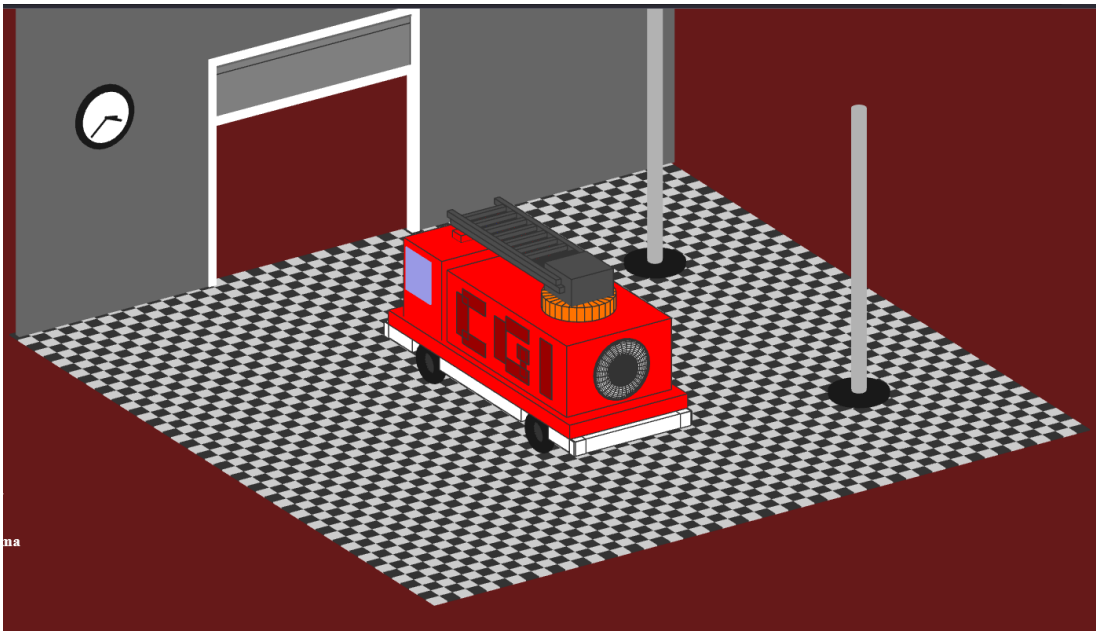
FACULDADE DE
CIÊNCIAS E TECNOLOGIA

GRAFO DE CENA

Quartel dos Bombeiros



TPC2 CGI 24/25

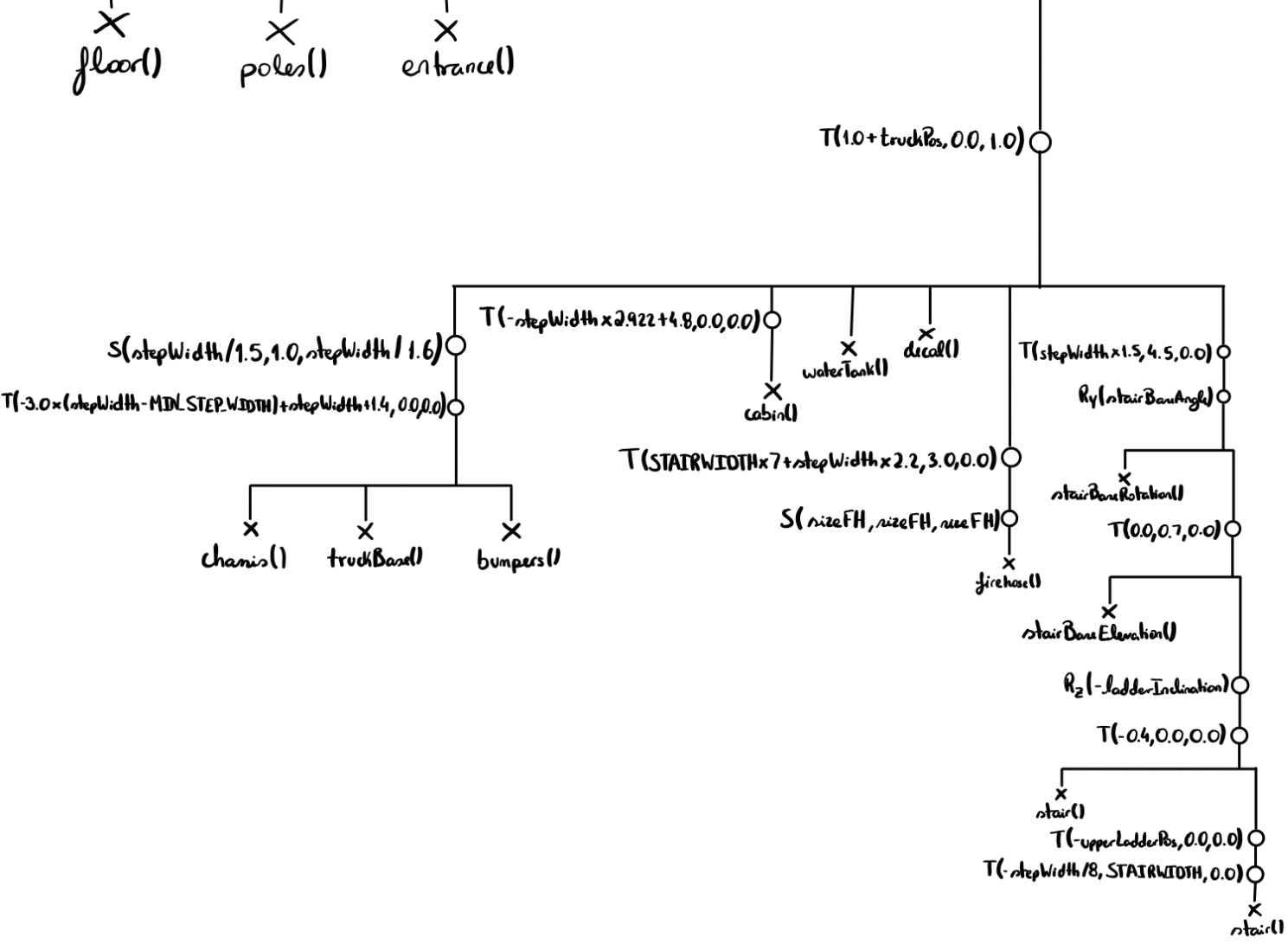
Miguel Lourenço 66043 – Alexandre Cristóvão 65143
Turno P1

Variáveis:

- truckPos = 0.0
- doorPos = 6.5
- upperLadderPos = 0.0
- WHEELRADIUS = 0.75
- wheelAngle = 0.0
- stairBaseAngle = 0.0
