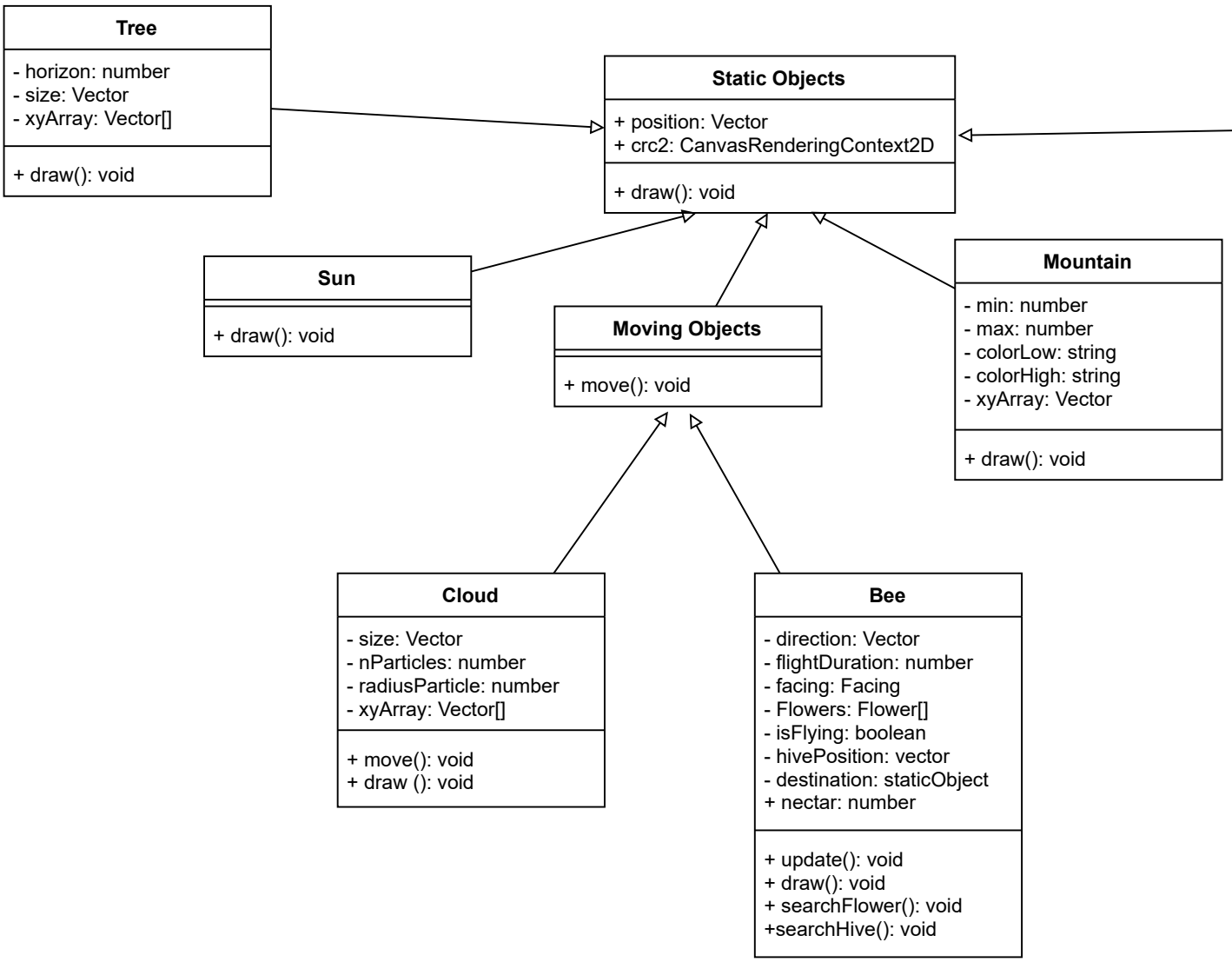
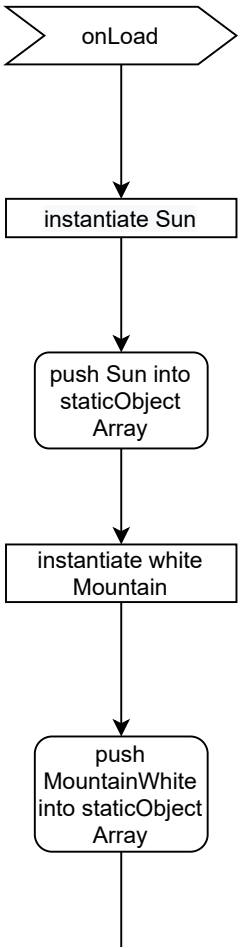
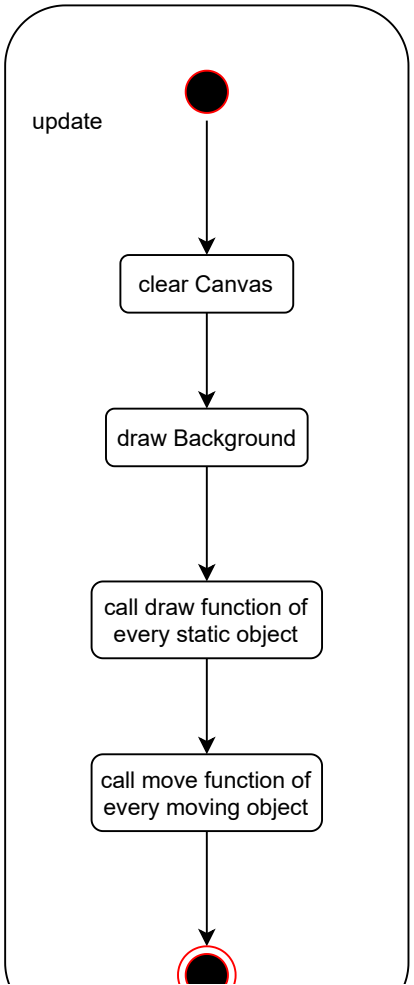
