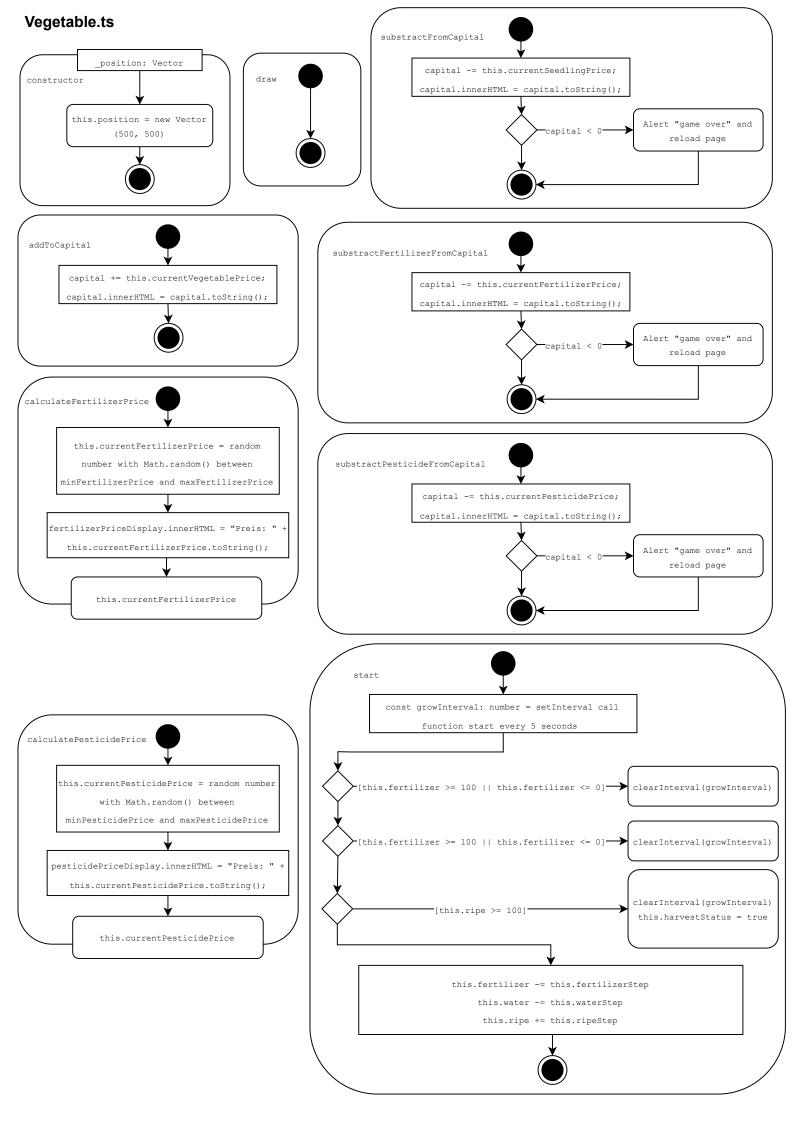




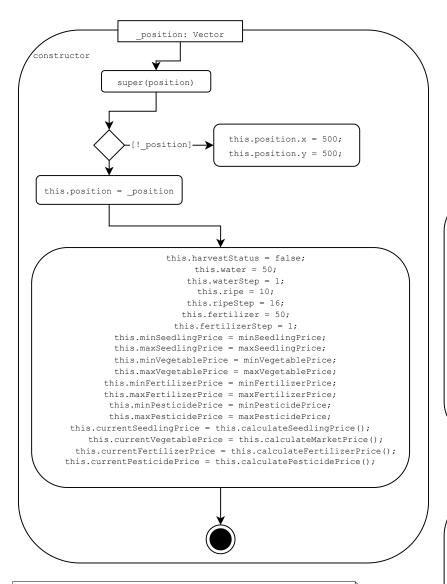




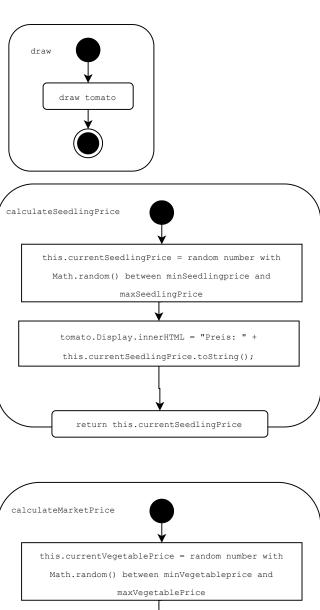




Tomato.ts



For Potato, Cucumber, Broccoli and Carrot:
The same structure with their own individual values for ripeStep,
fertilizerStep and different Display, sellDisplay in HTML.
In draw(), draw their own shape.

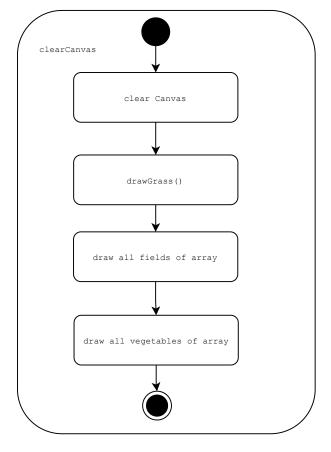


tomato.SellDisplay.innerHTML = "Preis: " +

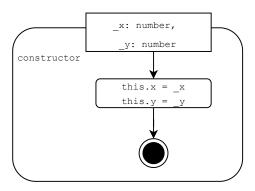
this.currentVegetablePrice.toString();

this.currentVegetablePrice

Field.ts spaltenposition: number zeilenposition: number draw constructor this.spaltenposition draw field _spaltenposition this.zeilenposition = zeilenposition _mX: number _mY: number event: MouseEvent handleClick [coordinates are one field] [this.vegetable.ripe >=100] [activeVegetable] [this.vegetable] [fertilizer/water <= [wateringCanBoolean 0 | > 100] == true] this.vegetable.water activeField = this this.draw() += 25 [this.vegetable.ripe >=100] createVegetable() at wateringCanBoolean = this.visualize() this position false this.vegetable. addToCapital this.clear createVegetable() at this.visualize() this position this.clear this.clearCanvas activeVegetable = null this.clearCanvas visualize clear waterDisplay.innerHTML = splice this.vegetable from this.vegetable.water.toString() vegetables array ripeDisplay.innerHTML = this.visualize this.vegetable.ripe.toString() fertilizerDisplay.innerHTML = this.vegetable.fertilizer.toString()



Vector.ts



Bug.ts