- ladderInclination = 0.0
- STAIRWIDTH = 0.2
- MAX_STEP_WIDTH = STAIRWIDTH x 8.0
- MIN_STEP_WIDTH = STAIRWIDTH x 3.0
- stepWidth = MAX_STEP_WIDTH
- DEFAULT_STEP_NR = 8.0
- stepNr = DEFAULT_STEP_NR
- sizeFH = Math.min(stepWidth x 1.0, 1.0)

Grafo Geral

(app.js)



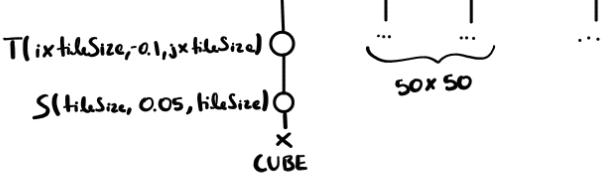
Grafo do Cenário

(scenery.js)

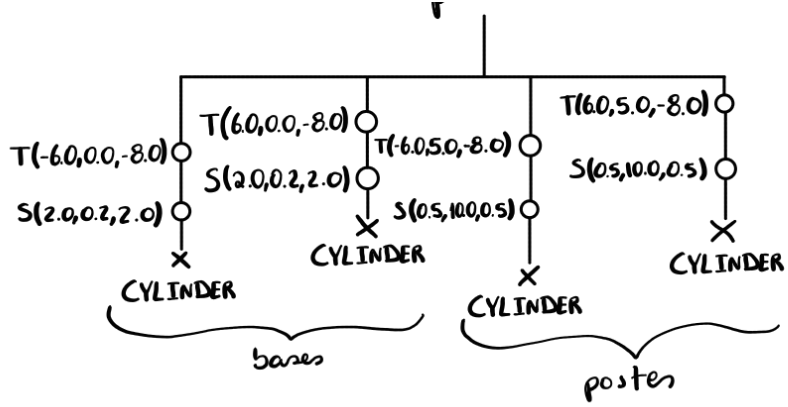
Variáveis:

- tileSize = 0,5: tamanho de um azulejo (x e z);
- gridSize = 25: nº de azulejos numa coluna/linha;

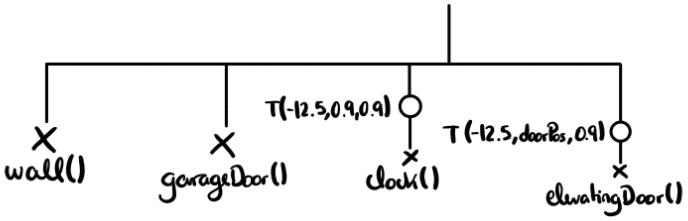
floor()



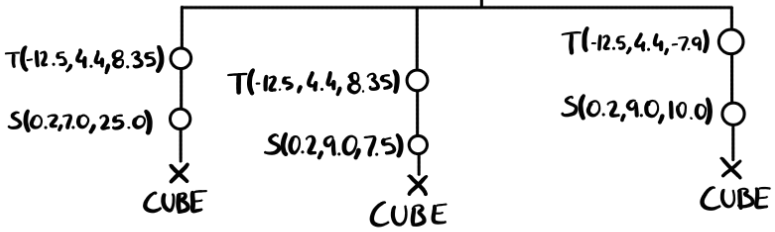
poles()



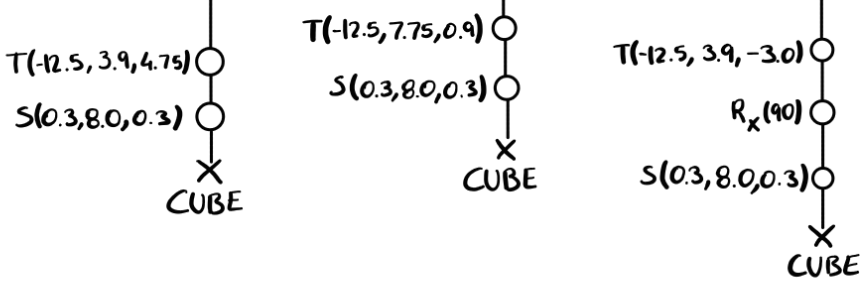
entrance()



wall()