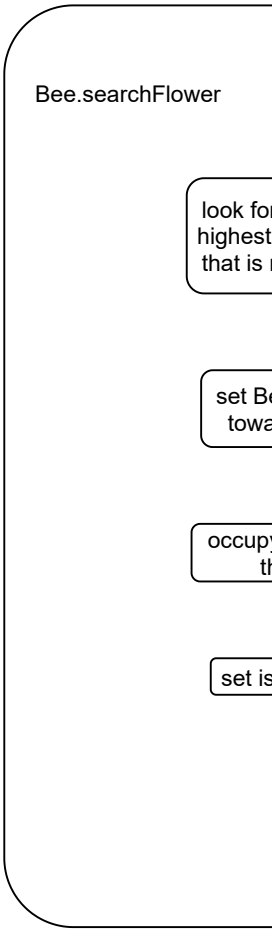
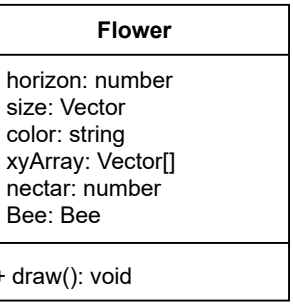
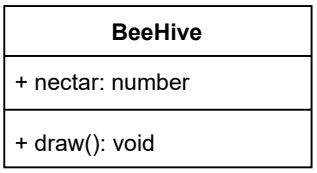

