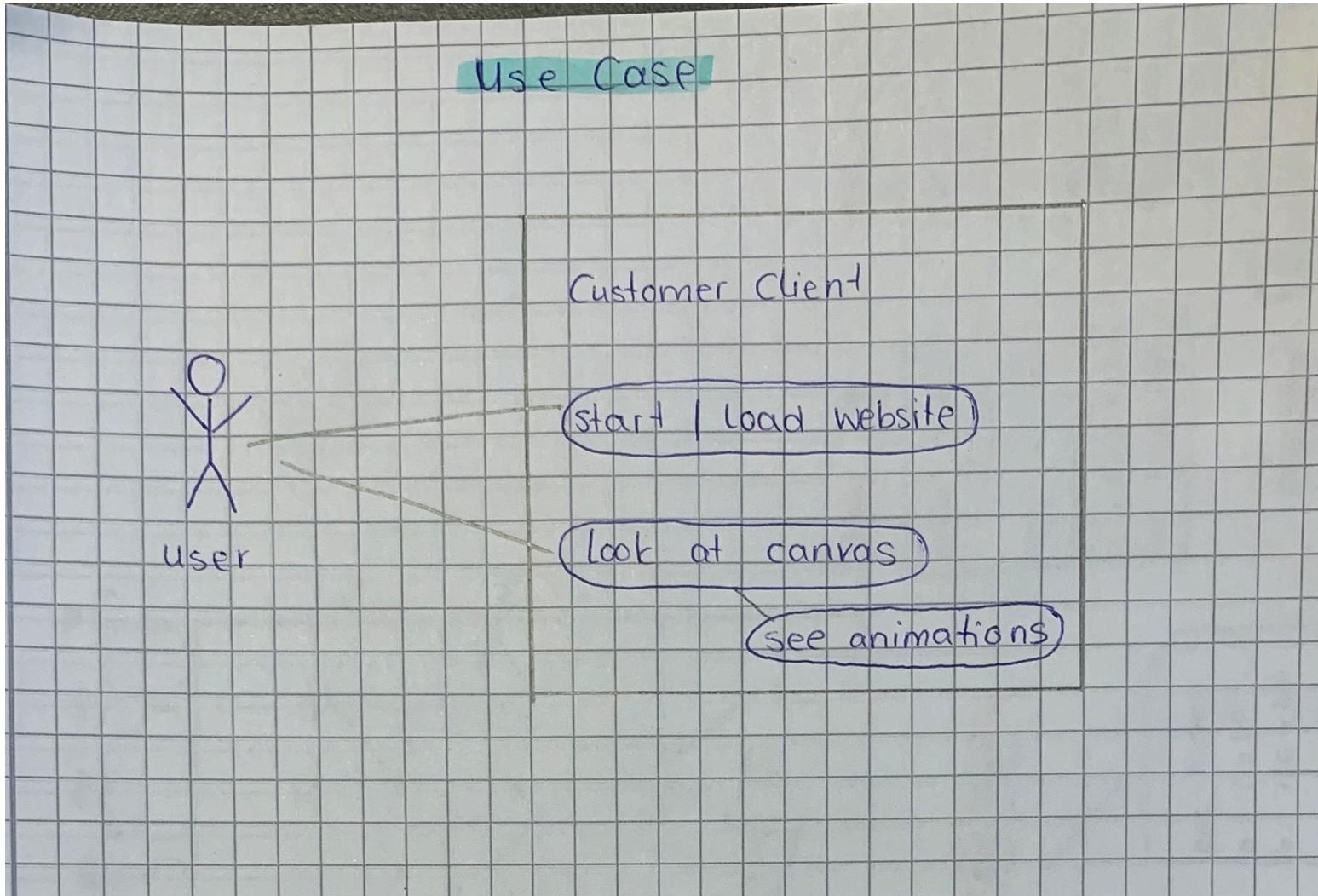


## Use Case



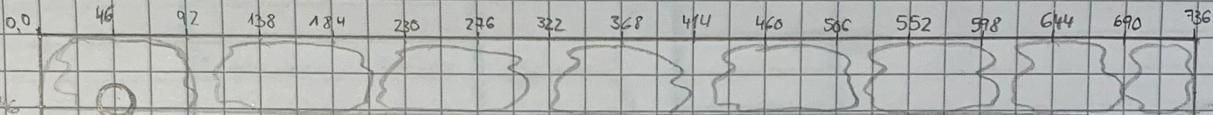
# User Interface

Standard - Canvas 736 x 414 px (iPhone 8, horizontal)