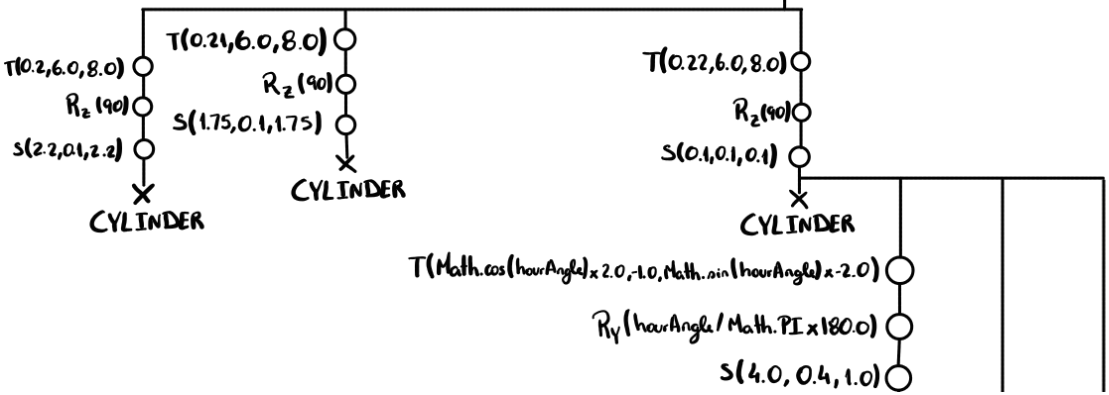


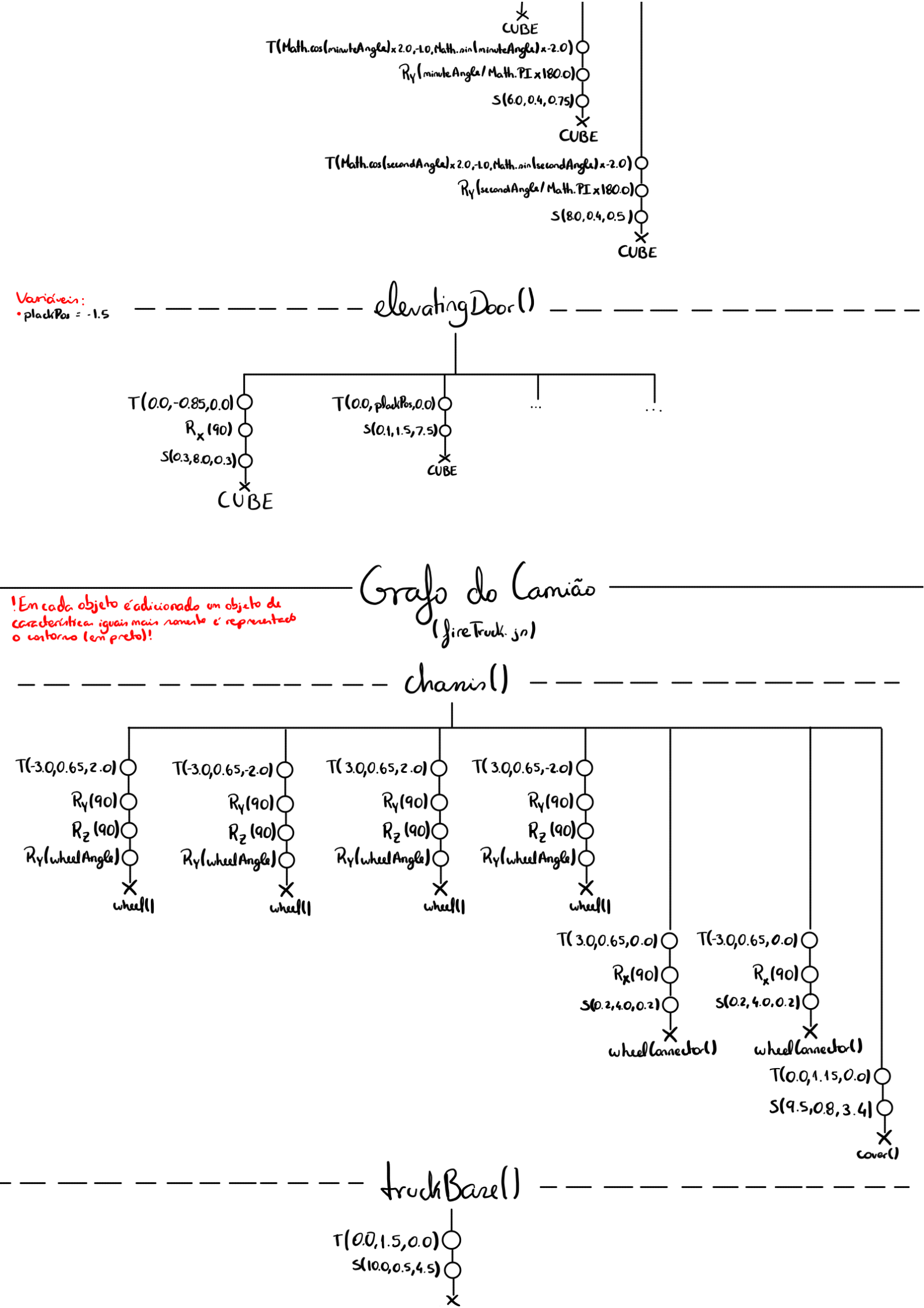
garageDoor()



clock()

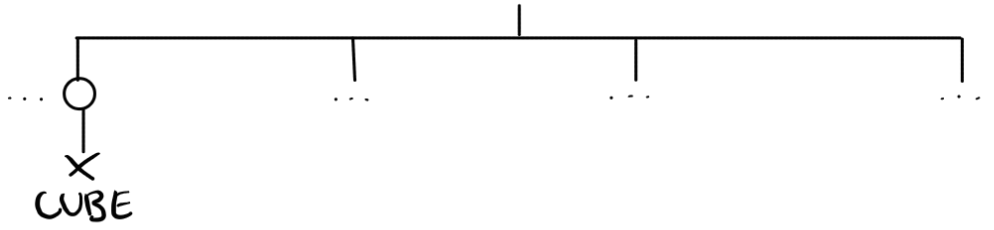
Variáveis: !extrair hora atual!
- now
- seconds
- minutes
- hours
- secondAngle
- minuteAngle
- hourAngle