Tree
- horizon: number
- size: Vector
- xyArray: Vector[]
+ draw(): void
Static Objects
+ position: Vector
+ crc2: CanvasRenderingContext2D
+ draw(): void
Sun
+ draw(): void
Moving Objects
+ move(): void
Mountain
- min: number
- max: number
- colorLow: string
- colorHigh: string
- xyArray: Vector
+ draw(): void
Cloud
- size: Vector
- nParticles: number
- radiusParticle: number
- xyArray: Vector[]
+ move(): void
+ draw (): void
Bee
- direction: Vector
- flightDuration: number
- facing: Facing
- Flowers: Flower[]
- isFlying: boolean
- hivePosition: vector
- destination: staticObject
+ nectar: number
+ update(): void
+ draw(): void
+ searchFlower(): void
+searchHive(): void

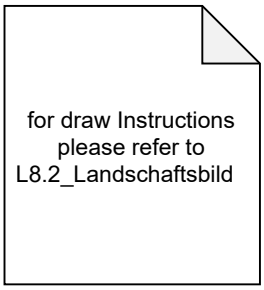

onLoad
instantiate Sun
push Sun into staticObject Array
instantiate white Mountain
push MountainWhite into staticObject Array

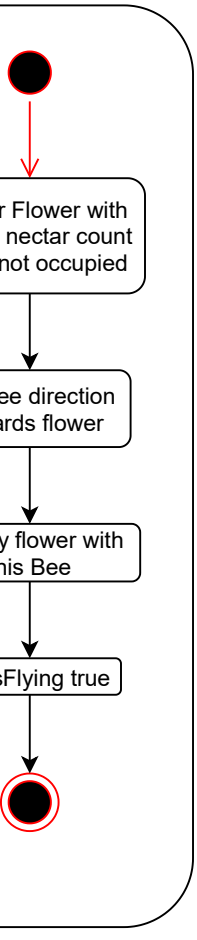

update
clear Canvas
draw Background
call draw function of every static object
call move function of every moving object

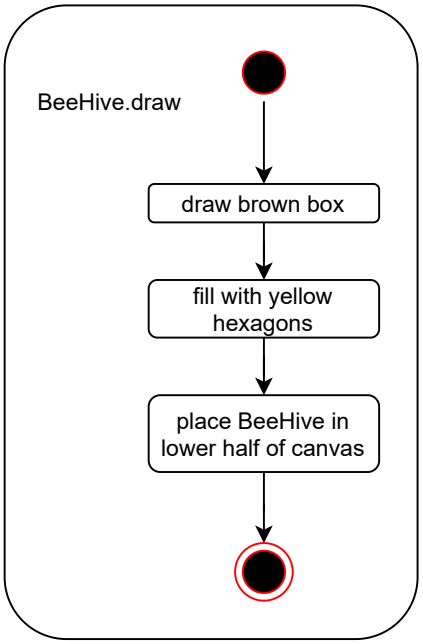

Bee.searchFlower
look fo
highest
that is
set Be
towa
occupy
th
set is

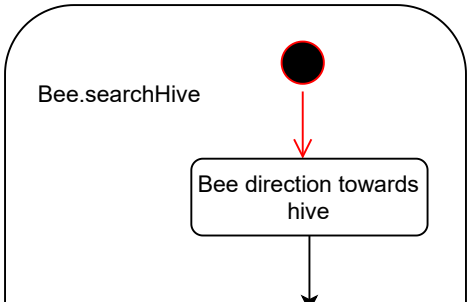

Flower
horizon: number
size: Vector
color: string
xyArray: Vector[]
nectar: number
Bee: Bee
+ draw(): void