## Sun



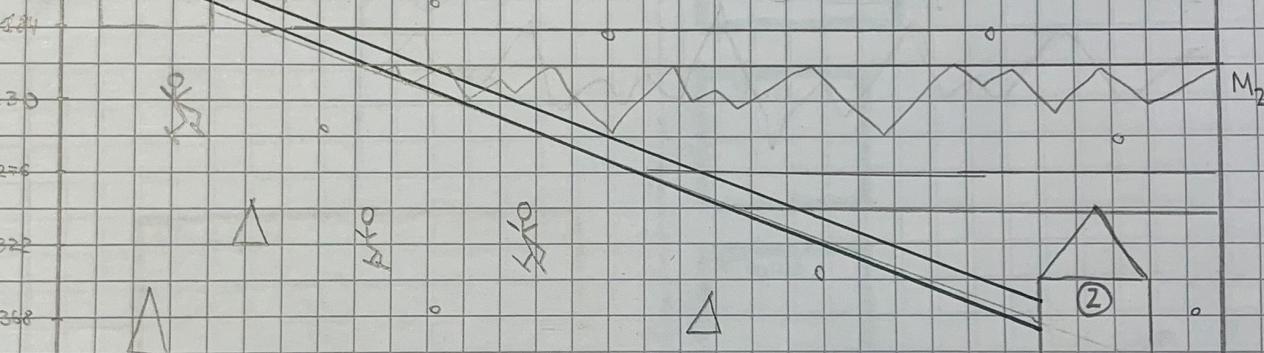
$r_1 = 11,5$ ,  $a = 1$   
 $r_2 = 46$ ,  $a = 0$



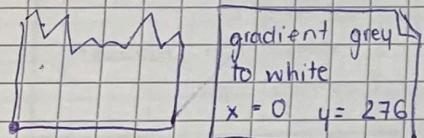
## Cloud



from many little particles, grays  
 $r = 11,5$   
 $a = 1$   
 $a = 0,6$   
 $a = 0$



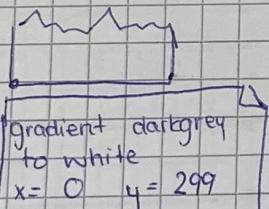
## Mountains 1



gradient grey to white  
 $x = 0$   $y = 276$

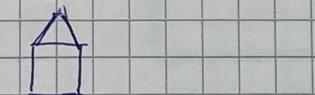
Peaks ( $x$ ) + Valleys  
 184 to 115  
 randomized

## Mountains 2



gradient darkgrey to white  
 $x = 0$   $y = 299$   
 peaks ( $x$ ) + valleys  
 207 to 299  
 randomized

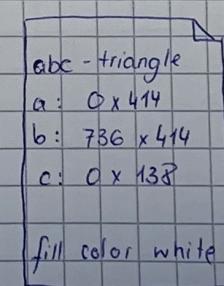
## Ski lift house



Cube:  $69 \times 69$  px  
 Triangle:  $l = 69$  px  
 $h = 46$  px

position 1:  $23 \times 184$   
 position 2:  $621 \times 414$

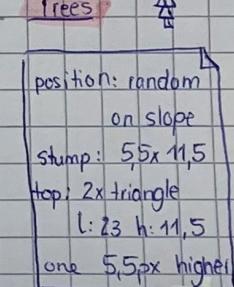
## Ski slope



abc - triangle  
 a:  $0 \times 414$   
 b:  $736 \times 414$   
 c:  $0 \times 138$

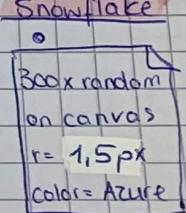
fill color white

## Trees



position: random on slope  
 stump:  $5,5 \times 11,5$   
 top:  $2 \times$  triangle  
 $l: 23$   $h: 11,5$   
 one  $5,5$  px higher