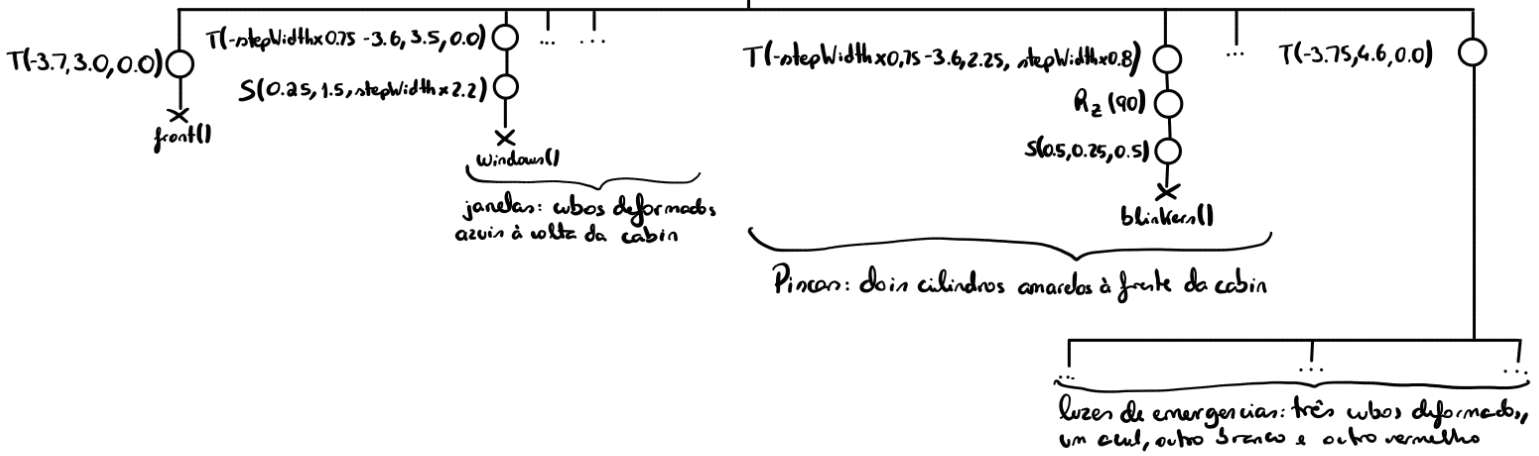

CUBE
T(Math.cos(minuteAngle)x2.0,-1.0,Math.sin(minuteAngle)x-2.0)
Ry(minuteAngle/Math.PIx180.0)
S(6.0,0.4,0.75)
CUBE
T(Math.cos(secondAngle)x2.0,-1.0,Math.sin(secondAngle)x-2.0)
Ry(secondAngle/Math.PIx180.0)
S(8.0,0.4,0.5)
CUBE
Variáveis:
• plackPos = -1.5
elevatingDoor()
T(0.0,-0.85,0.0)
Rx(90)
S(0.3,8.0,0.3)
CUBE
T(0.0,plackPos,0.0)
S(0.1,1.5,7.5)
CUBE
...
...
Grafo do Camião
(fireTruck.js)
!Em cada objeto é adicionado um objeto de característica igual mais ramo é representado o contorno (em preto)!
chanis()
T(-3.0,0.65,2.0)
Ry(90)
Rz(90)
Ry(wheelAngle)
wheel()
T(-3.0,0.65,-2.0)
Ry(90)
Rz(90)
Ry(wheelAngle)
wheel()
T(3.0,0.65,2.0)
Ry(90)
Rz(90)
Ry(wheelAngle)
wheel()
T(3.0,0.65,-2.0)
Ry(90)
Rz(90)
Ry(wheelAngle)
wheel()
T(3.0,0.65,0.0)
Rx(90)
S(0.2,4.0,0.2)
wheelConnector()
T(-3.0,0.65,0.0)
Rx(90)
S(0.2,4.0,0.2)
wheelConnector()
T(0.0,1.15,0.0)
S(9.5,0.8,3.4)
cover()
truckBase()
T(0.0,1.5,0.0)
S(10.0,0.5,4.5)

CUBE

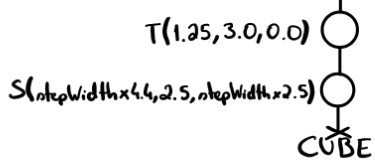
bumpers()



cabin()



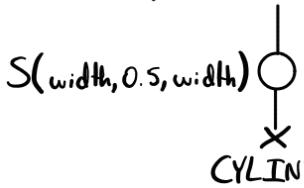
waterTank()



decal()