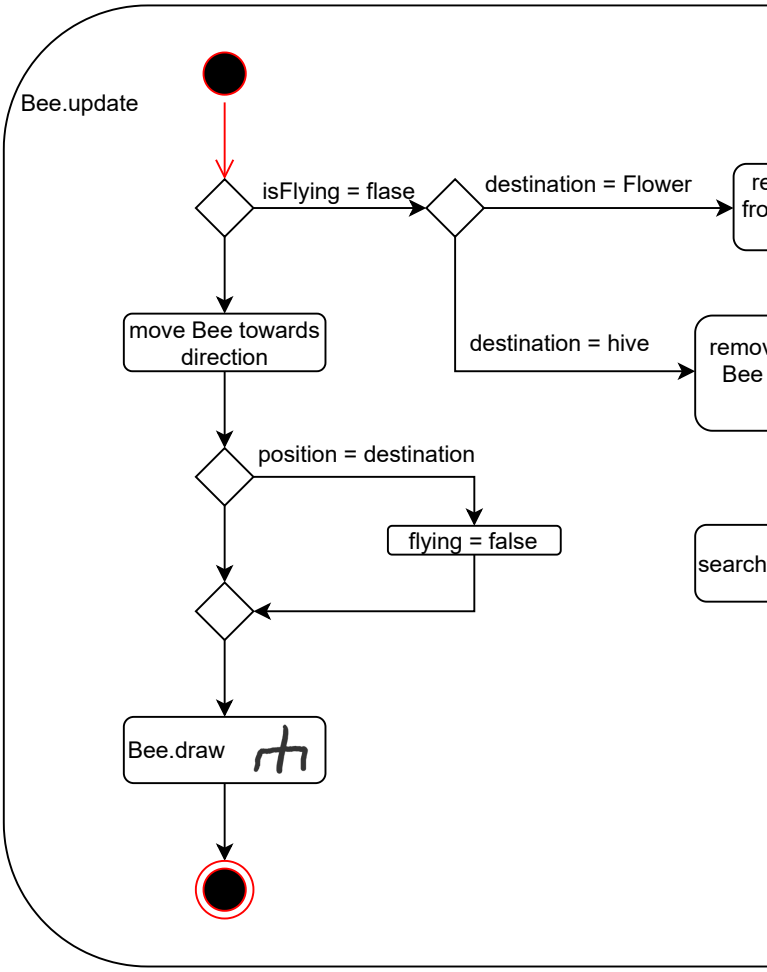

BeeHive
+ nectar: number
+ draw(): void

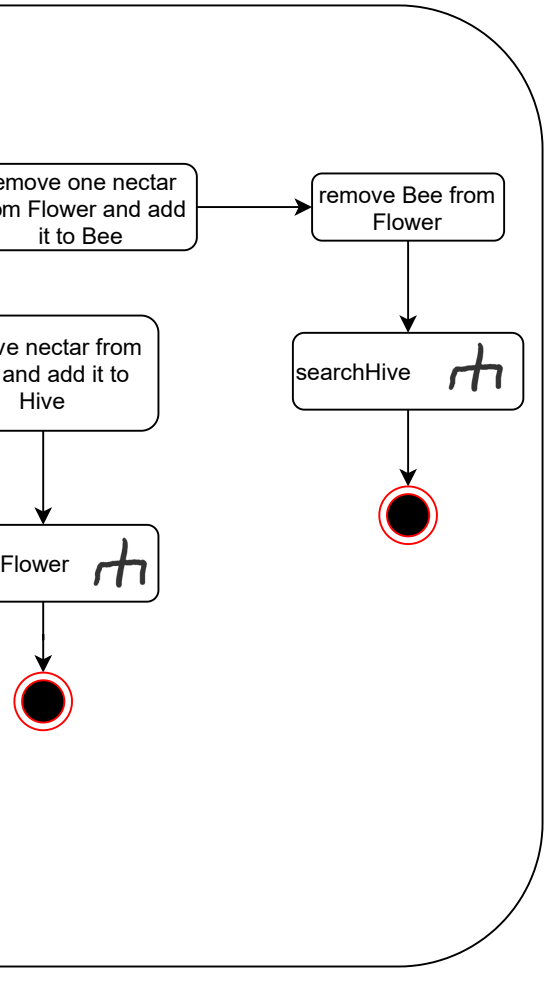

for draw Instructions
please refer to