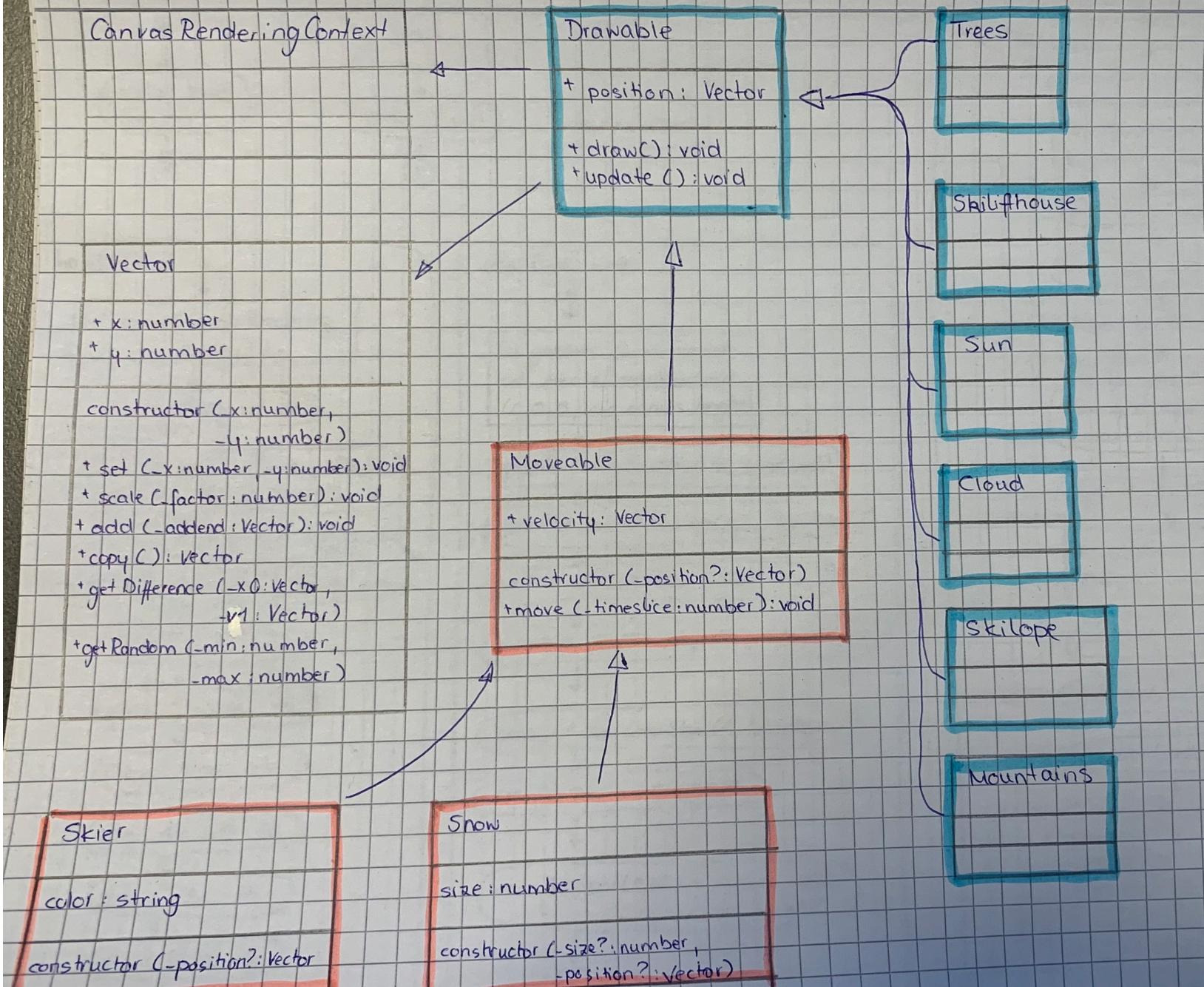
## Snowflake



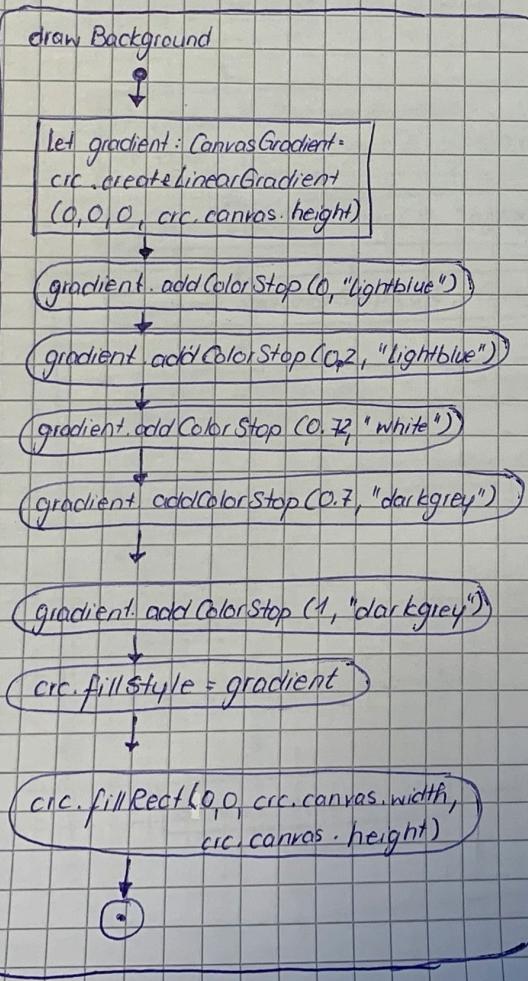
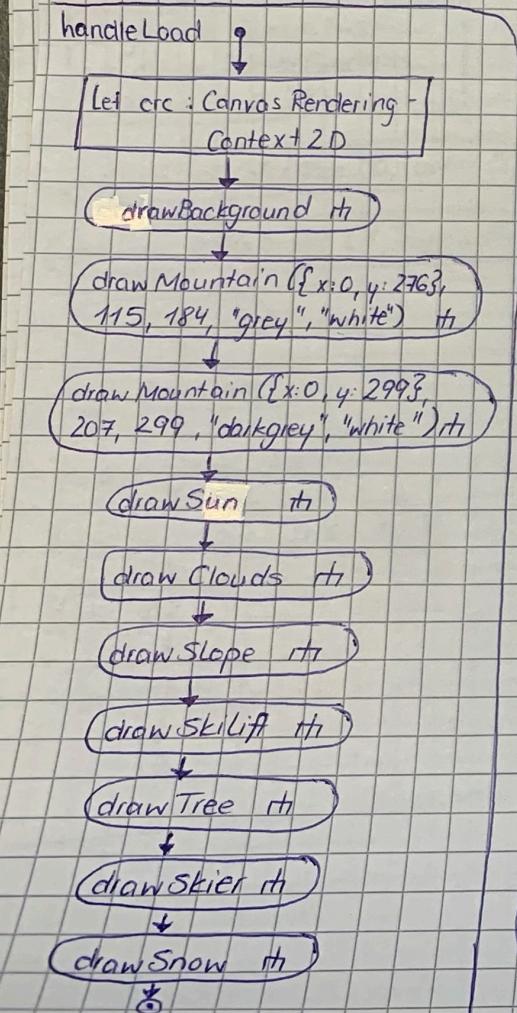
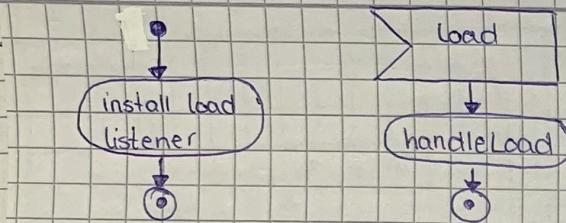
300x random on canvas  
 $r = 1,5$  px  
 color = Azure

string 1:  
 $46 \times 138 \rightarrow 644 \times 368$   
 string 2:  
 $69 \times 138 \rightarrow 867 \times 368$