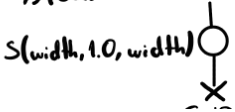
stairBaseRotation()

Variáveis:
- width = stepWidth * 1.5



stairBaseElevation()

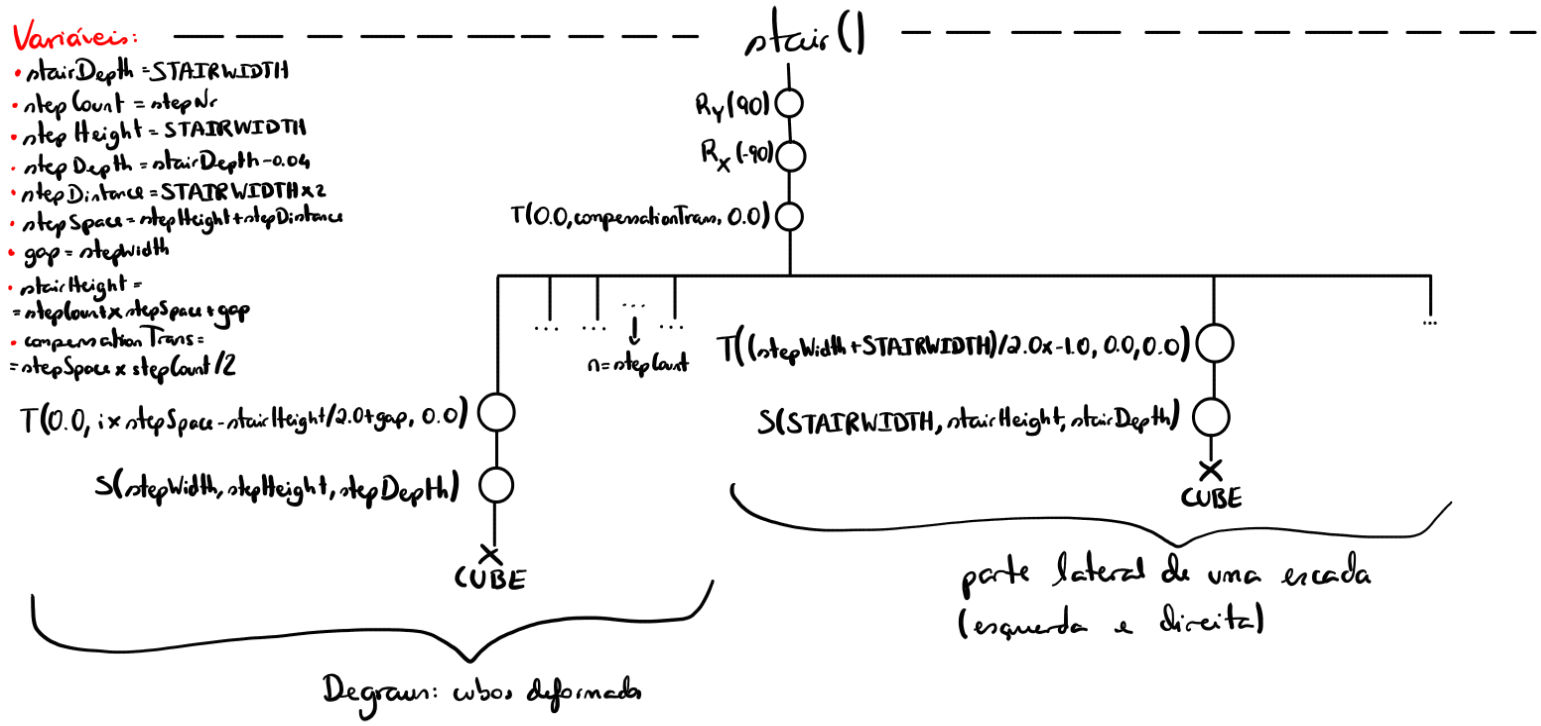
Variáveis:
- width = stepWidth



CUBE

Variáveis:

- stairDepth = STAIRWIDTH
- stepCount = stepNr
- stepHeight = STAIRWIDTH
- stepDepth = stairDepth - 0.04
- stepDistance = STAIRWIDTH x 2
- stepSpace = stepHeight + stepDistance
- gap = stepWidth
- stairHeight = = stepCount x stepSpace + gap
- compensationTrans = = stepSpace x stepCount / 2



Degraus: cubos deformados

parte lateral de uma escada (esquerda e direita)