L8.2_Landschaftsbild

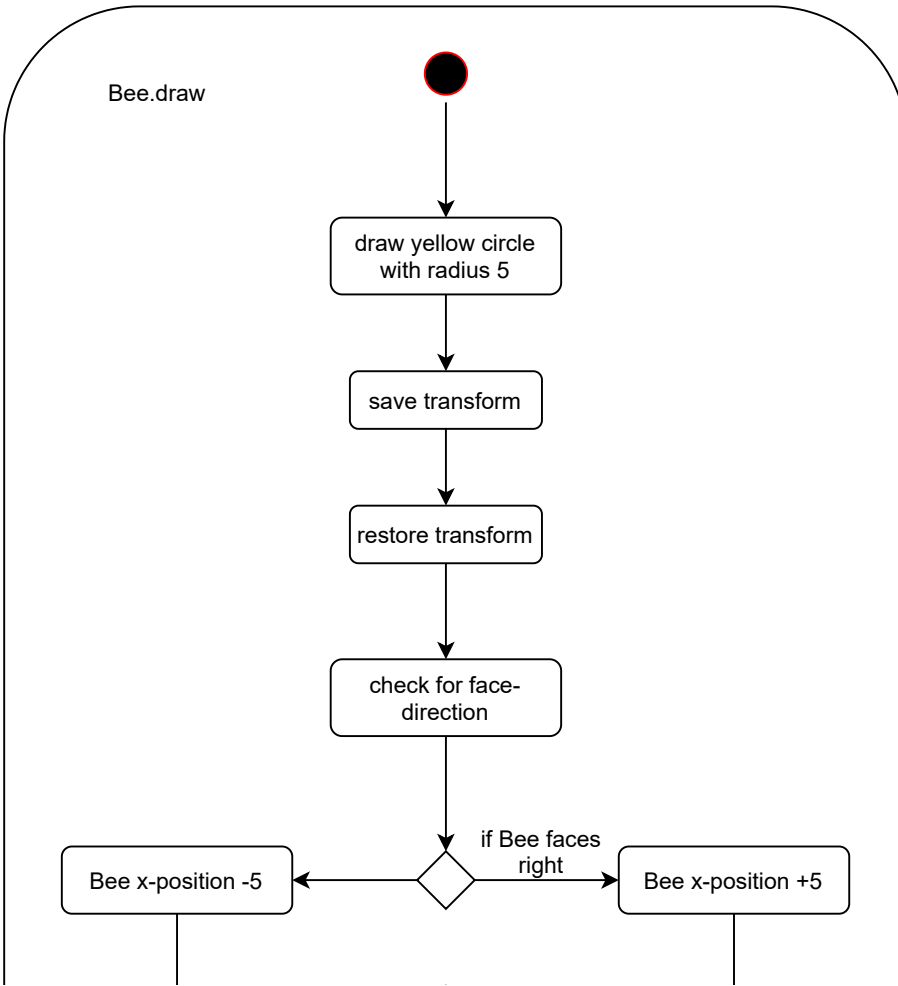

r Flower with
nectar count
not occupied
ee direction
ards flower
y flower with
his Bee
sFlying true