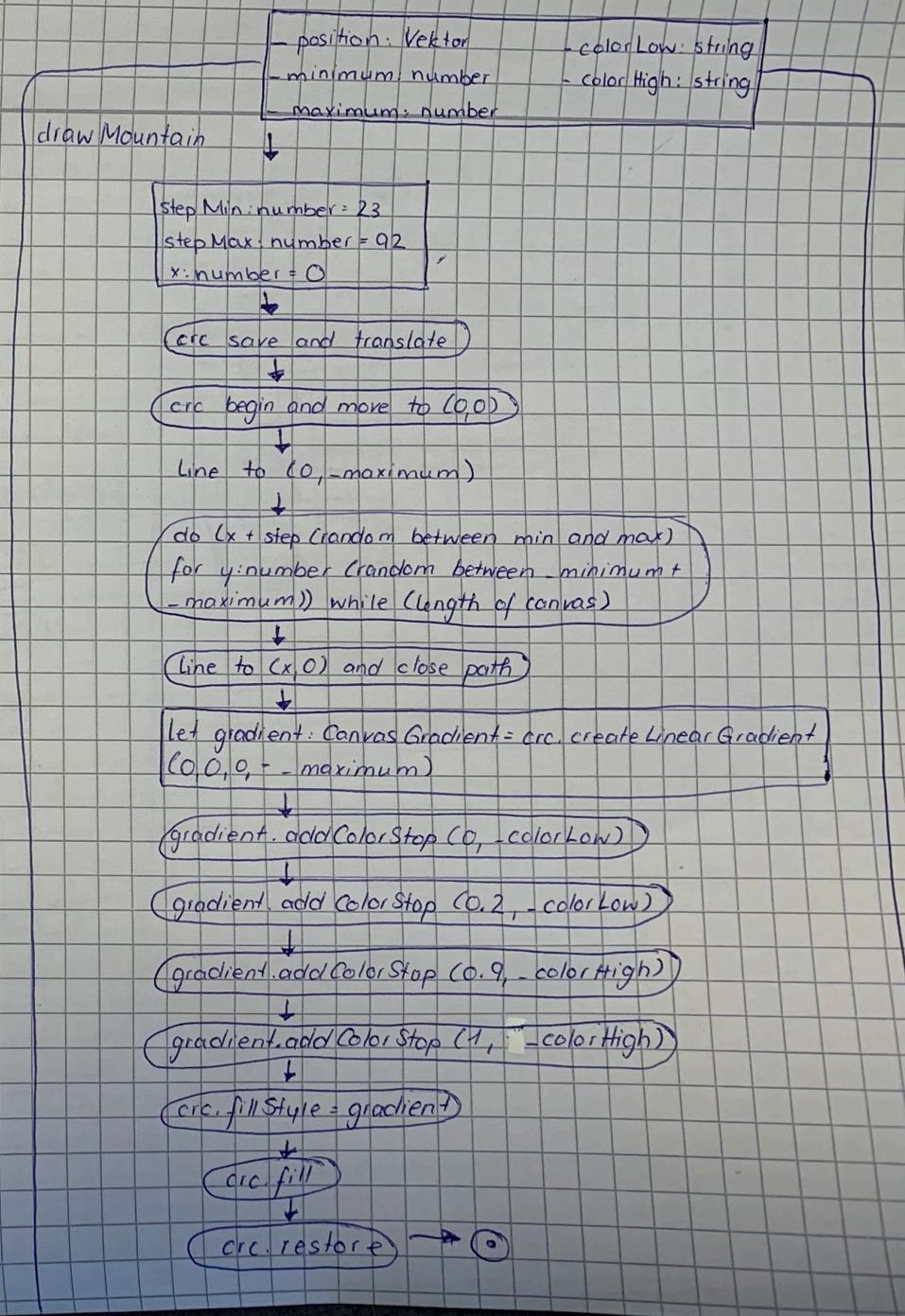
## Class Diagram



## Main.ts



## Activity diagram



### drawSun

```
-position: vector = (x: 46, y: 46)  
r1: number = 11,5  
r2: number = 46  
  
let gradient: CanvasGradient =  
crc.createRadialGradient  
(0,0,r1,0,0,r2)  
  
gradient.addColorStop(0,"yellow")  
gradient.addColorStop(1,"lightyellow")  
  
crc.save()  
  
crc.translate()  
  
crc.fillStyle = gradient  
  
crc.arc(0,12,0,2 * Pi)  
  
crc.fill()  
  
crc.restore()
```

### drawCloud

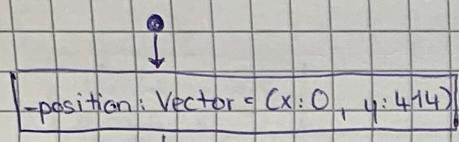
```
-position: vector = (x: 368, y: 23)  
size: vector = (x: 700, y: 46)  
nParticles: number = 300  
radiusParticle: number = 11,5  
particle: Path2D = new Path2D()  
  
let gradient: CanvasGradient =  
crc.createRadialGradient(0,0,0,0, radiusParticle)  
  
gradient.addColorStop(0,"lightgrey")  
gradient.addColorStop(0.6,"Gainsboro")  
gradient.addColorStop(1,"transparent")  
  
particle.arc(0,0, radiusParticle, 0, 2 * Pi)  
  
crc.save()  
  
crc.translate(-position.x,-position.y)  
  
crc.fillStyle = gradient
```

[drawn < nParticle]

```
x: number((random - 0,5) * size.x)  
y: number(random * size.y)  
  
crc.translate(x,y) and fill  
  
crc.restore  
  
drawn++
```

drawn: number = 0

### drawSlope



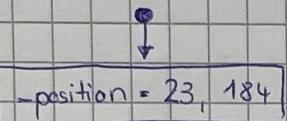
crc beginn path and move to  
 $x = 736 \quad y = 414$

crc line to  $x=0 \quad y=138$

crc close path and  
fill "white"