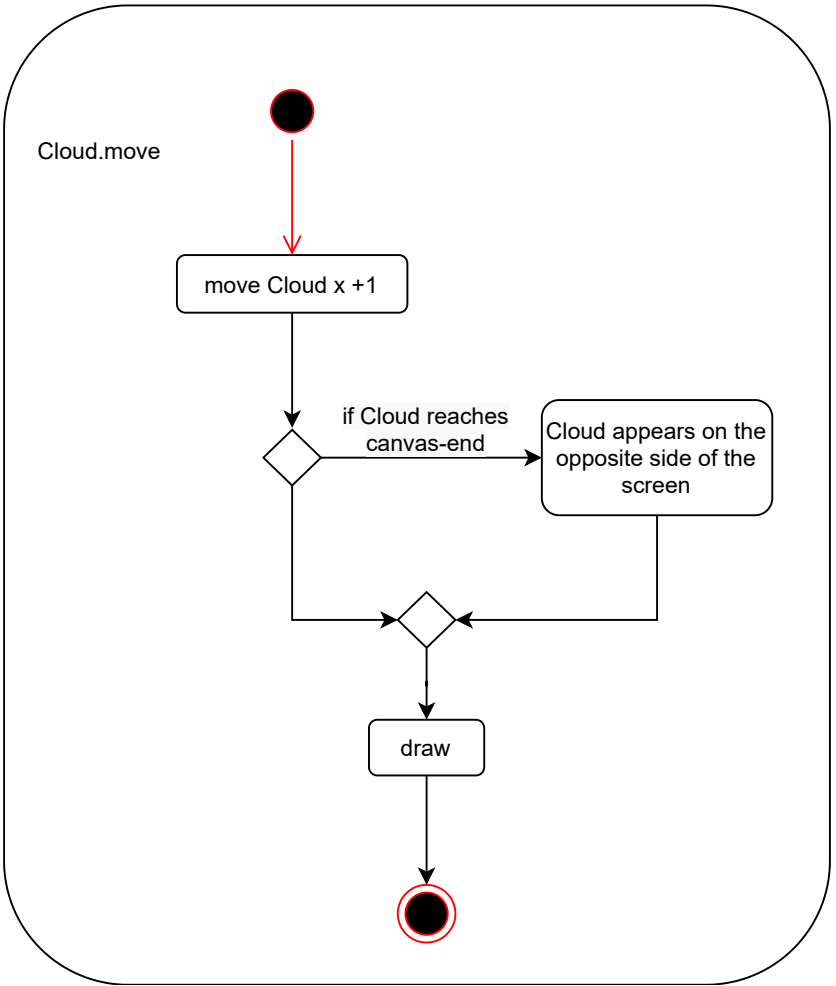

BeeHive.draw
draw brown box
fill with yellow
hexagons
place BeeHive in
lower half of canvas

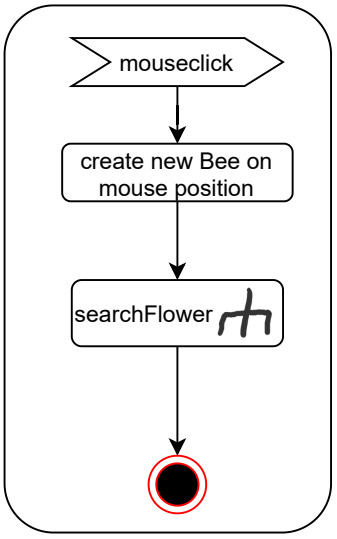

Bee.searchHive
Bee direction towards
hive

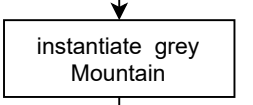

Bee.update
isFlying = flase
destination = Flower
move Bee towards
direction
destination = hive
position = destination
flying = false
Bee.draw

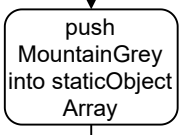

emove one nectar
om Flower and add
it to Bee
remove Bee from
Flower
ve nectar from
and add it to
Hive
searchHive
Flower

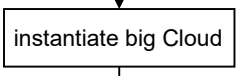

Bee.draw
draw yellow circle
with radius 5
save transform
restore transform
check for face-
direction
if Bee faces
right
Bee x-position -5
Bee x-position +5

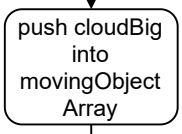

Cloud.move
move Cloud x +1
if Cloud reaches canvas-end
Cloud appears on the opposite side of the screen
draw

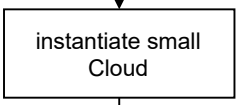

mouseclick
create new Bee on mouse position
searchFlower

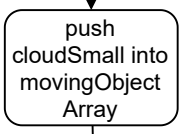

instantiate grey Mountain

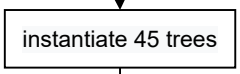

push MountainGrey into staticObject Array

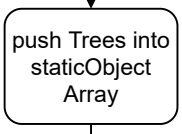

instantiate big Cloud

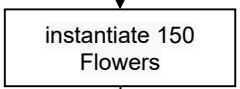

push cloudBig into movingObject Array

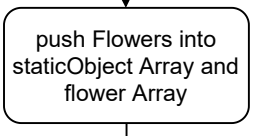

instantiate small Cloud

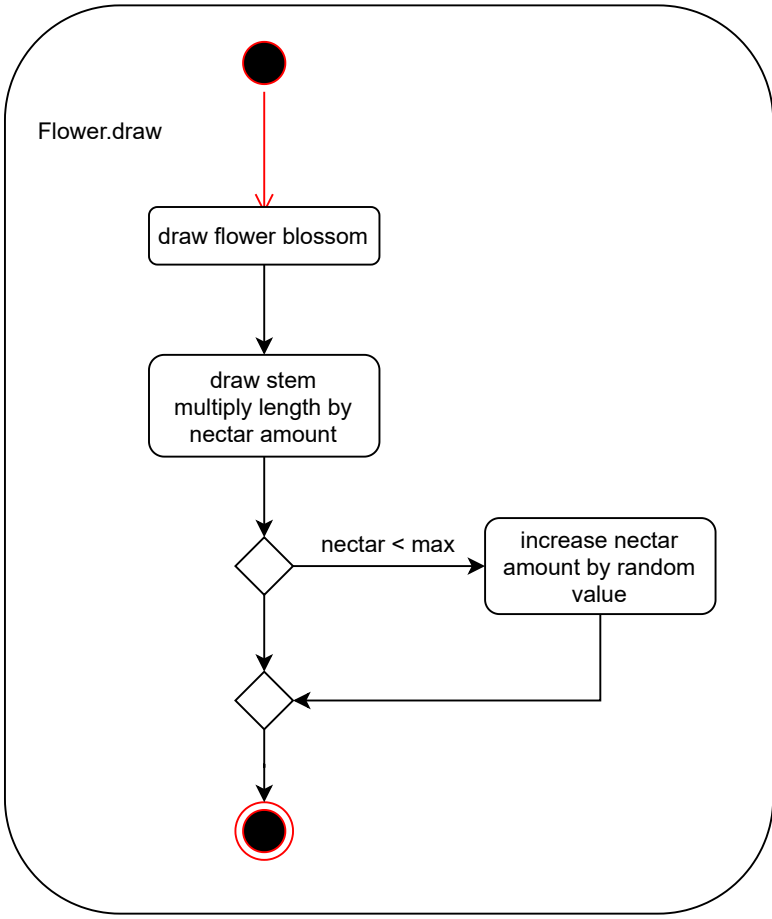

push cloudSmall into movingObject Array

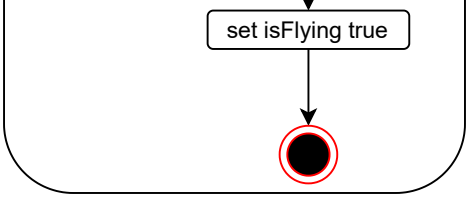

instantiate 45 trees

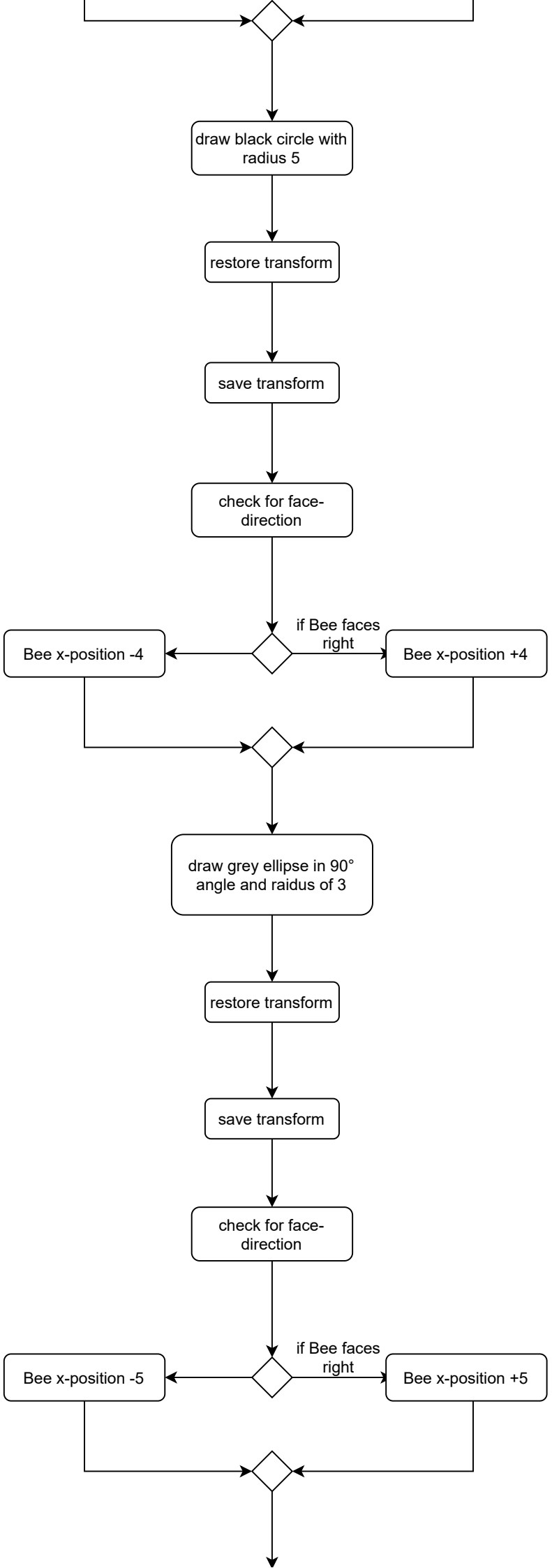

push Trees into staticObject Array