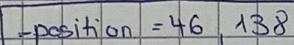
### drawSkifit



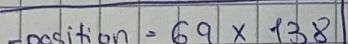
draw cube 69x69

draw triangle at  $y = 11,5$   
with  $l = 69$  and  $h = 46$

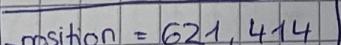
fill "darkbrown"



line to 644 x 368

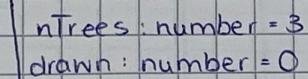


line to 667 x 368



draw cube 69x69

### drawTree



drawn ++

[drawn < nTrees]

position = random on slope

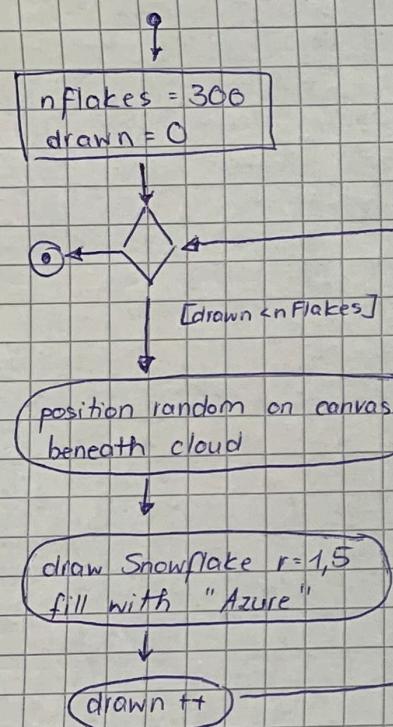
draw stump 5,5x11,5 and  
move up 6px and  
draw triangle  $l = 23, h = 11,5$   
move up 6px  
draw triangle  $l = 23, h = 11,5$

fill "darkbrown"

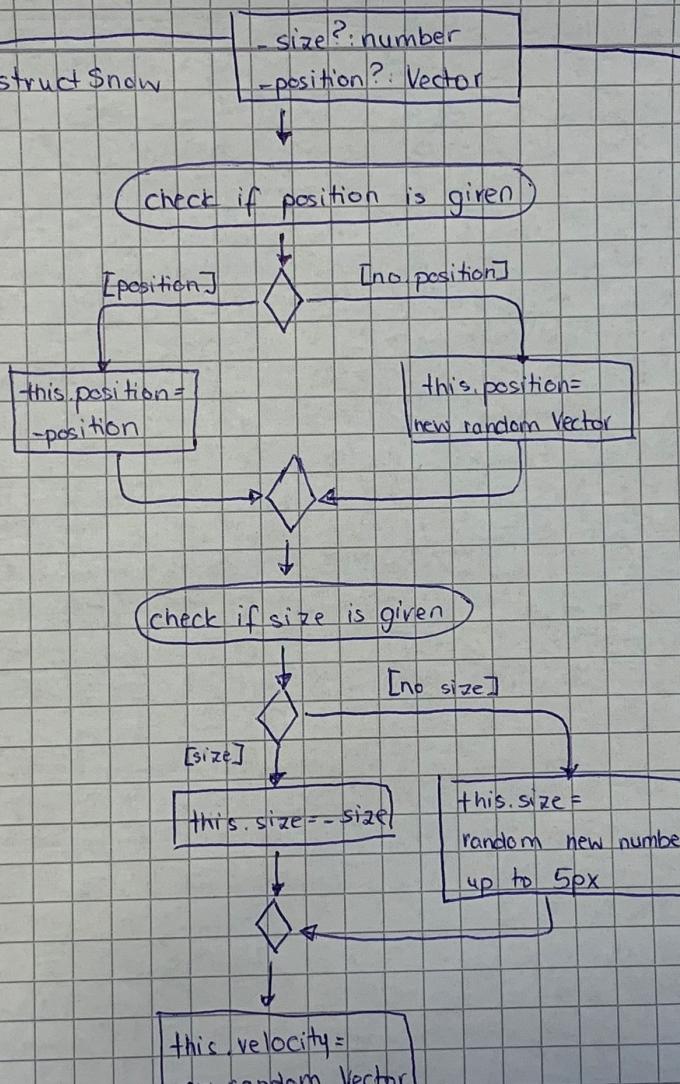
draw triangle at  
 $y = 346$  with  $l = 69$   
and  $h = 46$

# Snow.ts

## drawSnow



## construct Snow



## move Snow