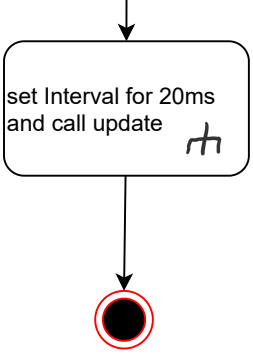

instantiate 150 Flowers

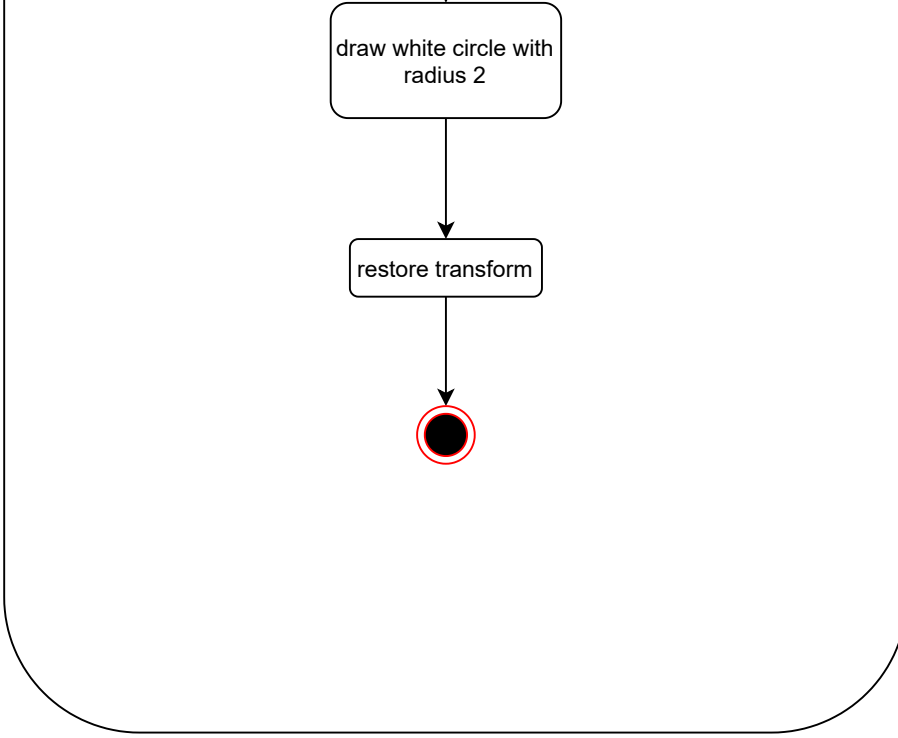

push Flowers into staticObject Array and flower Array


Flower.draw
draw flower blossom
draw stem multiply length by nectar amount
nectar < max
increase nectar amount by random value


set isFlying true


draw black circle with radius 5
restore transform
save transform
check for face-direction
if Bee faces right
Bee x-position -4
Bee x-position +4
draw grey ellipse in 90° angle and raidus of 3
restore transform
save transform
check for face-direction
if Bee faces right
Bee x-position -5
Bee x-position +5


set Interval for 20ms
and call update


draw white circle with radius 2
restore transform